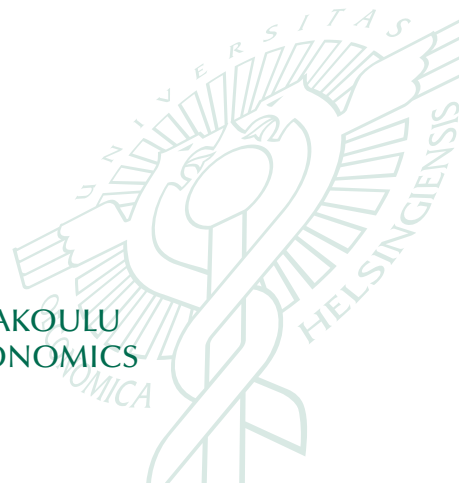


Problematic Talk

The Role of Multiple Understandings in Project Meetings



Salla Huttunen

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The Role of Multiple Understandings
in Project Meetings

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ABSTRACT

This research began to take form from an interest in *multiple understandings* – frequently referred to as *misunderstandings* – and their perceived ubiquity in internal meetings of a large multinational company. While a variety of studies have established that people of various nationalities and language skills in meetings are capable of creating a common understanding in dialogue, research until now has predominantly ‘stayed within the meeting’. This means that although meeting discourse and interaction – and their linguistic features in particular – have been widely studied, research that investigates meeting interaction in its organizational setting, and from the point of view of organizational communication, has received less attention. Further, the role that multiple understandings (more broadly, *problematic talk*) play in reflecting the understandings derived from the rest of the organization on the one hand, and in advancing both individual and organizational knowing on the other, is uncharted territory. Finally, existing research typically investigates individual meetings, while a sequence of multiple meetings in a row on the same subject has not been in focus earlier. Thus, this research sets out to find answers to the following main question and its sub-questions: 1) What is the role of multiple understandings and other difficulties (e.g. confusion, ambiguity, and non-understanding) in meetings? a) How do difficulties and problematic situations come about in meetings? b) Do the difficulties in understanding become less frequent as the team progress in their work? c) Do the difficulties change in nature over time as the team progress in their work? And d) What is the role of the rest of the organization in creating multiple understandings in a series of meetings?

With an eye on the questions above, this study explores multiple understandings (and other disruptive phenomena translating into problems) and the closely related activities of knowing, sensemaking, and learning. The study takes a dialogic approach and analyzes problematic situations (conveyed in speech) by using a framework for analyzing situated organizational problem solving (Kuhn, Jackson 2008). Additionally, this research closely investigates the interaction in these problematic situations by using a dialogic approach (Linell 1998) that emphasizes the reflexive relation of contributions/utterances, activities, relevant contexts, expressions, meanings, individuals, communities, organizations, and institutions.

The meetings studied comprise a series of nine consecutive internal meetings in a large multinational company where the participants (business English lingua franca speakers) focused on preparing for a major milestone of the next version of a tool developed for internal purposes. The findings show that disruptive phenomena in talk were vital for accomplishing knowledge and that the team participating in the meetings stayed effective from the beginning to the end in terms of knowledge accomplishment. Additionally, the rest of the organization played an important role in crafting understandings and knowing, especially at the beginning of the series of meetings.

Keywords: *meetings, interaction, understandings, problematic talk, organizational talk, project work, knowing, tagging*

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1. INTRODUCTION

Some years ago, I participated in a software production related workshop where the participants (multi-cultural, mostly English lingua franca speakers) were divided into groups, and each group was given an assignment, which was to think of an answer to the following question: “When can you say that a feature is DONE?” As the groups’ findings were presented, it turned out that each group had had a differing understanding and definition for a ‘feature’, a household word in software business. Some groups were thinking of a ‘feature’ in iterative software development terms, where a feature can denote some iteration within a product development cycle, whereas other groups seemed to be thinking along the lines of product features that fulfil end-users’ needs. Interestingly enough, there did not seem to be any negotiation in the workshop as to the meaning of the word ‘feature’. Everybody seemed to have a clear understanding of what the term means, and yet, different teams came up with very different criteria that implied a very different definition of the word ‘feature’. Another incidence that I was involved in related – again – to upcoming features of a product: I participated in a meeting where certain key features for the next version were decided, and the actual development work was kicked off. Two weeks later, I talked with the chief architect, who, as I learned, had come to a totally opposite conclusion regarding one feature than I had. By the time we clarified the requirement with the owner of the product, two weeks of time were lost.

There can be many reasons for these differing definitions and multiple understandings, but the anecdotes above are good examples of varying interpretations and multiple understandings. In the workshop, there were no serious consequences because of multiple definitions, but as the second anecdote already shows, this type of diversity could easily cause problems later if not detected at a relatively early phase. Success in internal face-to-face communication (in meetings) within multi-cultural organizations is essential for the success and efficiency of the organization. And yet, participants of face-to-face meetings often leave the meeting each having a differing interpretation of what was decided, and what needs to be done.

In organizations, meetings of various types are the arena where the participants come to share their understandings on the issues and topics being developed, discussed, and finalized, and where they spend a considerable portion of their working time. In a sense,

meetings form the backbone of an organization; something that the people working for the organization rely on when forming their understanding of what needs to be done. Although there are a number of ways in which people can interact and stay in touch in issues relating to whatever they are working on, meeting as a way of working in many organizations is yet to be challenged.

Company internal meetings, as such, are an important subject to study as the importance of face-to-face contact and oral communication has grown. A survey study (Louhiala-Salminen 2002) carried out in two Nordic companies, Stora Enso and Nordea, showed that more than 60% of a person's in-house communication is oral (face-to-face meetings, other face-to-face communications, video conferences, telephone, teleconferences, presentations). Among the reported findings of this study was also the fact that a significant amount of all communication – 80% – is in-house communication. The large share of in-house communication can probably be attributed to the size of the organization. As the size of an organization grows the need for internal communication increases. In large multinational companies, for example, the organization can be divided into specialized functions, which means that not everybody is working in the customer interface or with other external stakeholders. There are large numbers of employees who only attend internal meetings and also otherwise communicate internally; hence, the success of internal communication – in meetings and elsewhere in organizational communication – is in a key role for the overall success of any large company. Furthermore, in many companies, meetings have become an important way of working in teams, and a considerable share of working hours is spent in meetings. In many ways, “meetings are where organizations come together,” and as such arenas, they “remain the essential mechanisms through which organizations create and maintain the practical activity of organizing” (Boden 1994 p. 81).

1.1 Research gap

Given their importance, it is no surprise that various types of organizational meetings and interaction therein have been the focus of numerous studies. A common characteristic to studies focusing on company internal meetings is that very often their focus is on individual meetings – despite the fact that the data might comprise multiple meetings. As to research looking into meaning construction and sensemaking in meetings, the focus can be, for example, on the level of conversation or on specific

features of discourse. Multiple successive meetings, revealing not only how understandings are achieved in one meeting but also the workings of the organizational backbone and knowledge accomplishment in the meeting interaction over a period of time, have received less attention. To gain this, one needs, first of all, materials from not only one meeting but multiple successive ones. Secondly, to learn how possibly multiple understandings are crafted into shared knowledge one needs to examine the understandings within the framework of knowing and learning.

This research aims to fill the gap mentioned above and focuses on the understandings, knowledge, and learning achieved through joint sensemaking in a series of R&D meetings taking place in a multinational company that cover a longer period of time. Further, this study investigates the role of the entire organizational backbone in the formation of those understandings, how the meeting participants make sense of those understandings, and how they align their understandings and contribute to knowing, learning, and organizing in a manner that enables action.

Despite the fact that interactants might be happy about the understanding(s) achieved, they may differ considerably although these multiple understandings have not manifested themselves in discourse. Based on the materials studied for this research, however, one can see that many of these multiple understandings and other sources of ambiguity and confusion do make themselves manifest in the meeting interaction as participants voice their understandings or non-understanding. These points are, of course, problematic, and involve a communicative breakdown of varying severity. As such they threaten the team's ability to move on with the task at hand. However, these problematic situations translate into critical incidents that serve as stimulus for reflection at a time when what is considered normal is broken (Gherardi 2006). Gherardi (2006) uses an example from Polanyi (1967) who describes how, when driving a nail in with a hammer, we do not feel the hammer handle striking our palm but the head of the hammer striking the nail. In this activity, as Gherardi explains, the focal awareness is in driving in the nail, not in the other feelings because we have gained mastery of the instruments. Along the same vein, people in meetings do not pay focal attention to their talk and interaction as it is something that they have come to master but rather to the topics being discussed and the goals being pursued. It is not until there is a breakdown of some sort when they have to engage into reflexive organization and alignment of understandings. According to Gherardi, "this signifies that organizations as systems of

practices exist in the world of a tacit knowledge which is simply usable and becomes the object of reflection when a breakdown occurs” (2006 p. 21). Further, these points of breakdown (caused by ambiguities, uncertainties, contradictions) provide opportunities for individual and collective development in practical action, and this is where social learning takes place (Blackler, Crump, McDonald 2000, referenced to in Gherardi).

Real-life meetings and negotiations (and discourse therein) in business and organizational context have been studied from a variety of perspectives: Within the sphere of company external meetings, there are studies of *lingua franca* negotiations (Firth 1990) and ‘telenegotiations’ with an eye on accounts used in a proactive and creative sense and the embeddedness of negotiations (Firth 1995, Firth 1995); We know about business negotiations and the linguistics components of strategy therein (Lampi 1986) as well as two-party sales negotiations with an analytic focus on the interdependence of discourse and the business relationship, power, and the layeredness of discourse (Charles 1996, 1995, 1994); sales negotiations have also been studied from the viewpoint of a sales team whose internal strategy meeting is observed before the meeting with the prospective client (Vuorela 2005b); Finally, multiparty and multicultural business meetings have been studied from the point of view of ‘groupness’ and identity-building (Poncini 2004).

Company internal meetings, for their part, have been studied from a cross-cultural perspective, using a cross-cultural impression management (CCIM) discourse model (Bilbow 1997); further, a study into company internal meetings in Italian and British counterparts of a joint venture provide a view into managerial discourse and offer an opportunity for cross-cultural analysis (Bargiela-Chiappini, Harris 1997); various other internal meetings have been studied with a specific focus on power and politeness (Holmes, Stubbe 2003), on the indexical meaning of the pronoun ‘I’ (Fasulo, Zucchermaglio 2002), and leadership (Clifton 2006a); additionally, there are studies of internal meetings of recently merged companies with a view on meaning construction (Kangasharju 2007, Nikko 2007, Nikko 2009) and actors’ ways of sensemaking through the use of rhetorical strategies, frames, and categories (Rovio-Johansson 2007).

A specific feature not typically associated with meetings is humor, which has also found its way into research (Hatch 1997, Adelswärd, Öberg 1998, Vuorela 2005a). Apart from language, discourse, and interaction, meetings have received attention as a genre that

has experienced changes with the introduction of technologies diversifying the choices available in terms of media and channel (Svenning, Ruchinskas 1995, Treviño, Webster, Stein 2000).

What I term “internal meetings” in this research seems to have gathered increasing interest lately. A recent special issue of *Journal of Business Communication* (Asmuß, Svennevig 2009 eds.) focuses on meeting talk all of which occur in either some company or institution – among members of the same organization. Out of the six articles featured (for discussion on these, see section 2.4.2) in the special issue, five articles use conversation analysis as their approach. This gives an idea of how influential the conversation analytic approach is but also evokes a question on whether some other approaches might shed somewhat different light into what goes on in meetings in their relational existence within an organization.

As regards multiple understandings or misunderstandings in multicultural settings, the claim often seems to be that people’s various cultural backgrounds are to blame for the difficulties in understanding. However, research on multicultural (culturally diverse) and intercultural (wherein communication occurs between people representing different cultural backgrounds) settings has shown that people in interaction are capable of creating a common understanding *in situ* despite differences in, for example, cultural backgrounds and language skills. This common understanding is achieved in interaction in a manner that satisfies both/all. Poncini (2004 p. 23) says that “existing research often focuses on difficulties and misunderstandings as opposed to determining what might facilitate communication.” Poncini further contends (Bargiela-Chiappini, Nickerson, Planken 2007 p. 33) that a focus on miscommunication in intercultural settings assumes that intercultural interactions are problematic and ignores factors contributing to successful intercultural communication.

The fact remains, however, that miscommunication in meetings does occur – effectively constituting communicative breakdowns and problematic situations. This may even be such a commonplace occurrence that people take it for granted; after all, sharing a fully congruent understanding is practically impossible, and in any case, difficult to assess. Given that most of us feel that divergent understandings, confusion, ambiguity, and even misunderstandings are somewhat of a nuisance, one can understand that there has been interest in finding a cause for these divergences. An obvious candidate for the

cause of the multiple understandings that differ from one another might be multiculturalism in terms of nationalities and varying native languages giving cause for differing levels of language skills, but this can also perhaps be questioned since, as pointed out, people with varying national and language backgrounds are known to overcome these obstacles. Another approach to looking at difficulties in aligning understandings, like Poncini (2004) says, is what might facilitate communication, and more to the point, how the multiple understandings could be rounded off into coherent and congruent understandings that make sense. A rounding off of conflicting or highly differing understandings is especially important in meetings taking place in an R&D environment, where the levels of complexity are not trivial and where problem-solving activities span temporal and spatial spaces that cannot be dismissed when looking at (mis)communication in meetings. Additionally, people in meetings (R&D meetings, too) may represent different areas of expertise, such as customer interface or business vs. software development, and can thus “come from different cultures”. Examining the ways in which people in interaction are able to share their own expertise, develop and refine solutions together, and – perhaps most importantly – negotiate a shared understanding may well provide the key to successful communication.

As sites of organizational talk, meetings are not places where conversation occurs naturally; rather, conversation is regulated by predetermined agendas that largely dictate the choice of topics available (Boden 1994 p. 89). Furthermore, as Boden says, “the interaction order of meetings is doubly ‘situated,’ first within the flow of talk, and, second, within the reflexive rhythm of the organization.” The latter is related to what Boden (1994 p. 91) calls a “laminated effect of meeting upon meeting,” creating a layering effect operating in exchanges that take place between people in meetings and working to frame succeeding interactions. At the same time, according to Boden, these exchanges build toward decisions or “organizational objects that, retrospectively, will look like decisions.”

So, although talk at work in general and in meetings in particular has been studied somewhat extensively, there has not been any research focusing on internal meetings within multinational companies (MNC) in a manner that looks at problematic situations (multiple understandings, ambiguity, confusion, non-understanding) and their role in social learning and acquiring knowledge. Further, there has been relatively little research that takes the multiple layers, that is, the laminated effect of meeting upon

meeting creating the organizational backbone, in play into account. Looking at these aspects entails following not only individual meetings but a series of meetings all focusing on the same theme or generic subject to learn how the participants use the instrument of talk and how they focus their attention to the meanings and understandings at times of breakdown over a period of time. Additionally, the dimension represented by the organization, that is, the social community surrounding the meetings and how the knowing accomplished in meetings work to organize and enhance knowing (learning) in the organization is a dynamic well worth examining. Otherwise, our understanding of multiple differing understandings and other causes for breakdowns remains on the level of knowing some of the causes for these and some understanding of how to avoid them. This type of understanding, however, detaches multiple understandings and other breakdowns into isolated and fragmented phenomena without looking at their role in learning and acquiring knowledge.

In sum, to fill the gap, this research takes multiple consecutive meetings as its data and investigates the role of multiple understandings and other disruptive phenomena in crafting knowledge in practice. Looking at multiple consecutive meetings allows visibility to the frequency and distribution of breakdowns as well as their contribution to individual learning. The methods are partially traditional as the data gathering was conducted in a multinational company using audio-recording. Another part of the established vein of methodology is observation and conversations with the meeting participants. The analysis, however, comprises two perspectives: The first is a view on the “passage of discourses across situations” (Broadfoot, Deetz, Anderson 2004 p. 201) involving intertextual analysis, and the second is an analysis that leans heavily on Kuhn and Jackson’s (2008) framework developed for investigating knowing in organizations. Also, while knowing in organizations (in practice) has recently become an interesting topic of research especially in organizational communication studies, there are no studies that look at the role of understandings in knowing and in enabling action in organizations.

1.2 Research aims

This research aims to investigate the role of multiple understandings and other disruptive phenomena (confusion, ambiguity, non-understanding, among others) within the company internal meetings of a large multinational company (MNC), and looks at

how shared understandings are negotiated in these meetings. More specifically, this research looks at the ways in which the participants of the meetings studied craft meanings together, *how* they “do things with words” (Gherardi 2006 p. 157), how they overcome the differing understandings, what are the strategies they use for claiming to know, and finally, how they contribute to acquiring and creating knowledge. Like Karl E. Weick (1995) says: “How they construct what they construct, why and with what effects are the central questions for people interested in sensemaking.” This, of course, means that this research looks not only at multiple understandings but also at the ways the participants make sense of these understandings. This also entails the examination of the ‘knowing process’, meaning how the participants of meetings “entitle themselves as knowers, gain the authority to know, and try to exercise control over what should be known” (Lazega 1992).

With its real-life data originating from live and regular meetings, this research takes cue from other meeting research in that it is decidedly *grounded in action*, orienting towards treating action and structure as mutually constitutive in organizations and organizing (Fairhurst, Putnam 2004). This research incorporates theory familiar from the realm of social practice and looks at how people *in practice* communicate to accomplish if not shared at least ‘close enough’ understanding. Further, instead of looking at individual meetings on different topics or meetings among separate companies and the discourse therein, this research primarily focuses on a series of company internal meetings (R&D, nine in total) that revolve around the same product over a period of nine weeks during which the project team is preparing for a major milestone. This means that the development of learning, understandings, negotiated understanding(s) and the ensuing knowing regarding the topics being discussed can be followed from one meeting to the next. An important aspect of this inquiry is the structural backbone provided by multiple meetings and the rest of the organization. This means the understandings that have been developed either in earlier or other meetings or in other interaction and communication are also taken into account to the degree they are manifest in the meeting discourse. Without this, the mutually constitutive roles of action and structure in organizations and organizing cannot be fully explored. So, while the data and much of the analysis pertaining to it remains on the horizontal level of *development talk* – a very concrete form of discourse – this research also maps the relation of the development talk with the other levels of discourse to indicate the role of

the vertical travel of discourses insofar as it is reflected in the meeting discourse. And as the production and development of meaning does not occur in a vacuum, void of any pressures, this research also pays attention to the ambient factor of power necessarily present in any organizational encounter.

1.3 Research questions

This study drills into the phenomenon of understanding and a breakdown in communication, and how that contributes to learning and knowing. In other words: how do individuals communicate to understand, know and learn in meetings (and partially between them) and what kinds of strategies and resources they use to make sense of problems, co-create meaning and build a base of understandings at times when there is a breakdown in communication or a mismatch in understandings. In studying the phenomenon of understanding in an organization, power is an issue that needs to be taken into account. Also, meetings as a specific way of working need to be discussed. Specifically, this study will focus on one main research question that has four sub-questions as follows:

1. What is the role of multiple understandings and other difficulties (in understanding) in meetings?
 - a. How do difficulties and problematic situations come about in meetings?
 - b. Do the difficulties in understanding become less frequent as the team progress in their work?
 - c. Do the difficulties change in nature over time as the team progresses in their work?
 - d. What is the role of the rest of the organization in creating multiple understandings?

In what follows, this study takes a purposefully eclectic approach to the phenomena of communication breakdowns due to multiple understandings and other disruptions as the organizational talk-in-interaction that is observed is so rich and colorful that it would do the discursive phenomenon great injustice to view just some slice of it. Hence, there is a

need to look at meetings in both their temporal and spatial existence without, however, losing touch with the talk-in-interaction. To borrow the words of Latour (2005, in Cooren 2007) this research “will not hesitate to sometimes move like an ant and sometimes fly like an eagle to do justice to the details of interactions” while acknowledging effects of spacing and timing, which transcend and dislocalize the here and now of the interactions (Cooren 2007 p. xvii).

The concepts that emerge as main concepts when discussing the theoretical background are understanding, knowing, sensemaking, and learning. These concepts are discussed in chapter 3. The analytical framework (chapter 4), for its part, owes its approach to two main contributors: firstly, the *framework for practice-based research of knowing*, introduced by Kuhn and Jackson (2008), and secondly, *dialogism* introduced by Linell (1998).

Data in this meeting comes from a series of internal meetings where the topic revolves around the next version of an existing software product. The series of meetings are held in preparation of a major milestone, which – when passed – also marks the kicking off of a new project. Data also comprises recordings from other individual meetings that are used for comparison. For a more detailed description of the data, see section 4.2.

2. MEETINGS – THE HEARTBEAT OF ORGANIZATIONS

Corporate life for many people in multinationals today is filled with meetings. Research reports on meetings indicate that the time managers spend in meeting varies between 25% and 80% of the overall working time (Fulk, Collins-Jarvis 2001, Volkema, Niederman 1996). As all of the research referred to above was conducted in the 20th century, a safe assumption is that the lower variable, 25%, might now be somewhat higher as discussions with business practitioners (with managerial duties) working for companies operating either globally or internationally reveal that estimations of time spent in meetings range between 30% and 50%. Already some 12 years ago, Eric Matson in Fastcompany.com forecast that “As more work becomes teamwork, and fewer people remain to do the work that exists, the number of meetings is likely to increase rather than decrease.”

In the following, I discuss the definition of meeting, that is, what kinds of characteristics do I assume the kind of gatherings of people entail that are called meetings in this research. After the definition, I introduce the research tradition focusing on meetings especially in the business context. This delimitation is important as meetings and negotiations have been widely studied in other contexts, too. However, research on inter-governmental negotiations or other international and intercultural meetings have somewhat different agendas and purposes that have an effect on the ways and means of interaction. While the focus of this research is on company internal meetings, I also discuss negotiations between companies as that research is closely linked with the present undertaking.

For purposes of clarity, the meetings discussed from section 2.3 onwards are divided into *internal* and *external* meetings. This is because there is a difference between the two types. Especially the latter type (external) often relates to what are typically referred to as *negotiations*. What’s more, division to internal and external gives additional scope to the terms in which to think about meetings.

2.1 Meeting defined

The simplest definition of meeting might be something along the lines of two or more people gathering together to exchange ideas on a certain topic. Yates and Orlikowski (1992) who see meetings typically occurring over a face-to-face medium define meetings as a genre of organizational communication that is governed by certain genre

rules. However, for a meeting to be recognized as one not all rules need to be enacted; for example, a meeting without minutes or a formal agenda can be a meeting. Some rules are, however, almost mandatory: Yates and Orlikowski (1992 p. 303) see, for example, preplanning and formal structuring devices as so binding that a chance encounter of three people at the water cooler does not count as a meeting. Fulk and Collins-Jarvis (2001 p. 625) use the term meeting to mean “the act of gathering together for a limited period of time for the purpose of communication”.

Bargiela-Chiappini and Harris, in discussing meetings as a genre, propose a generic model based on what they say is the underlying principles in the data they had gathered:

1. meetings are explicitly task-oriented and decision-making encounters;
2. meetings involve the co-operative effort of two parties, the Chair and the Group;
and
3. meetings are structured into hierarchically-ordered units (1997 p. 208).

This generic model, like Bargiela-Chiappini and Harris say, is based on the data they gathered from an Italian and a British company, and as such, it of course works for their purposes. However, as for using these principles as a generic model for other studies involving meetings, some of the principles seem relatively loose and others, for their part, restrictive. For example, while meetings are explicitly task-oriented, so is the rest of business or organizational life. Meetings understandably are a whole lot more focused in a number of terms, such as the number of people, number of topics, and objective. Then, decision-making might be one part of the meeting, but it also may be that a meeting is held purely for status updates or other information sharing purposes. Further, while the role of the chairperson might be visible and even pronounced, there are also meetings where someone is acting in the role of a facilitator, introducing agenda items or topics, or, a meeting could also almost entirely be *agenda-driven*, with the role of the chairperson being somewhat marginal. Holmes and Stubbe (2003) have similar criticism towards Bargiela-Chiappini and Harris’s definition and say that in their data (meeting materials from 80 meetings from 9 different workplaces) informal meetings seemed to be an important way of getting the business done – without necessarily always involving any cooperative effort.

Holmes and Stubbe's own definition, "*interactions which focus, whether indirectly or directly, on workplace business*" (2003 p. 59), is, however, too wide. Like the researchers admit, this definition also allow for people encountering fortuitously and taking the opportunity to discuss an issue of common interest and concern. Vuorela's (2005b p. 8) definition is almost identical: "A meeting is defined as a coming together of two or more people for a specific business purpose." To me, both these definitions seem somewhat haphazard as although the topics discussed might be the same as ones discussed within preplanned meetings following them up might be difficult. This type of encounter also lacks the element of routine which is one hallmark of the type of genre (see 2.1.2 below) meetings belong to.

While this research does not (and cannot) exhaust the topic of meetings and cover all possible company internal meetings, it has become evident that the definition of meetings within organizations (for the purposes of this research) needs to allow for a broader scope. In this research, Fulk's and Collins-Jarvis's definition is broadened to mean the *preplanned* act of gathering together for a limited period of time for the purpose of communication. The inclusion of the word *preplanned* adds the element of premeditation and scheduling that is characteristic of the type of meetings investigated in this study. All of the meetings studied had been planned ahead and meeting invitations had been sent well in advance. One could simplify the definition of a meeting to 'a communicative event occupying a space in someone's calendar involving two or more people'. The communication that takes place in these preplanned gatherings can have multiple aims and purposes. A meeting could be held for information sharing purposes, for decision-making, for brainstorming, and for regular status updates – just to mention some. One disclaimer is needed though: although seeing a doctor probably would occupy a place in a person's calendar and it involves the encounter of (usually) at least two people, I would not call it a meeting, but rather, *appointment*, as it is generally called. The purpose is not solely for communication nor is the interaction that takes place focused on workplace issues but rather, on the person's own health.

Finally, while many still associate meetings with the face-to-face medium, meeting technologies (phone conference, virtual meeting technology) are increasingly used to overcome distances and dispersion of teams. In their study dating back to 1995, Volkema and Niederman (referred to in Fulk, Collins-Jarvis 2001 p. 654) found that

only 13% of meetings used mediation devices. One cannot but join Fulk and Collins-Jarvis in their conjecture that mediated meetings will become much more prevalent. All of the nine meetings studied for this research had some mediation devices in use: Phone conference was always available for people from other countries and other remote locations as well as for people needing to leave early (and participate from their car or train for the rest of the meeting) or arriving late.

2.1.1 Meetings punctuating the ongoing sensemaking

For organizations, meetings are a matter of life and death. Meetings structure the work and are an important part in the organizing of any institution. Boden (1994 p. 82) sees the essence of meetings as comprising of “(t)alk and its turn-by-turn sequential accomplishment.” Meetings are, however, much more than that. As said, meetings also have an important role in bringing organizations about - in organizing, through talk. By looking at the talk of meetings, we can see the mesh of matrices (albeit a different one than the organizational matrix) that the meeting participants weave; the intricacies of organization is outlined against the backdrop of a meeting setting. Meetings are an essential part of the organizational sensemaking as they are the arena where the ongoing flow of actions and words are brought to if not a momentary halt at least a concentration of sorts allowing for discussion, debates and clarification of issues among participants (Weick 1995). So, while meetings structure the work and punctuate the ongoing sensemaking, so to speak, they also reflect the wider organization and the sociocultural context. The organization that is “out there” is not something that cannot be left out from the analysis as it in many cases bears on the outcomes of meetings.

2.1.2 Meetings as a genre or culture

Where Yates and Orlikowski (1992) discuss the meeting genre from the point of view of organizational studies, Linell (1998) describes *communicative* genres from the point of view of interaction studies. The definition, nevertheless, is largely similar: in Yates and Orlikowski’s (1992 p. 302) words, “(i)ndividuals invoke this genre in response to a recurrent organizational situation, defined generally by the set of organized group practices emerging from the socially defined demand for face-to-face interaction underlying contemporary organizational culture”. Although Linell (1998) discusses communicative genres in general, he could, in fact, be describing the same genre or media: “if members of a society or community often have to solve the same type of

communicative problem [...], they develop routinized ways of carrying out the interaction” (p. 239).

An important additional characteristic of what makes any communicative genre eligible as one, is that whatever communicative genre we are talking about, it needs to be routinized and institutionally congealed. In Linell’s words, “some of the most clear-cut genres are types of ‘institutional discourse’, i.e. cases of task-oriented discourse designed to deal with some specific activity, often involving professionals” (1998 p. 240).

In her doctoral thesis on discursive strategies in multicultural business meetings, Poncini (2004) argues that it is valid to take the meetings she studies as a single culture or a level of culture as the character of the group and their shared behavior plays a bigger role than, for example, the nationality of the participants. Her data and analysis is a case in point, but one should caution against thinking of all possible kinds of meetings as a single culture. In fact, there probably are almost as many meeting cultures as there are meetings.

2.2 Language in meetings

Just the other day at work, me and some of my colleagues were discussing nationalities and how they might appear at work. My Swedish colleague, who had just recently moved to Finland from China, where he had spent a number of years leading a virtual global team that was spread around the world into all major continents, said that his Swedish friends had asked him how it feels to work with Finns in a Finnish company. His answer was: “I don’t know.” The reason for this – according to his own analysis – was that he truly feels that he works in quite a unique microcosm where he himself does not think of himself as a Swede, and he does not consider his other colleagues as representatives of nationalities either. As we were talking about this, he reminisced on a meeting that took place in China where he was working together with X (female, from Malaysia), Y (male, from Italy), and Z (male, half British, half New Zealander) without thinking for a second anything other than the topic they were tackling with. His most prominent memory of that meeting was how well and efficiently they worked together.

The story above, while on the one hand a reflection of what it’s like to work in a global company, on the other hand verifies in its own way what research has known for quite

some time already: people resort to the identities that are most salient for the work at hand – typically their professional identity. There are, however, certain characteristics within global companies that are worth discussing: the common language (a safe bet is that in nearly 100% of global companies, the common working language is English) and the corporate culture. The story above indicates that there is something in the culture that people recognize as being unique as what transpires for them is a ‘unique microcosm.’ In the following, I briefly discuss English as the working language in an organizational context.

2.2.1 English as the language of business

In modern multinational corporations, not only do people in organizations spend a lot of time collaborating and doing teamwork (a lot of it in meetings), this collaboration requires interacting in a language that is often something else than one’s own native language. Typically, the language chosen for multinationals is English. For the particular type of lingua franca English spoken within businesses, a Finnish research team has coined the term *business English lingua franca* – BELF (Louhiala-Salminen, Charles, Kankaanranta 2005). Charles (2007 p. 265) mentions that the owners of BELF are the international business discourse community – meaning all those non-native speakers of English in the business context who use English in their work “to get the jobs done”. While these people are not native speakers, they get the job done, and use English while doing that. Contemporary BELF research views these people as communicators in their own right instead of along the lines of native or non-native speakers (see e.g. Lampi 1986, Charles 1996, Vuorela 2005b). In the following, I discuss the use of English as the chosen language of companies.

2.2.2 Spread of English

A reflection of how widely spread the English language is the fact that studying English is no longer just important for Chinese students – it is the bare minimum (see e.g. <http://www.teachabroadchina.com/>). As is also commonly known, English is one of the official languages in one of the world’s most populated countries: India.

The use of English language within companies is likely to further increase as the internationalization of business environment expands. For example, when looking at mergers and acquisitions taking place within the European Union (EU), in 15% of the cases one counterpart originates outside of the EU (European Commission, 2001). Most

often in these cases, the home economy of the acquiring or the acquired company is the US. International intra-EU mergers and acquisitions account for 29% of all cases. Furthermore, international mergers and acquisitions are expected to increase.

Whether the acquiring or the acquired company resides in an English-speaking country may or may not play a role in the choice of the common working language. Some intra-EU mergers and acquisitions, for example, have led to English being chosen as the common working language. A case in point is Nordea, a Nordic finance services concern with some 35,000 employees in Finland, Sweden, Denmark and Norway. Nordea was first born from the merger of the Finnish Merita and the Swedish Nordbanken that took place in 1997. Vaara et al. (2005) have looked at how corporate language policy decision and the language skills in the chosen language become empowering and disempowering resources in the organizational communication of Nordea. The initial choice of language – Swedish – which was defined at the outset of the new merged bank was later characterized as an “accident” and a “strategic mistake”. The decision to use Swedish as the company language evoked a lot of discussion inside the company and it was well publicized in the media (selected Finnish media were investigated), too. Researchers found that the choice of language resulted in Finnish-speaking suffering in interaction and communication while Swedish-speakers became professionally more ‘competent’ (perception). This led to segregation in career progression, and the revival of Finnish-Swedish national confrontation, among other things. In the case of Merita and Nordbanken – the subsequent Nordea – languages that were immediately available were Finnish and Swedish as the two languages were the ones official to the sovereign states within which the two companies operated. Interestingly, these languages were seen as vessels promoting the nationalist ideology although the official languages in Finland are both Swedish and Finnish. This is explained by the fact that the Swedish spoken and written in Finland was viewed as stiff and old-fashioned in contemporary Sweden. The decision to change the company language into English was finally announced in March 2000 when the Danish Unidanmark merged with Nordea.

Taking into account the increasing number of mergers and acquisitions and the trend towards bigger entities, it may be safe to assume that English usage is likely to increase as the lingua franca of business life. Correspondingly, the number of people speaking English as a foreign language within these companies increases. Thus, the results of

research on understandings should be applicable to any company that uses English as their official language and whose employees come from a variety of non-English-speaking cultures.

English as lingua franca brings with itself additional challenges and multiple understandings between the participants in meetings. People whose native languages are different may have very different skill levels, accents, vocabularies; they may use very different intonations, tones of voices, and so forth. Business practitioners are likely to agree that multiple understandings, some of them could even be called misunderstandings, are commonplace and even a well-recognized occurrence in companies where English is used as the common working language. However, according to Poncini (2004 p. 23), “existing research often focuses on difficulties and misunderstandings as opposed to determining what might facilitate communication.” Guidelines as to how to improve communication in meetings within companies surely exist, but the communication within company internal meetings deserves more formal research. Although any guidelines are helpful, methodological investigation has great potential in providing such insight to company internal meetings as to help in improving guidelines. This, in turn, brings additional value to practitioners by hopefully providing tools and methods for improving communication within meetings. In the following, I will concentrate on meetings and how they have been studied. The division to internal and external meetings can be argued to be partially artificial as the line between internal and external can be drawn in many ways. However, the division in what follows has helped me to categorize the research in some way.

2.3 Internal meetings

Internal meeting is a term for the kinds of meetings that are investigated in this research. With the term internal meeting, I refer to meetings that take place internally in the company (quite physically as well, in the premises where only employees have access to), with participants being either employees of the company or employees that directly work for the company – providing a service for which their salary is paid by some other company (partner or subcontractor, for example). Employees – regardless of whether they are employed by the company directly or indirectly – all have signed a non-disclosure agreement and have access to not only premises but also to relevant systems and data that they need for their work.

In the following, I look at research that has focused on what I have termed internal meetings. The ones that bear a great deal of resemblance to the current undertaking receive more attention than others.

2.3.1 Search for coherence in corporate meetings

Bargiela-Chiappini and Harris (1997) have looked at the internal meetings of an Italian and a British company, both multi-nationals within the telecommunications industry. Additionally, Bargiela-Chiappini and Harris touch upon an Anglo-Italian joint venture and discuss the difficulties the managers faced when made to work together.

The major part of the study concentrates on the discourse of meetings that took place either in Britain (in English) or in Italy (in Italian). While the companies in the two countries were operating within the same industry, the meetings studied were somewhat different: in Britain, the researchers first had access to so-called Business Action Team meetings within the personnel function whereas in Italy, their participation was limited to the quality assurance department. Due to the dissimilarity of meetings, the researchers later gained access to so-called Business Improvement Programme meetings (with quality improvement as an underlying theme) to allow for comparison between the meetings in the two countries.

Although the research setting in the two countries would imply that the study focuses on cross-cultural features of the meetings studied, the majority of the study remains primarily in issues that are intra-textual or intra-cultural. According to Bargiela-Chiappini and Harris, this is due to the nature and content of their data, basically directing them to this approach. Nevertheless, the approach in both companies is comprehensive and involves the use of various data sources (meeting recordings, interviews of people in QA departments of each company), combining both quantitative and qualitative methods.

As a general frame for their study, Bargiela-Chiappini and Harris adopt Weick's sense-making, which is a process that people engage in through language in their pursuit of *coherence* (Bargiela-Chiappini, Harris 1997 p. 58). Very early on in their study, Bargiela-Chiappini and Harris, however, realized that although they were allowed access to the meetings and were able to record the meetings, a "vast amount of shared knowledge" remained beyond their reach. They note that while coherence operates on

several interdependent levels, those being intra-textual, inter-textual and contextual, they themselves only had access to one: the intra-textual. This led to inevitable problems with interpretation of the data, and hence, mostly intra-textual level only is an understandable solution. Bargiela-Chiappini and Harris corroborated their claim on the inaccessible bulk of shared knowledge by having some British and Italian native speakers listen to the recordings of meetings (or read transcripts) and the results supported their suspicions: the recordings did not make sense to non-business listeners and the transcripts were hard to interpret for both business and non-business listeners. The problem is not new for researchers working with professional discourse in general, and hence, as suggested by Holmes and Stubbe (2003), for example, ethnographic techniques must be used to gather detailed background information. As Holmes and Stubbe say (2003 p. 10), rich ethnographic description is an essential analytical tool for providing the contextual information required to understand much workplace talk.

So although Bargiela-Chiappini and Harris had the access to the companies – and this is generally notoriously difficult for researchers to achieve – their outsider status rendered their interpretation difficult. Had the meetings Bargiela-Chiappini and Harris attended, observed and recorded been more technical in their content, their problems might have been even bigger. Still, a large proportion of what is involved in sense-making (according to Bargiela-Chiappini and Harris) and the resulting coherence remained uncovered in their study.

The approach Bargiela-Chiappini and Harris settle on, the pragmatics behind pronominal, lexical and thematic choices, however allows for a rich analysis. The interpretative framework proposed and used is divided to the main task (structural dimension), the instrumental theme (textual dimension), and the relational theme (social dimension). By looking at thematic development by means of pragmatics, Bargiela-Chiappini and Harris sought to capture the dynamics of discourse at intratextual and intertextual levels.

Given the pragmatic approach, Bargiela-Chiappini and Harris looked into what they say are “some of the most salient textual manifestations of coherence, i.e. theme, personal pronouns, metaphoric language and discourse markers” as they were realized in selected meetings (1997 p. 69).

Although Bargiela-Chiappini and Harris had access to what were called Business Improvement Programme meetings in the British company to allow for comparison with the Italian meetings, their analysis focuses on the Business Action Team meetings dominated by the personnel department people. This choice is a valid one as it allowed the researchers to investigate longitudinal thematic development and intertextuality with the topic of the meetings remaining the same: the performance related pay and its possible reception among the employees. While Bargiela-Chiappini and Harris are able to follow the development of the theme (performance related pay) and its eventual breakdown, the explanatory power of their description remains rather weak. There is a reference to a deterioration of the internal climate of the company due to a wave of redundancies that affected managerial positions, too, but otherwise, what is going on in the rest of the organization remains hazy.

As to metaphoric talk, it seems that while it was used in the Italian meetings, it was missing from the British ones. So instead of metaphors, the researchers explored coherence by investigating *symbolic clusters* (italics in the original) represented by 3rd person pronominal references. The initial clusters as regards addressees are ‘managers’ and ‘workforce’ which effectively evens out any political aspects or power games certainly relevant in any organization. Bargiela-Chiappini and Harris later note that there should be a third set of referents added to the symbolic network, namely trade unions. All in all, the analysis remains on textual level and there is very little reference to how, for example, referencing is tactically used in discussions.

As regards power and its use in meetings, Bargiela-Chiappini and Harris do note that turn-taking dynamics (length and number of turns) are related to the status of the individual, and can be taken to be indicators of power (1997 p. 202). However, hierarchical status does not seem to play a role in the level of formality of meetings as the researchers found that the perceived relevance of the subject matter to individual or departmental interest had more effect on formality than respect for hierarchical status (1997 p. 207).

So, although Bargiela-Chiappini and Harris (1997 p. 37) claim that meetings in many organizations are at the heart of sense-making process, deliberately attempting to impose order on what Bargiela-Chiappini and Harris see as the confusing and confused variety of experience that characterizes much of organizational life, they concentrate on

the intra-textual facet of the meetings. This is not by design or choice but by their status as outsiders, rendering their background information limited and shared knowledge practically non-existent.

2.3.2 Power and politeness in meetings

Holmes and Stubbe's (2003) work on power and politeness draws on a sizable bulk of data that was collected as a part of the Language in the Workplace Project conducted within Victoria University in New Zealand. Their meeting data comprises both video and audio recorded materials from large commercial and semi-public organizations as well as factories. The whole bulk of the data comprised some 2000 spoken interactions from 420 participants in 14 different workplaces (Holmes, Stubbe 2003 p. 13); the data used for studying meetings comprised 80 meetings from 9 different workplaces. As discussed already while defining a meeting (see 2.1), the researchers also counted fortuitous encounters that led to a discussion of common interest and concern as meetings. What follows from this is that participation to some 'meetings' was open in the sense that anyone could participate.

Holmes and Stubbe's approach is sociolinguistic and in their analysis of power and politeness in meeting talk focuses on the strategies used for managing meeting interaction. They study two extreme cases in detail and identify strategies such as agenda setting, summarizing progress, keeping the discussion on track and reaching and ratifying decisions while also looking at how the face needs of participant are attended to in the process of the meeting. Holmes and Stubbe clearly have chosen their cases because they are so highly contrasting: the first one is very formal with the chair following the agenda consistently, focusing on the topics and being overall very 'businesslike' and goal directed. The second, for its part, is in many ways more democratic, allowing time for discussion with all participants asked to contribute; the agenda progression is tended to but in much less overt and more subtle ways. Both meetings are deemed to be very effective although the chairs used very different strategies.

Holmes and Stubbe discuss a variety of ways to 'do power' starting from the blunt, direct and blatant ordering available for the people in power and related to their status they also mention expert power that those people with expertise within some field can wield. Additionally, they discuss some more subversive strategies that those in less

powerful positions can use, such as initiating digressions or contesting ideas. While all these strategies are valid, they possibly overlook the more subtle strategies that can possibly be identified by studying meetings in more detail. And although Holmes and Stubbe emphasize the need for ethnographic techniques, and stress that detailed ethnographic information is essential to any meaningful analysis, the organization that surrounds the meetings studied is notably absent from the analysis in the two case studies – the analysis stays within the meeting, so to speak.

Holmes and Stubbe also quite straightforwardly borrow the concept of ‘community of practice’ from Wenger (see 3.4) and seem to equate the concept with a ‘workplace’. There is no discussion on learning and sense-making which is the outcome of engaging in whatever joint enterprise.

2.3.3 Meetings – bringing organizations about

As said, language – and the inherent signs and symbols – are at the heart of all communication. Language in organizations appears in many forms such as texts in documents and online media, audio-recordings (podcasts etc.), and videos – just to name some. Deirdre Boden (1994) approaches the organization through talk: in her book, *The Business of Talk, Organizations in Action*, she looks at how people in organizations “talk” their organizations into being (1994 p. 14) and the structure is borne out of action. Although Boden approaches her subject, talk in organizations, via means of conversation analysis, her focus is on organizations in “the broadest sense.” This means that although her materials come from meetings and telephone calls, she considers the wider organization while considering, for example, how information is transmitted and – maybe more importantly – transformed through talk. Since no information is static or neutral, it cannot simply be communicated. Boden discusses the imperfectly understood and unevenly distributed flows of information, and notes that *understandings* and how they are achieved are central to everyday life (1994 p. 18). Further, while noting that understandings involve a constant updating – meaning, at the same time, that they are constantly shifting – Boden, however, does not really enter into the realm of understanding and knowing. It seems, also, that for Boden the term *understanding* and *meaning* denote the same as she points out that meanings do not occur as isolated cognitive phenomena in the heads of individuals, but are rather constructed interactively and locally.

As locally produced talk and local language practices are the salient constituents of organizations, meetings are where organizations come together (Boden 1994 p. 81). Boden looks at the interaction in meetings and studies, for example, the structured sequences of openings and closing of meetings as well as the turn-taking that takes place in between. Although Boden says that face-to-face meetings function as routine encounters, they are, nevertheless vital. Like she says: “[c]aught in a meeting and connected through a series of interactions across time and space are the people, ideas decisions, outcomes that *make* the organization” (1994 p. 106). Hence, meetings have an important role in bringing organizations about – in organizing, through talk. To use a metaphor from Boden, by looking at the talk of meetings, we can see the mesh of matrices that the meeting participants weave. In talk, we can detect not only the intricacies of organizations outlined against the backdrop of a meeting setting but also the multiple understandings that are produced and reproduced within the mesh created by meeting encounters. In other terms, if an organization were a brain, meetings are the synapses and neurons relaying the impulses of talk which serve as the vessels of ideas and thoughts. Given this ability of people in interaction of creating and recreating their organizations and the links between them, “*cross-multiplied* over still broader stretches of time and space, these actions and reactions may indeed appear as "structure," as enduring, solid and real” (Boden 1994 p. 205).

Boden, whose own ethnomethodological research covers talk in business extensively, quotes March & Olsen (1976) when considering what both theories and research on organizations need: “What we need is “a theory that considers the timing of different individual actions, and the changing context of each act,” so that we can understand a “much more interactive, branching, and contextual set of connections among participants, problems and solutions...” (1994 p. 208).

2.4 Conversation analytic approaches

Conversation analytic (CA) approach is a denominator shared by a number of investigations of workplace interaction. In the following sections, I explore the approach and present the approach as it has been used in meeting research.

2.4.1 Conversation analysis as an approach

Conversation analysis – the creation of which is largely attributed to an American sociologist, Harvey Sacks and his colleagues (most notably Schegloff and Jefferson) –

looks at *turns* that are periods during which one speaker holds the floor (Lakoff 1990). The principles of the model of conversational turn-taking are relatively simple, yet powerful. According to Boden (1994 p. 67), “the methodology has always been comparative, and everyday conversation is taken to be a kind of “bedrock” of all interaction, a primary, even primordial site of sociality.” Boden then lists the essential features of the model:

1. one speaker speaks at a time;
2. number and order of speakers vary freely;
3. turn size varies;
4. turns are not allocated in advance but also vary;
5. turn transition is frequent and quick;
6. there are few gaps and few overlaps in turn transition (1994 p. 67).

Koskela and Piirainen-Marsh (2002 p. 258) also encapsulate the method succinctly in saying that the method aims at describing the organization of social activity from the viewpoint of interaction. Conversation analysis investigates those linguistic events, acts and conventions that are used for creating, interpreting and modifying meanings in a variety of situations. Conversation analysis sees language and conversation as meaningful activity where speaker and hearer are inseparable, and both need to be taken into account. Also, a salient feature of conversation analysis is the fact that expressions and speech acts in conversation are permeated by context. This means that the context is present in what is said (Koskela, Piirainen-Marsh 2002 p. 262).

Koskela and Piirainen-Marsh (2002 p. 269) further explain that from the point of view of conversation analysis, meaning is socially produced and it is related to a context created by interlinked activities; there is no difference between primary and secondary meaning, and all linguistic expressions are indexical (knowledge about the situation, context, speaker, previous discussion, among others, all contribute to meaning). To interpret these expressions, one always needs contextual information. This context, however, is not what Boden (1994 p. 74) calls the “obvious” context, the “outside factors” or social structure, but the actual activities that occur in their actual sequence. Similarly, the interactants themselves have a bearing on how meaningful conduct is produced and understood in interaction. Like Pomerantz and Fehr (Pomerantz, Fehr

1997) say, people's conduct is not entirely idiosyncratic; if it were, coordinating activities with others would not be possible.

Conversation analytical research has proven that an essential part of meaning is derived from sequences within conversation (Koskela, Piirainen-Marsh 2002 p. 270). Depending on where an expression appears within a sequence dictates its meaning, and in this context, the meaning cannot be controlled by the speaker as the hearer's interpretation is an essential part of the process with which common understanding is achieved. Regardless of the type of interaction – whether it is casual or institutional talk, for example – the interest of conversation analysis is in explicating the methods or procedures people employ to make sense and be understood by others (Pomerantz, Fehr 1997).

As we shall see through the examples in later sections of this chapter, conversation analysis is a powerful 'tool' for analyzing what goes on in interaction at the level of talk. Conversation analysis, however, stays on the level of talk and has little explanatory power in the face of such an occurrence as, for example, the interpretation of the word 'forhandlingsansvarlige' in Nielsen's (p. 37) article. This is the kind of situation where one would benefit from supporting materials (interviews) or extensive background information (knowledge of labor conditions and possible agreements). Further, while one can picture how certain features (such as influencing others) might have a bearing on the wider organization, it is not discussed.

The power of conversation analysis lies in its focus on the recursive features of talk. In this research, I use notation that closely albeit maybe not as accurately follows conversation analytical tradition. However, the actual analysis leans heavily on a framework developed by Kuhn and Jackson (2008, for more on the framework, refer to section 4.3 on page 97). I shall also amend the analysis by looking at the organizational context, and not only at the immediate context of talk. Like Boden says, "the *recursive* features of both talk and its organizational context *matter* – to the talk, as well as to how the organization is created and sustained through talk" (1994 p. 75).

Conversation analysis has recently also been applied to numerous studies of company internal meetings. Two Nordic companies, Stora Enso and Nordea that merged at the beginning of the century have received a lot of CA attention. Kangasharju (2007) focuses on interaction and influence and, for example, meeting conventions and

decision-making, whereas Nikko (Nikko 2007) looked at how meanings are produced in interaction after the company language had been changed into English. Given that the studies approach their target using conversation analysis the analysis operates on a micro-level where the conversationalists' interaction is the focus of attention. Kangasharju's approach is ethnomethodological conversation analysis (CA) that does not presume a pre-existing theoretical model; instead, the phenomena investigated are approached via data.

Nikko (2009) has also used the data mentioned above in her doctoral thesis on dialogic construction of understanding in corporate meetings. In it, she investigates how the participants of these internal meetings construct shared understandings of the overall structure of the meeting activity, how they construct understandings locally, and what types of institutional orientations the participants display while constructing shared understandings. More specifically, she looks at collaborative completions and code-switching (using Finnish, Swedish, or English) and their role in building intersubjectivity and the institutional context. While Nikko discusses and analyzes the participants' orientation to institutional aspects, her focus remains inside the meeting. Although the talk within the meetings as an interactional practice connects the content to a larger institutional context, the relevance of this is not elaborated further. This is, of course, partly owing to the methodological and theoretical approach: conversation analysis.

2.4.2 A surge of CA research

As mentioned in the introduction, a recent issue of *Journal of Business Communication* was completely devoted to investigations into 'meeting talk'. In their introduction to the issue, Asmuß and Svennevig (2009) lay out the scope which covers research on social relations, emotions, identity construction, decision making, and the social organization of meeting talk. The approach in all but one is conversation analysis which gives an idea of the prevalence of the approach. In the following, I briefly discuss those articles that discuss meetings taking place in the business context.

2.4.3 Interpretative management

Nielsen (2009) has studied managers' interactional strategies by looking at – in her words – “how middle managers interact with their employees when teaching them to think and act in accordance with the strategic interests of the organization” (2009 p. 25).

By saying “when teaching them to think and act”, Nielsen makes the activity sound oddly intentional – as if the managers’ tasks involves *teaching* employees how to think and act. One would think that this ‘teaching’ takes place quite unnoticed to the participants.

Nielsen’s analysis is based on interaction originally taking place in Danish which makes following the analysis a bit tricky, and in some parts, one just has to trust her analysis of what is actually going on. One’s trust, however, falters at one point where Nielsen discusses the acquisition of the organizational language. Nielsen’s example is from a meeting taking place in the personnel department of a large service company, and the discussion revolves around laying off 630 employees. The word or words to be acquired are *forhandlingsansvarlige* (negotiation responsible) and Nielsen explains that this is not part of the Danish lexicon, and according to her, it is apparently part of the organizational lexicon of the company. She notices that the interactants find it important that the term used is not simply ‘responsible’ but ‘negotiation responsible’ and says “the difference seems to be whether you hold the responsibility for implementing the firings or hold the responsibility for negotiating the firings” (2009 p. 33). Nielsen’s interpretation of the situation is interesting and yet, at the same time, a bit troublesome. Here, one yearns to learn more background details. While Denmark’s labor legislation might be a chapter of its own, one wonders if the term, “*forhandlingsansvarlige*” might have something to do with some kind of a collective agreement.

Another interesting piece of analysis concerns the articulation of the interpretative management process, where the manager (from the same personnel department meeting), according to Nielsen, defines a reality and establishes a use of language. In the example, the manager denotes the laying off as ‘adjustment’, which he says is the word to be used. While I agree that the expression, like Nielsen says, establishes a connection to a microeconomic discourse, her interpretation of its use is interesting: “The word presupposes that the staff has hitherto not been adjusted (i.e. the number of employees has been too high, and that this malfunction is now being removed)” (2009 p. 35). According to Nielsen, the word choice defines not just how to talk about layoff and downsizing, but also how to think about layoff and downsizing. I find the interpretation of the word ‘adjustment’ as presupposing that the staff has hitherto not been adjusted rather interesting; and, to me, this interpretation does not seem plausible. It may well be that the company has never laid people off before, but I fail to see how

the word ‘adjustment’ indicates that. Then, surely the number of employees has been ‘adjusted’ before, but we generally do not talk about *recruiting* as adjusting.

While the rest of Nielsen’s discussion of leaders and managers as communicators is highly plausible, the examples above create certain distrust on the chosen approach. It may well be that Nielsen is a complete outsider and, hence, could be interpreting the situations differently. In cases like these, one wonders if the focus on individual words might sometimes lead one astray.

2.4.4 Influencing decision making

Clifton (2009), for his part, uses conversation analysis and membership categorization analysis for seeing how different participants in a meeting (private for-profit language school) craft their discursive identities and use these identities as discursive resources for influencing others – and, in particular – the chair, who has the discursive identity of ‘decision announcer.’

Clifton shows how participants are dependent on the identities that are made relevant to the talk for influencing each other. As such, no one possesses influence, but it is rather a set of potentials that can be negotiated. According to Clifton, the decision announcing, however, is bound to the chairperson identity, and this, in turn, gives the chairperson access to resources not available for other participants.

In his earlier study, Clifton (2006b) analyzes the ways and techniques a younger and more inexperienced member of the team uses to gain incumbency as a competent team member within the same setting (a pedagogical meeting in a language school in northern France). Clifton’s approach here, too, is conversation analysis (CA), and to account for the “why is this utterance here” question, he combines it with membership category analysis (MCA). In discussing his method, Clifton points out the relevancy of the researcher’s understanding of the institutionalized talk and mentions that he himself has been working in the same language school a number of years and, thus, has knowledge of what the meetings are about.

2.4.5 Emotions – laughter and humor

Kangasharju and Nikko (2009) also continue with conversation analysis when analyzing joint laughter and emotions in meetings that took place in the meetings of two large Finnish-Swedish corporations (Stora Enso and Nordea) shortly after they had merged

together. Their analysis shows that joint laughter is not only used for humor but that it has some specific functions in meetings. First, managers used laughter for creating a relaxed working climate; second, it was used for closing down a topic or a phase in a meeting; third, joint laughter – when invited by team members – can be used for diminishing tension and stress in the face of a demanding task assignment; and fourth, joint laughter was used for accomplishing remedial work in a problematic or face-threatening situation.

2.5 External meetings and negotiations

The term *external meeting* used in this research closely translates to what is often referred to as negotiation. External meeting indicates that the participants represent different companies, and there can be attendees from two or more companies. The companies that are meeting each other either to negotiate a business deal or other proposition or to decide over matters for which both or all share an interest. These two parties may already be quite close partners or collaborators, but in what I term external meeting, each drive towards their own purposes – albeit, often, with a win-win target in mind.

In what follows, I discuss research on external meetings, which as a bearing on my own research.

2.5.1 Discourse vis-à-vis a business relationship

Charles (1994) has looked at two-party sales negotiations between companies residing in the UK and Finland with a focus on the business relationship and its reflection in the interaction of the negotiation. Charles's approach is interdisciplinary, using studies from disciplines such as business management, sociology, and social psychology as well as linguistics. It is one of the first studies – if not *the* first – that looks into extralinguistic business context and its bearing on the discourse meaning. Like Charles (1994 p. 1) says, adhering to the linguistic perspective only leads to the negotiation discourse itself being taken to contain everything necessary for its interpretation. In 1994, Charles felt discomfort over an analysis (the linguistic one), which, while powerful in detailing the elements and forces of interaction, fails to account for the 'bigger picture' – in Charles's case, the business context and the relationships between buyers and sellers in particular. In 2001, Cooren (2007) and his colleagues tackled a somewhat similar challenge and decided to do an analysis of a series of management meetings (filmed for a

documentary) from both the perspective of language and social interaction (LSI) as well as organizational communication (OC).

For tackling her data, Charles develops a descriptive framework that she combines with the layers she identifies as relevant for the context within which the buyer-seller negotiations take place: these layers – a woof (or weft) of sorts – comprise the superstructural (the negotiating relationship), the macrostructural (the negotiation event itself) and the microstructural (interaction in negotiations – Charles calls these ‘cycles’). The warp that goes with this woof is the descriptive framework (applied to all levels described above) consisting of I (initiation), D (development), and E (ending). These parts, phases or sections are also recognized by other researchers who call them opening – debating – closing (Bargiela-Chiappini, Harris 1997), opening/introductory – central development – closing phases or sections (Holmes, Stubbe 2003), or opening – core – ending (Vuorela 2005b).

As to the internal coherence of meetings and topic management, Bargiela-Chiappini and Harris did identify exchanges and moves within the phases of the British but failed to do the same for the Italian ones, which to them seemed looser. While this could, of course, be attributed to certain cultural traits related to national culture, it could perhaps have to do with different tactics used in running the meetings (on the part of the Chair). Holmes and Stubbe (2003 pp. 68-69) identified two major patterns in the topic management of the meetings they analyzed: one was linear where the flow of the meeting closely followed a written agenda and proceeded between topics in a uniform manner. The other pattern was ‘spiral’ or ‘cyclical’ where the same point often recurred several times (taking the argument further each time). The latter, according to Holmes and Stubbe, was used in meetings where the team was, for example, exploring a range of possible directions for their activities over the next few months. It seemed that this approach helped in achieving other goals, such as greater involvement from the group resulting in a higher level of ‘buy-in’. Charles (1994 p. 100) also notes that in her data, the negotiators’ progression was cyclical as opposed to linear or sequential. Charles discusses the rhetorical function of the cyclical patterns as well as their role in the referential mechanism of topic organization, but leaves the ‘superstructural’ function with lesser notice. It would seem safe to assume that the cyclical pattern possibly also helped in lubricating the wheels of the relationship especially as one reads Charles’s analysis of how the negotiation is organized and the role of power in it.

Like Poncini (see below, 2.5.2), Charles (1994) also identified tactical strategies, such as expression of empathy, understanding and satisfaction sellers used when trying to elicit information. Charles shows how these tactical strategies are used to save one's "professional face" (a concept she introduces in this research) especially in negotiations where the business relationship is new. In the old relationships, the strategies rely heavily on personal and social face-saving strategies.

Charles's investigation into power in negotiation is not altogether dissimilar with what Holmes and Stubbe have done later (see 2.3.2). Charles studies the way the negotiators use discourse to express power and to "produce intended and foreseen effects on others" (Wrong 1979 quoted in Charles 1994). The negotiators achieving their purposes on the long run ('macropower' in Charles's study) use 'the language of the powerful' as opposed to 'powerful language'. Short-term victories, for their part, are achieved using 'micropower' (1994 p. 210).

The language of the powerful, according to Charles, is successful (in terms of power) in, for example 'procedural language' and 'procedural moves' with which the main negotiators in new relationships can assert their powerful position (1994 pp. 221-227). Interestingly, Charles found that the amount of procedural language lessens as the relationship grows older and it tends to be less direct.

In Charles's study, topic introduction turned out to be an interesting battleground as the seller in one negotiation failed to initiate a topic despite a seemingly powerful language used. Like Charles says, failure to initiate a topic could depend on a number of things (weakness of competing elements, the strength of the utterance itself, power vested in an interactant) – all of them, however, linked with power. Nevertheless, "simply signaling a topic introduction is not necessarily a powerful enough strategy for successful topic introductions" (1994 p. 233). Topic introduction is very close to what Holmes and Stubbe identify as 'setting the agenda' (2003 p. 72) that is used for controlling the discourse. According to Holmes and Stubbe, setting the agenda is a controlling mechanism that is also available for other meeting participants: for the less powerful, it is a way of resisting authority and of subverting established power structures.

Even more interesting are Charles's analyses of 'weak metalanguage' and silence; in the case of 'weak metalanguage', especially, by using a combination of directness and

hedging, a speaker resorts to a strategy of ‘tactical deference’ that proves to gain him long term success. Silence, for its part, may force the other speaker to continue talking about something he wishes not to talk about (1994 p. 238).

Charles’s intercultural comparison of the British and Finnish negotiations reveals some differences (as one would perhaps expect), but like Charles herself says, she only had one Finnish negotiation (old relationship) for analysis, rendering it somewhat narrow.

2.5.2 Discursive strategies

Poncini (2004), for her part, focused on a multiparty and multicultural business meeting (involving an Italian company and its approximately 25 international distributors, individual companies all, from 12-14 different European countries), shedding light on meetings having their own culture (or a level of culture), and how these shared cultural traits are visible or discernible in the language – that Poncini analyzes as a series of speech events and shifting frames. Poncini’s approach involves concentration on linguistic and interactional features of meeting discourse, and pays attention to, for example, the use of the pronouns *we*, *you* and *I*, as well as the use of specialized lexis.

Although Poncini’s approach resembles the one of Bargiela-Chiappini and Harris in that she studies personal pronouns, among others; where Bargiela-Chiappini and Harris investigate their contribution to the degree of formality, Poncini focuses on the way personal pronouns indicate the nature of the group and their relationships. But where Bargiela-Chiappini and Harris focused on the development of instrumental and relational themes, Poncini looks at a variety of linguistic and extra-linguistic aspects that seem to contribute to the sense of ‘groupness’. In addition to personal pronouns, she looks into specialized lexis, evaluative speech used for building consensus for image and strategy as well as for managing participation and construing roles. Finally, she pulls all the analyses together and shows how different interactional strategies combine to position participants into different roles which she further groups into three categories of ‘frames’ (at-meeting, outside-meeting, other), a notion developed by Goffman (1974, 1981 referenced in Poncini 2004).

Poncini’s investigation into interactional strategies is highly interesting and the way she combines the different analytical approaches to indicate the development of groupness or a culture is thorough. Her research provides some glimpses to the strategies speakers

(or, at least one speaker) use for, for example, allowing hearers a resource ('we-ambiguous') with which they can include themselves with a positive future vision (Poncini 2004 pp. 130-143); another device is what Poncini terms a *strategic evaluative summary* (2004 p. 243, italics in original). According to Poncini, strategic evaluative summaries are used by the company speaker to manage participation and often contain an evaluative element. Although the strategic evaluative summaries probably are a conscious choice of the speaker, possibly because of past experience and previous successes, this is not spelled out.

Vuorela (2005b), has examined how a sales team prepared for a client negotiation by agreeing over an explicit interactional strategy detailing how to conduct the negotiation. For example, the team Vuorela studied agreed that if one of them has difficulties in answering buyer initiation, another team member initiates a defensive new topic. Other, explicitly agreed strategies included hindering communication on an unwanted topic and working as a team to gain floor and discuss the topics the sellers have on their agenda.

Where Poncini does not discuss the element of power involved in these strategic summaries, Holmes and Stubbe do (2003). In the materials they analyzed, strategic summaries were devices used typically by more senior participants to 'do power' and thus control the development of the interaction. For example, in decision-making, summarizing gives the person doing the summarizing influence over what is overtly recognized as having been agreed (Holmes, Stubbe 2003 p. 77). Further, while Poncini does discuss areas of conflict – either on the level of interaction or themes – she does not talk about the social relevance of conflict and its relation to power. In his discussion on an information sharing meeting taking place in a relatively big Swedish company, Alvesson notes that "power is most relevant in explaining the absence of conflict" (1996 p. 64). This is the result of symbolic or ideological power: people voluntarily obey certain actors and take them as authorities. Conversely, one can say that in the presence of conflict, one is probably witnessing a power struggle or a discussion (if it's talk, interaction) between parties that are more or less equal, and have the 'means' to challenge one another.

2.6 Meetings in other organizational contexts

In this section, I describe research that has been conducted in other organizational contexts besides companies or corporations. Examples come from a Swedish hospital (team meetings) and a British embassy in Belgium.

In recent times, research in internal meetings in various organizations has increased: Lundgren (2006) has looked into meetings taking place in a clinic for rehabilitation medicine at a Swedish hospital where she has studied a multi-professional team's meetings and the ways in which the split, or double reciprocity (the patient and the Social Insurance Agency) on the one hand and the scatteredness of information among participants on the other shape the team's communicative practices. Lundgren's analysis shows how the two "imperatives" (double reciprocity and scatteredness of information) influence the team's communicative practice, and, like Lundgren explains, the focus on *relevant information* ensures a decision-making process where all participants play an equal role that is premised on their professional knowledge and expertise, not on their age, sex or standing in the organization.

Van Praet (2006), for her part, reports her findings after the analysis of a series of interviews she has conducted at the British embassy in Belgium. Her viewpoint is refreshing as she examines the meeting (or rather, a particular meeting convention within the embassy) from the point of view of participants: the one of the Ambassador's (enacting power) and the rest of the staff (degrees of acting upon power).

Van Praet first analyzes the Ambassador's interview by using two approaches, one, a linguistic-descriptive analysis within the framework of Appraisal Theory, and other by means of content analysis. The system of Appraisal Van Praet uses for analyzing the Ambassador's interview seems to be particularly powerful in opening up the explicit and implicit emotional, ethical and aesthetic evaluations the Ambassador holds as regards the meeting, and the content analysis further corroborates the findings. On the one hand, the meeting is a venue for information sharing where the values of solidarity and equality are enacted, but on the other hand, the hierarchical status differences of people in various positions are strictly held on to.

The interviews with the rest of the staff reveal the other side of the coin; while some respondents faithfully echo the Ambassador, others question the usefulness of the

meeting. Van Praet reveals a whole new repertoire of differing interpretations as to the meaning of the meeting starting from impressing the boss to advertising what one is doing. It becomes clear that the meeting is “his meeting” and all the rest are either his audience or simply working towards him. However, the spirit of collegiality, solidarity and equality – the values that the Ambassador endorses – do not come about on his say-so.

Van Praet (2009) continues on the analogy of performance and audience by discussing Goffman’s dramaturgical approach to interaction in a more recent article that uses the same British Embassy meetings as the data. Van Praet analyzes the various dramaturgical techniques the Ambassador employs to take up the role of a director, who controls and supervises an effective team performance. While he directs the team performance, the Ambassador makes sure to make himself the star of the performance and the leading center of attention. Van Praet shows how the meetings fail to enhance team spirit, and only serve as instances for displaying collective affiliation to the Ambassador’s status and position.

2.7 Conclusions

In this chapter, I have, first of all, discussed the definition of a meeting and proposed one for this study: *a preplanned act of gathering together for a limited period of time for the purpose of communication*. Additionally, I reflected on the discussion of meetings as a genre. Then, I briefly discussed the role of the English (and business English lingua franca, BELF) language in meetings and in multi-national companies. I then looked at research pertinent to the area of meeting or negotiation study. As the current study is taking place within corporate context, I have focused on research that has been conducted in the business world.

As a summary, I can say that meetings have been studied from a variety of perspectives, looking at various different phenomena using a number of different approaches. Among these, one finds applied linguistics, sociolinguistics, conversation analysis, and interdisciplinary approaches that are guided by the disciplines of, for example, business management, sociology, social psychology, pragmatics, and linguistics in general. While many studies have ‘stayed within the meetings’ they have focused on, some have taken the extra-linguistic features into account in the analysis. The ones to mention is Charles (1994) who has studied the way the business relationship (and its age) affects

the business negotiation, and other is Boden (1994), whose ethnomethodological study covers a wide variety of contexts within the organization she studied. However, there is somewhat little (if any) research on meetings that takes the organization within which the meetings take place into analysis in a way that reveals the dynamics between the two. Another marked gap I have identified is the fact that there seems to be very little meeting research that takes multiple consecutive meetings as the focus of its study. These are the gaps that the current study aims to fill.

3. DEVELOPING A CONCEPTUAL FRAMEWORK

When investigating problematic talk in an organizational context it is difficult to undertake the task without simultaneously looking into various related aspects. Hence, it is necessary to consider the role and linkage of concepts such as understanding, knowing, learning, and sensemaking together. Taking into account the organization is vitally important as it gives these concepts a particular flavor that must not be overlooked. This chapter looks into these concepts and indicates how they are central to understandings as they evolve in meetings within a corporate context.

The following figure (Figure 1) is an attempt to depict the social arena and the processes or concepts that emerge in literature in the context of communication within organizations; they are understandings, knowing, learning, and sensemaking. In the figure below, the elliptical shape on the vertical axis in the middle singles out the processes or concepts that mostly manifest themselves on an individual's level, those two being understanding and knowing. Respectively, sensemaking and learning embrace these individual processes on both sides as they come into play both on the level of individuals and organizations. Over time, individuals who participate in activities in a professional community also develop a professional identity; they accumulate a sense of what it is to be like a professional in a given field, and what it takes to be acknowledged as an expert (Brown, Duguid 2000). All of the processes depicted below contribute to building this identity. The length and intensity of participation in a field directly influences the perception other members of that field have of an individual's expertise. These processes coincide in a joint enterprise that is in constant, dynamic move.

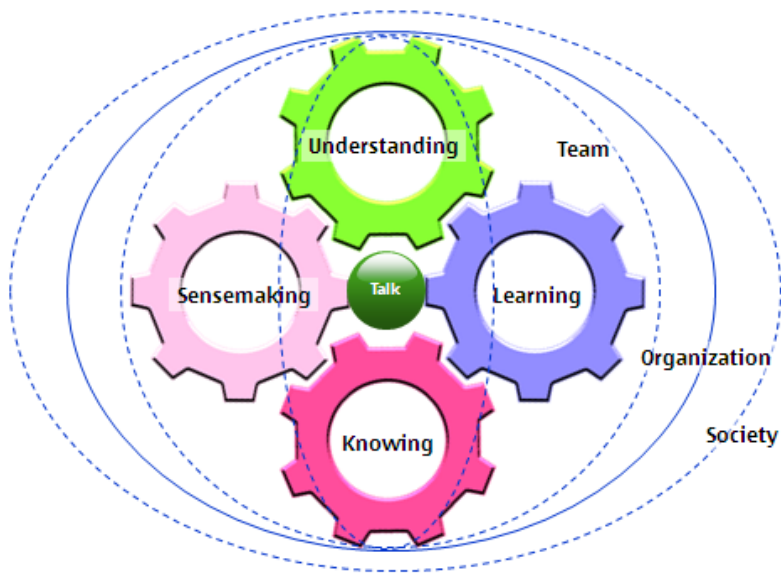


Figure 1 Concepts related to problematic talk-in-interaction

An essential feature of the figure above is that the understandings and knowing that people learn and make sense of when participating in the social communities within organizations are never stable. The understandings – similarly as all other constituents – are in constant motion. As one part of this constellation shifts, so do the others. This is a necessity and probably the only constant within organizations: the fact remains that when one constituent moves, all the others move accordingly – and the movement does not stop, there is no still moment. The following table contains conceptual definitions of the processes/concepts described above (definitions below are coined based on the literature that is discussed later in this chapter and relate to the view of social participation/practice):

Table 1 Conceptual definitions of processes

Understanding	Knowing	Learning	Sensemaking
Ability to learn and a process of that learning; Personal interpretation	Conscious deliberation done together; Competent participation in a practice; Non-static and not limited to what is already known.	Knowledge gained by active participation in a meaningful activity; Unfolds via interaction and out of shared experiences; Reflected in practice	Interpretation of action, activities, and process (incl. speech activity)

Although the figure above is somewhat mechanistic, the implication is **not** that the movement and dynamics would be equal. There are always issues related to the topic at hand factoring in on the relative movement of the constituents. Similarly, apart from the vertical axis and individual, the positioning of the processes or concepts does not denote any particular significance other than that people in organizations are constantly making sense of their knowing, and understanding, and learn in interaction. Another important detail to notice above in the figure is that all the action takes place against the backdrop of the social community where this particular practice takes place. Although there is no indication of movement in that direction, the implication is that the constituents not only structure the social community by way of organizing it, but they are also constantly shaped by the social surroundings within which the activity occurs. Hence, the movement one has to imagine in the figure is not two- but, at least, three-dimensional. The following section introduces a framework with which one can analyze these processes in interaction.

Since talk constitutes the materials studied in this research and since it is the manifestation of all the problems related to understanding and knowing, and subsequently leading to sensemaking and ultimately learning, I begin my discussion with talk and its role in modern organizations. Next, because of the crucial role understanding plays in the related concepts of learning, knowing, and sensemaking, I discuss linguistic approaches to language and understanding, and then move to understanding as emerging from interaction – as a social practice. In what follows, I map the theoretical territory in an attempt to lay out the scenery in a manner that is exhaustive enough to convey the complexity and to clarify my approach. The theoretical

territory covers a rather wide area. I felt this is a necessity as I try to be faithful to phenomena that emerge by insight into empirical events. The conceptual framework presented in what follows will offer theoretical concepts and terms that will help put this research into perspective vis-à-vis other organizational and communications research.

3.1 Talk as part of organizational discourse & communication

Organizations are “complex discursive formations where discursive practices are both “in” organizations and productive of them” (Deetz 2001 p. 6). This view, which, according to Deetz, has gained ground in the academia within the last 25 years or so, is quite important as it implies the idea that human interaction in a specific location is a core formative feature of the construction of the organization (or world, as it may be); i.e. organizations are not sites where discourse takes place but rather, organizing itself occurs via discourse. This notion leads to the revelation that organizations as entities hardly could have means for existing were it not for discourse – talk and the many other manifestations of discourse. Organizational discourse as a field of study connotes a variety of perspectives drawn from many different disciplines where the central focus is the role of language in organizational settings (Marshak, Grant 2008). According to Fairhurst and Cooren (2004), these conceptions vary from language in use and interaction processes to general and enduring systems of ideas in historically situated time.

While talk and language in interaction tends to be fraught with perils in so far as understanding is concerned, it nevertheless holds a central role in any and all organizational action and activity. Talk-in-interaction, that is, language in use shapes the social order in everyday organizations as the discursive interaction has very real effects on the actions and behavior of individuals (Grant, Hardy, Oslick, Putnam 2004). Although talk-in-interaction is but one form of organizational discourse it is a key component that creates and sustains organizational worlds. When thinking about talk-in-interaction and other forms of organizational discourse – such as text of all kinds, documents, e-mails, and other written manifestations of organizations – talk-in-interaction is possibly the only one that can sustain an organization alone; the others have a hard time doing the same despite the fact that they are in many cases the

reifications of organizational discourse. As already pointed out, this relates to the organizing potential of language in use.

Like Broadfoot, Deetz and Anderson (2004) state, both organizations and discourse are constantly in action. This means that whatever analysis is attempted the result is a necessarily narrow snapshot of the organizing life that can never provide a full picture or an understanding of the whole. However, when the mutually constitutive nature of both organization and discourse is taken into account and factored in when working on the process of study and report “much is gained” (Broadfoot, Deetz, Anderson 2004 p. 194). This is what Broadfoot, Deetz, and Anderson call a “dialogic approach” to discourse and organizing life. When engaging the dialogic approach, one needs to be “sensitive to the messy, moment-to-moment manner in which people and institutions fashion coherent, complete worlds” out of something that is partial, hidden, and fragmented (ibid. p. 197). The dialogic approach Broadfoot, Deetz, and Anderson call for is related to *dialogism* (Linell 1998), a theory and approach that is especially suited for talk-in-interaction (for details, see section 3.3.4). One of the central tenets of this approach is an assumption that a number of basic entities are interrelated in terms of intrinsic, conceptual interdependencies where one cannot be defined nor thought of as prior to the other. Equally importantly, dialogism emphasizes that everything is reflexively related: contributions/utterances, activities, relevant contexts, expressions, meanings, individuals, communities, organizations, and institutions.

3.2 Cognitive approaches to understanding

The ways of approaching understanding reflect two different epistemological approaches that I divide into two broad categories labeled by the following characteristics: cognition, process, and system/code on the one hand, and a social practice on the other. Linell (1998) calls these approaches monologism and dialogism (for details, see section 3.3.4), respectively. To me, these approaches translate into looking at language, talk and its understanding from mostly a linguistic (such as grammatical, semantic, pragmatic, phonetic, syntactic) or a social practice point of view. Dialogism will be discussed in detail and linked to the concept of understanding in section 3.3.4,

Language is an inherent though not the only part of communication. The role of language and talk in communication can be studied from a number of perspectives: first,

from the linguistic point of view, where language can further be divided into properties that serve the purposes of different functionalities. Second, from the point of view of social undertaking where language serves as the medium for crafting shared understandings.

Looking at linguistic properties of language – as laid out by Lakoff, (1990) – the first is *form*, which is linked with the formal aspect of language structure, that is, sounds and words (phonology and lexicon), and the rules (grammar, syntax) that govern how they can appear. The second property is *semantics*, which, for its part, is related to meaning. The third property is *pragmatics*, which is the property that attempts to discover the principles regulating speakers' intentions as well as hearers' understandings, and the reasons the first and second are not necessarily identical (1990 p. 28). In this respect, it is the linguistic property linking to communication. One very influential theory related to pragmatics is the Cooperative Principle (1989 p. 24). This will be briefly introduced and linked to 'understanding' next.

3.2.1 *Conversational implicature and cooperation*

Paul Grice studied as a pupil of J. L. Austin, and together they have come to be known as 'ordinary language philosophers' (Thomas 1995). Austin's Speech Act theory on how words are used to perform speech acts (same words to perform different speech acts and different words to perform same speech act) has been highly influential and many of the terms Austin introduced are still valid and in use in the field of pragmatics. By now, Grice is a household name for linguists, but since this research is interdisciplinary, I will briefly introduce Grice and his cooperative principle. I also aim to link Grice with, for example, research on organizational communication where Grice is not as widely known as in linguistic approaches.

Grice first introduced his idea of conversational *implicature* in 1967. A conversational implicature is used, according to Grice (1989 p. 24), when whatever is implied is clearly distinct from what is said, and hence, the conventional meaning of the words differs from what is implied (meant). For us to be able to derive the meaning from what is said, Grice says our talk exchanges need to be cooperative efforts wherein we recognize a common purpose or set of purposes that is either fixed or it may evolve during the talk exchange. What is important, though, is that "*some possible conversational moves would be excluded as conversationally unsuitable*" (1989 p. 26). Grice's general theory,

which he labels the Cooperative Principle and which by now is quite well-known, states “Make your conversational contribution such as is required, at the stage at which it occurs, by the accepted purpose or direction of the talk exchange in which you are engaged” (1989 p. 24). In the Cooperation Principle, Grice distinguishes four supermaxims – quantity, quality, relation, and manner – which have more specific maxims. According to Grice, in a standard type of conversational practice, most people not only follow the principle, but also find it reasonable to follow – something that should not be abandoned.

Grice’s principle is, however, an ideal. Linell (1998 p. 11) notes that Grice “pictures the speaker as an entirely rational agent who speaks his mind” clearly, economically, and in a planned manner. For Linell, Grice stands for monologism (as opposed to dialogism, Linell’s approach, see section 3.3.4), which sustains the authority of the speaker at the cost of listeners. In crafting understanding, hence, the speaker is the lead whereas listeners are rendered to audience. The principles of Grice are all speaker-based. Linell goes on to explain that while Grice’s theory might implicitly invoke the notion of dialogue it nevertheless suppresses, for example, “negotiations of meaning, hedges, vagueness, ambiguity, polyvocality, misunderstanding, conflicting interests, concealment, opposition, power, domination, and fragmentation of participation and knowledge.”

Thomas (1995 p. 87) has similar problems with Grice’s theory saying that it fails to account for situations where an utterance has multiple possible interpretations, and where the speaker might be flouting the maxim deliberately. Further, according to Thomas, the theory does not help distinguish between a violation and infringement of a maxim. The four maxims also seem to be rather different in nature, and yet, they overlap with one another, making distinguishing difficult. Thomas also finds Grice’s argument that there should be a mechanism for calculating implicature difficult to obey as it is not always clear how the mechanism might operate.

In their paper on Gricean pragmatics and non-cooperation in communication, Sarangi and Slembrouck (1992) investigate how well the Gricean principles of cooperation can be applied to discourse produced within an institutional setting, and once they have analyzed the applicability via numerous examples and real-life encounters (in an institutional setting) they come to the conclusion that “cooperation never occurs as a

value in the abstract, it is always tied to a condition of a shared social interest and investment” (1992 p. 138).

Sarangi and Slembrouck go through a number of cases (discourse within an institutional setting) and are able to point out that, within the institutional setting, there is no ‘negotiation of meaning’ in the sense that Grice meant for his framework to apply. However, the current research argues that the negotiation of meaning is crucial for successful communication. It will be shown that failing to negotiate the meaning (regardless of whether the negotiation is initiated by the speaker or interlocutor) will result in confusion, (mis)understandings and conflicting interpretations of what has been said. In any case, failure to negotiate the meaning hampers action and prolongs decision-making.

3.2.2 Pragmatic understanding

As can be deduced from the discussion in the previous section, the ways in which we comprehend each other are known on a general level from the pragmatic viewpoint; in understanding, we more or less master both the semantic and pragmatic functions of words in utterances we hear or text we read. This means we understand the meaning of the words (semantics) and their intended meaning (pragmatics) in the context where understanding takes place.

For understanding, the hearer needs to recognize that the speaker’s utterance – in terms of words – but it is hardly enough for deciphering the meaning of the expression. For this, the “hearer is usually expected to derive other propositions which are not related in any systematic way to the meanings of the words uttered” (Blakemore 1992 p. 6). Expressions, often very economical in form and function, can contain meanings such as dismay, relief, promise, prediction, warning, or a request for confirmation. Blakemore gives a good example of this in the following utterance: “Tom’s coming,” which, in effect, can indicate any of the meanings mentioned above, and it is up to the hearer to infer the meaning by combining the linguistic as well as the non-linguistic clues. However, as Blakemore points out, “it is always for the speaker to choose what to make explicit and what to leave implicit” (1992 p. 7).

Relevance theorists, who pick up from Grice’s principle of relevance, theorize on a much more complex and highly cognitive level. According to Sperber and Wilson (1986

p. 260), what underlies all human interaction are the principles of relevance which entail that “human cognition tends to be geared to the maximization of relevance” and that “every act of ostensive communication communicates a presumption of its own optimal relevance.” Similarly as Grice thinks of all of his principles, Sperber and Wilson say that communicators do not “follow” the principle of relevance, and they could not violate it if they wanted to. This relates to the essence of relevance, which, according to Sperber and Wilson (1986 p. 261) is a property – not a commodity: it can be a property of inputs to cognitive processes or of stimuli, for example.

For Sperber and Wilson, modes of communication are either coding-decoding or inferring meaning. What is involved in inferring meaning, briefly, is deployment of a process that is essentially non-demonstrative and that entails modification of hearer’s cognitive environment (set of assumptions that can be represented mentally and accepted as true) in a manner that produces new synthetic implications and strengthened premises in the hearer’s memory.

Blakemore sees the difficulty in trying to build a highly conceptual apparatus for the processes involved as the “utterance interpretation takes place so fast and so spontaneously that we are usually not aware how we recover the message we do” (1992 p. 10). Still, Blakemore’s description of how contextual information is stored under a concept or address, which the hearer is given address to when s/he needs to process information is very close to Sperber and Wilson’s information that is stored in a hearer’s memory as an idea. This raises a question of what kind of a frame would be needed in people’s heads in organizations to reach something that would even approximate to a shared understanding.

Sperber and Wilson say that “an assumption is relevant to an individual at a given time if and only if it is relevant in one or more of the contexts accessible to that individual at that time” (1986 p. 144). But all people do not have access to the same contexts – not everyone can understand/comprehend in exactly the same way. Similarly, not all assumptions are relevant for all people – even if they had access to the context. Blakemore (1992 p. 20) explains that this is a point where misunderstandings occur: there is a mismatch between the context envisaged by the speaker and the one selected by the hearer. In simpler terms, the interactants do not share the same background knowledge, and hence, their experiential worlds do not meet (cf. Linell, 1998).

Cognitive processes relating to information handling raise questions concerning the type of interaction in the current study: should a hearer feel that an assumption is not valid to her/him, will s/he even bother to process the information given the fact that the contextual effect will not be relevant for her/him? Further, assuming that there is a lot of processing ongoing which takes a lot of capacity with inferring meaning and processing information that is inherently complex (often involving new technologies), but how much more processing power do lingua franca speakers need to invest in order to comprehend an utterance? And does this affect the probability of successful communication?

When communicating, speaking to one another, people strive for mutual understanding in order to avoid misunderstandings (Blakemore 1992, Sperber, Wilson 1986). However, as Sperber and Wilson (1986 p. 19) state, mutual knowledge is an ideal that can never be achieved, as the existence of mutual knowledge can never be established. We can never be sure it exists. The techniques and strategies (intentional or not) underlying successful human communication, however, mitigate the evident handicaps of communication. As Sperber and Wilson (1986 p. 50) continue, human intentional communication is also typically ostensive which – as such – implies a guarantee of relevance (making intention manifest). People automatically turn their attention to what is relevant for them, and it is this principle of relevance that explains how we infer meaning from what is said.

The process of inferring meaning that, according to Sperber and Wilson, involves intention/ostention, formation of assumptions (existing and new) on basis of concepts, contextualization, and application of deductive rules is complex and fascinating – and produces a host of questions in the context of this research: What about the flood of information we are subjected to? What if we do not have a mental model of the words, concepts, and ideas that are presented to us? What if the constant flood of information is too large for us to store even a fraction of it in the way that Sperber and Wilson propose? What are the underlying assumptions in meetings? Do people think they have enough background information to be able to contribute in meetings? Questions like these lead us to a critique of cognitive theory of understanding.

3.2.3 Critique of cognitivism

Despite the fact that cognitive theories of inferring meaning and understanding in interaction are fascinating and highly plausible, at least in theory, implementing the theory in the empirical world is difficult. Few of us would deny that there are occasions when we “*engage brain before putting mouth into gear*” (Hopper 2005 p. 135), which is something that Hopper calls “a cognitivist maxim” prescribing strategic control over speech. This invokes an idea that there is a source for talk, or, if brain is not engaged, communication is thoughtless. However, like Hopper (2005 p. 136) says, “in empirical lived experience we only hear the mouth’s talk.” Mental states or thought processes are seldom visible in people’s interactive behavior and this is a problem for the empirical enquiry. Drew (2005 p. 167) explains, for example, that while we all experience situations where we realize that someone we are talking with has made a mistake and let it pass, a transcription of such a situation would reveal nothing (as we did not correct the mistake). Drew’s point is that although we *introspectively* know this mistake occurred, we cannot base our analysis of conduct on it. Nevertheless, both Hopper and Drew indicate that there are ways of talking that could be evidence of cognitive states or strategic thinking before talk. Some mental states could, for example, be manifest in the participants’ use of words “describing both cognitive and emotional states” that “can be regarded as a folk psychology which speakers employ to account for what has happened or is happening” (Drew 2005 p. 167).

Coulter (2005), on the other hand, is ready to reject cognitivism altogether, claiming that any psychological phenomena are far from our daily language use and comprehension. He discusses a concept – *telementationalism* – introduced in Harris (1981), and explains how this myth, according to which linguistic knowledge is a matter of knowing which words stand for which ideas, is present in the majority of linguistic theory. Coulter further discusses the Wittgensteinian ideas of Malcolm (1990) whose view of language and comprehension is close to instinctive behavior, and notes that although neither Wittgenstein nor Malcolm argue that we never think before we speak, “such *practices* are *not* essential to, nor constitutive of, most of our communicative conduct using linguistic resources” (2005 p. 84).

Coulter (2005 p. 85) is also suspicious of any “mentalistic conceptions of language” and basically denies any theories of utterance interpretation. He does allow that some

interpretation might be needed in cases where an utterance is obscure. For Coulter, understanding an utterance is an achievement while interpreting it is an activity: “to have actually understood something is very often simply a matter of now knowing how to proceed, what to do – it is in many respects a capacity” (2005 p. 87). According to Coulter (2005 p. 92), the best way of avoiding confused commitments, such as the “theoretical fictions” of mentalism, telementalism, and cognitivism, is to “ground our analytical work on human conduct in the logical grammar of our language.”

3.3 Social practice approach to understanding

Since multiple understandings and even misunderstandings are here taken to be an inherent part of organizational life, this section looks at how research outside linguistics or cognitive psychology views these concepts. In addition to understanding and misunderstanding, I discuss ambiguity, another key notion of any research that examines understanding. In the current study, ambiguity must be explored as it is generally acknowledged to cause occasional confusion in organizations. Finally, I introduce key concepts of dialogism, an approach to study interaction as proposed by Linell (1998).

The following figure maps the perspectives to *understanding* I lay out in the discussion that follows. Note that the figure – especially in as far as *undermining factors* to understanding are concerned – does not attempt to be exhaustive but remains illustrative. The conditions mentioned in the left-hand column list the four conditions detailed by Schwandt (1999) and an additional condition mentioned by Linell (1998).

Understanding		
Conditions	Connotations	Undermining factors
Understanding is not the same as knowing	Comprehension (process)	Confusion (miscommunication, misunderstanding)
Understanding denotes learning (rather than reading)	Interpretation (outcome)	Ambiguity
Understanding is relational	Learning (something to comprehend)	Uncertainty
Understanding entails a possibility of misunderstanding	Knowledge	Inadequate perception
Understanding is contextual		Inappropriate comprehension
		Strategic unwillingness to cooperate

Figure 2 Perspectives to understanding

Understanding is a slippery concept and hence, the figure above is my attempt to categorize the perspectives via which I try to clarify understanding as a concept. The first column lists the conditions under which understanding transpires (as defined by Schwandt and Linell, for more, see below); the second column lists the typical connotations we have when we hear the word ‘understanding’ used; and the third column lists some of the factors that undermine understanding as an activity. These will be discussed in the following.

3.3.1 Connotations and conditions of understanding

As we have seen, understanding as a concept is highly problematic. It can be taken to denote *comprehension* as a process of figuring out something or it can be seen as *interpretation*, an outcome that – once digested – could be understood as *knowledge* of some kind that a person has achieved. Therefore, understanding can be thought of as a prerequisite of knowing. In his influential book on communities of practice, Wenger (1999) cautions against using the word *understanding* as it “can easily reflect an implicit assumption that there is some universal standard of the knowable” (p. 41). Weick (1995 p. 55) acknowledges the same fallacy with *sense* in *sensemaking*, saying that it invokes a realist ontology suggesting that there is something out there to register

and sense accurately. At the same time, it invokes idealist ontology by suggesting there is something that needs to be agreed and constructed plausibly.

Schwandt (Schwandt 1999) has done a succinct analysis of the phenomenon of understanding in the realm of qualitative inquiry. He argues that understanding unfolds under four conditions:

- a) there is a difference between understanding and knowing,
- b) understanding denotes learning rather than reading,
- c) understanding is relational and requires openness, dialogue and listening, and
- d) understanding entails a possibility for misunderstanding.

Given these, Schwandt's analysis is clearly related to Linell's dialogism where understandings are subject to local production with speakers giving cues to each other to the interpretation of each other's utterances, and understandings are then inferred from utterances based on these cues.

In discussing his first condition, Schwandt (1999 p. 452) says that "(t)o *understand* is literally to stand under, to grasp, to hear, get, catch, or comprehend the meaning of something. To *know* is to signal that one has engaged in conscious deliberation and can demonstrate, show, or clearly prove or support a claim." Given his topic, Schwandt elaborates at length on our constant "business of construing the meaning of something" without venturing deeper into how we propose to know something. According to Kuhn and Jackson (2008), knowing in organizations is a function of resources for legitimation, legitimacy, and accountability – which amount to the three steps involved in Lazega's (1992) definition of the situation (see section 3.4.1, p. 72). Depending on the result of the function, people can know relatively certainly (and be able to transmit information to a person requesting it), or there can be a high level of indeterminacy driving people to even improvise when coming up with ideas as to how to resolve a problematic situation.

Schwandt's second condition, understanding denoting learning, ties understanding to praxis. Understanding is an educational process of learning where understanding and

interpretation are enactments or performances rather than an act of an individual conscious mind. This way, understanding and interpretation is more of engaging into dialogue than simply grasping the meaning of something. So, as we take part in discussion and engage into activities that involve interaction, we display our understanding to others. In Schwandt's words:

When we seek to understand what others are doing and saying, we simultaneously publicly explicate that understanding. In fact, our efforts to present, to articulate, to pronounce, or to say what we think we understand are inseparable from our efforts to understand. To say it more simply, there isn't first a silent act of comprehension followed by a public recitation, rather, understanding and speaking meaning are intertwined. (Schwandt 1999 p. 456)

According to Linell (1998), people in interaction expose and test their mutual understanding; the interactants can not only test their own understanding, but can also monitor the other's understanding based on what s/he says. The very words that are used in this interaction are dynamic and open in the sense of meaning and the interactants (that Linell calls 'actors') can negotiate and redefine them there and then. The actual situated understandings emerge as results of this communicative work.

What logically follows the words above is Schwandt's third condition: that understanding is relational. For explaining the condition, Schwandt (Schwandt 1999) quotes Gergen (1988), according to whom "(U)nderstanding is not contained within me, or within you, but in that which we generate together in our form of relatedness". The conditions of understanding as learning and relational render understanding as existential, too. "(W)hen understanding is conceived of as relational and existential, familiarity and strangeness are not simply cognitive or rational assessments of aspects of our experience, but ways in which we actually experience being in the world" (Schwandt 1999 p. 457). Our experiences of the world and our sense of belonging in it account for the "familiar" whereas the "strangeness" brings on an experience of confusion and a feeling of disorientation. In trying to understand, we are always standing between the familiar and the strange elements. Like Wenger (1999) says, "understanding is always straddling the known and the unknown in a subtle dance of the self."

When we consider understanding as a social and interactive achievement, we can also see how understanding (and possible misunderstanding) relates to cultures: the more

common experiences we have the likelier it is that we are members of the same culture. Further, the more common experiences we have and the more ground we thus share amongst each other, the more likely it is that we have less trouble understanding each other.

In engaging into dialogue, we seek not only to understand but to “share in a common meaning” (Gadamer 1989 quoted in Schwandt 1999) and to assess our own understanding, and the limits of our knowledge and ignorance. Within this aspiration lies the fourth condition: attempting to understand involves a risk of misunderstanding. According to Schwandt, we live in a world where mistakes and surprises are built in and although we might try to ensure that we understand something, we might find a surprise that changes everything. Additionally, “we have no *theory of error* that specifies criteria or standards of right and wrong interpretation, but we do have a theory of understanding that assumes we are seeking interpretations that are mutually understood and adequate for finding our way about the world” (Schwandt 1999 p. 461). This theory of understanding, according to Schwandt, is the theory of dialogue explaining how we sort our misunderstandings and errors – or multiple understandings. So, although we might communicate to develop shared and mutual understandings, this happens only occasionally, if at all (Linell 1998 p. 80). Hence, like Linell (1998 p. 114) says, “totally shared understandings are an ideal rather than an empirical fact” and what is relevant for our communication is an understanding “for all practical purposes” (Garfinkel 1967 (ed. 1992) referenced in Linell 1998).

In addition to conditions laid out by Schwandt above, I have added one that I have deduced from Linell: understanding is contextual. Linell (1998) introduces the ideas of Goodwin and Duranti (1992 referenced in Linell) related to context; according to these two, no utterance can be properly understood unless one takes into account the contextual elements – such as cultural setting, speech situation, or shared background assumptions. Linell talks about “*the triadic relation between utterance (discourse), understanding and contexts*” (Linell 1998 p. 139); in short, this means that we understand an utterance by relating it to its contexts (fit the expression to be understood into something that is already known or understood), express or display our understanding of the contexts by uttering something specific at the right time, and construct and renew the contexts by producing and/or understanding the utterance. This, according to Linell (1998 p. 78), is in line with what Bakhtin has said about all

understanding being responsive: “the understanding of somebody’s utterance ordinarily involves active treatment of that utterance.” This treatment, while partially occurring internally, is typically ‘visible’ and available in the response, which then reflects the understanding. Linell’s *context*, within the realm of this study, is to a large part, the *practice*. People participating in the meetings need to share enough of each others’ practice to be able to act. For this, they need to comprehend both in intellectual and practical terms – which, for Polanyi (1967), is the acquisition of knowledge from another.

3.3.2 *Confusion in understanding*

Confusions in understanding come in many forms and varieties as does discussion concerning them. Those involved with examining problematic talk may use terms such as ‘misunderstanding’ and ‘miscommunication’ (Holmes, Stubbe 2003, House, Kasper, Ross 2003, Tzanne 2000), and these same terms have often also been connected with intercultural communication although recently there has been evidence of new directions within this field as the focus is shifting from misunderstanding to understanding in intercultural communication (Buhrig, Thijs 2006). Within the realm of organization research, Weick (1995) talks about ‘confusion’ that is brought on by ‘ambiguity’ and ‘uncertainty’ (for details, see section 3.4.5, p. 81).

Misunderstanding and miscommunication has long been viewed as “an exclusively intrapersonal cognitive event” (House, Kasper, Ross 2003 p. 4) – as something that occurs between a speaker and a hearer involving failure in mapping the speaker’s intention and the linguistic form. Over the years, other models have emerged from a need to analyze miscommunication without resorting to categorization of what misunderstandings are. Among these, Coupland et al.’s (1991) model that synthesizes social-psychological and discourse-analytical perspectives has been highly influential.

As a term, misunderstanding is similarly problematic as understanding, since it, too, suggests that there is some universal standard to the knowable that can also be understood amiss. Coupland et al. (1991) contend that since language and communication are intrinsically flawed, partial and problematic, a logical outcome is that all communication is basically miscommunication. Regardless of how we define understanding and misunderstanding, it seems that no understanding is ever the same.

So, while people can understand in multiple ways, their understandings, although never exactly the same can, nevertheless, be partially same. Here, understandings overlap, but where they do not, they can be ‘miles apart’. Regardless of whether understandings are the same, partially the same, or completely different, all kinds of understandings can be partial in that they might be somewhat obscure or ‘blurred’. As to sources of misunderstandings, Bazzanella and Damiano (1999 p. 819) have suggested the following taxonomy of what they call linguistic *triggers* of misunderstandings:

1. Phonetic
2. Syntactic
3. Lexical
4. Semantic
 - 4.1. Propositional content
 - 4.2. Reference expressions
 - 4.2.1. 'external'
 - 4.2.2. addressee
5. Pragmatic
 - 5.1. Illocutionary force and indirect speech acts
 - 5.2. Non-literal uses: implicatures, irony, metaphor, etc.
 - 5.3. Relevance
 - 5.4. Topic
 - 5.5. Plans

As it happens, apart from some specifics referred to in the sub-sections, these triggers comprise the linguistic properties of language (see discussion of Lakoff in section 3.1) that are inherent not only in understanding but in all communication: *form* (including phonetic, syntactic and lexical features), *semantics*, and *pragmatics*. So, the conditions for misunderstanding are to a large extent the same as for understanding. But, of course, for the purposes of having some coherence, distinguishing between understanding and misunderstanding is often useful in real life situations. Out of the sources of intercultural misunderstanding House (2003) mentions, inadequate perception or inappropriate comprehension at different levels of language (see Bazzanella & Damiano above) may cause an understanding that could be interpreted as a misunderstanding. However, when they are caused by gaps in either interlocutor’s knowledge of the world, we are more likely to call it misunderstanding although the more accurate term might be ‘partial understanding’¹ (Dua 1990).

If we consider the conditions for the unfolding of understanding that Schwandt proposes (earlier in this section), not all of them are equally relevant for misunderstanding.

However, similarly as understanding, misunderstanding also unfolds in our relational interaction: through dialogue, listening, and cognitive processing. Misunderstanding is the part where surprise comes in; it is the necessary contingency involved in understanding.

3.3.3 Ambiguity in talk, language, and organizational life

Ambiguity is a slippery notion that can refer to a feature appearing in language and talk and causing difficulties in interpretation, or, for instance, to any situation wherein meaning is vague or uncertain in some way. Ambiguity is a term often used in pragmatics to indicate unclear meaning of a message. Lakoff (1990 pp. 264-265) calls ambiguity “the politician’s best friend” and “the mother of Teflon.” According to Weick (1995 pp.91-92) “(a)mbiguity refers to an ongoing stream that supports several different interpretations at the same time.” Weick discusses different definitions of ambiguity and notes that in all of them, ambiguity means that the assumptions that are necessary for rational decision making are not met. He then moves on to present a list of 12 characteristics pertaining to ambiguous situations in organizations. Out of the listed characteristics, two are especially pertinent for this research: information is problematical as regards its amount and reliability, and the existence of multiple, conflicting interpretations. Apart from these two, other ambiguous situations causing sensemaking in meetings might involve (but not limiting to) a situation where the nature of the problem itself is in question, or where roles and responsibilities are not clear.

Apart from a number of reasons stemming from organizational life, ambiguity in discourse can derive from a variety of causes related to the hearer’s experience, background, or other situational factors. An utterance can thus have a different meaning according to the hearer’s context and be perfectly clear, albeit different from another hearer’s meaning. Lakoff (1990) further explains that ambiguous talk also frees the speaker from all responsibility as the interpretation is left to the hearer; if the latter settles for the problematic interpretation without asking further clarification, it is the hearer’s problem. In addition to examples of problematic talk – such as confusion and ambiguity – talk in interaction carries a load of inherent features, such as “negotiations of meaning, hedges, vagueness, ambiguity, polyvocality, misunderstanding, conflicting

¹ In my view, misunderstanding can also be strategic out of unwillingness to cooperate.

interests, concealment, opposition, power, domination, and fragmentation of participation and knowledge” (Linell 1998 p. 11).

3.3.4 Dialogic understanding (dialogism)

Given their messy nature, multiple understandings, confusion and ambiguity can be challenging to tackle conceptually. The dialogic approach Linell (1998) introduces offers the kinds of concepts that are useful for describing these phenomena in an analytical way. Dialogism sees interaction essentially as a social practice wherein individual contributions of actors cannot be understood in isolation from each other. Each utterance or contribution to interaction is responsive to prior contexts and contributive of renewing contexts, and in interaction, the interactants not only complete each other’s actions but also influence each other. While cognition is seen as an inherent part of our ability to generate meaningful interaction, it is not the only contributor; in dialogism, cognition and social interaction are assumed to penetrate each other (Linell 1998 p. 93). As Linell explains, cognition – along with communication – plays a part in the conception, manipulation and exchange of meanings and messages. However, besides the processing power of an individual, there are a number of situational factors that contribute to interaction, including the interactants themselves, their environment, and background factors both abstract and concrete. Like Linell says (1998 p. 98), “the dialogistic stance, is that all utterances, and many of their properties, are indexical; large parts of their meanings are unstated and must be supplied by actors in communicative contexts.” This means that all utterances are contextualized and always understood by our going beyond language.

Linell divides the contextual resources to two major categories (‘hypercategories’). These are immediate contextual resources and mediate (abstract) contextual resources. The immediate ones comprise such resources as prior discourse (co-text) and the surrounding concrete situation. The mediate resources, for their part, are more varied consisting of items such as assumptions, beliefs, knowledge and understandings (model) related to discourse; actors’ models of their current and upcoming communicative projects (see p. 105); specific knowledge or assumptions (biographical) about people involved; abstract situation definition (frame) which in this dissertation, for example, is a meeting; the specific organizational context (hierarchy, division of labor); institution and its subcultures which in this dissertation could be the company and its meeting

culture; knowledge of language and communicative routines; and finally, general background knowledge.

Linell suggests that the hypercategories might need further subclassification of *local* and *non-local* ones. This means that some contexts are immediate whereas others are not; Linell gives an example of someone walking into the room or a sudden loud bang (immediate) and people going to non-local or global topics. Linell (1998 p. 131) further gives additional comments on the contexts: they are *semiotic phenomena* which mean that they are meaningful in relation to discourse; the contexts are also relevant in the sense that actors use only some parts of the discourse in their active sense-making. The contexts are multidimensional in the sense that there are never any single contexts but a complex matrix of contexts – which Linell calls a *context space*. What follows logically is that there is considerable overlap in the contexts and contextual resources; at the same time, however, it is possible that not all contexts or contextual resources are shared. In Linell's terms (1998 p. 132), this relates to *the double dialogicality of discourse*: “contexts anchor discursive events both in social and physical space at some point in time [...] and in cultural history.” Context spaces between interlocutors can also be competing and people may have different ideas about what is going on in a given situation or what it is they are talking about. According to Linell, when people use partly different and conflicting situation definitions as resources, different understandings are produced.

While the contexts and contextual resources are available to individuals to varying degrees, they do not amount to anything (at least, *observable* anything) unless they are brought into the dialogue: the contextual resources can only enter the dialogue through participants. And this is where the interlocutors begin to piece the puzzle of message and meaning together. According to Linell (1998 p. 142), discourse involves building and using fragments of understanding and contexts into *islands of temporarily shared understandings*. Here, interlocutors use local cognitive processes to extract the contexts and fragments and recontextualize them, using contextual resources, into new context spaces – all in interaction: “whenever something is said (or done), it is added to the potential co-text, which can be understood as a pool of resources that can be used for building new utterances and new meanings by recontextualization” (Linell 1998 p. 144).

Linell (1998 p. 154) defines recontextualization as “the dynamic transfer-and-transformation of something from one discourse/text-in-context to another.” This is done because, like Linell says, communication situations do not occur in splendid isolation. People are connected in various ways, they interact in different times across time and space and also through documents, e-mails, and online presence – and then, wander between situations. This is what Wenger calls *brokering* (see section 3.4.7, p. 85) and the people involved are *roamers*, going from one place to another, creating connections and moving knowledge – or, in Linell’s terms, discursive content. Often, recontextualization involves changes in texts, simplifications, condensation, elaboration, and refocusing; in other words, recontextualization never entails a pure transfer of a fixed meaning (Linell 1998 p. 155). Linell further elaborates on the levels of discourse where recontextualization can take place: it can be *intratextual*, occurring within the same conversation or encounter; it can be *intertextual*, relating to specific texts, discourses and conversations (each anchored in its specific context); and it can be *interdiscursive*, occurring at more abstract and global levels. Regardless of whether recontextualization within a meeting occurs by linking to what has been said already in that same meeting (intratextual), by linking to what has been said elsewhere at another time (intertextual), or by linking to completely other discourses altogether (interdiscursive), it plays a major role in crafting understandings.

3.3.5 *Understanding & misunderstanding in this research*

So, to sum, the logic with which one approaches understandings and misunderstandings in talk varies. Based on the literature reviewed above, I borrow Linell’s terms, monologic and dialogic, to group these approaches into two. According to Linell (1998 p. 17), monologism is prevailing in most contemporary approaches to language (e.g. linguistics, cognitive psychology). If we think about linguistic approaches to language and understanding, the aim is to communicate accurately and precisely, subscribing to whatever rules there are governing form, pronunciation (in talk), spelling (in writing), or semantic representations, for example, in a manner that is suitable for the purpose or situation. If the person talking or writing fails to communicate the message or the meaning in a way that it comprehensible to the hearer or reader, then the result is a problem: either misunderstanding or miscommunication.

The other side – or in Linell’s words, an ‘antidote’ to monologic approaches – is dialogism. When the same event (especially the verbal encounter, talk-in-interaction) is seen as social practice, similar challenges are not considered failures but rather understandings that can be constantly updated. Like Linell (1998 p. 114) says, “totally shared understandings are an ideal rather than an empirical fact” and our understandings in communication are close enough “for all practical purposes.” This means that interactants never reach a completely shared understanding (or at least, so we think – we cannot empirically test it) while talking with each other, but more often than not, they reach a mutual understanding that is not conflicting.

Looking at understandings through the lens of social practice, a much more fluid and flexible picture opens up. Understandings are not some static constructs inside individuals’ heads but rather, in talk-in-interaction, they are constantly updated, reviewed, aligned and re-reviewed. In this sense they are similar to what Orlikowski (2002 p. 269) deems as “continuity of competence” (when talking about knowing in practice) which is never given, only achieved. What’s more, given the approach into understanding as a social practice, one can see how no understanding is ever a final one, but all understandings allow for modifications. This research looks at understandings as they unfold within the relational scene of the organization. Modifying Gergen’s (Gergen 1988) words, this research does not seek to uncover the understandings contained within individual participants of meetings, but looks at how the meeting participants generate these understandings together in their form of relatedness. While some of the interaction and confusion therein analyzed in this study occur within one meeting, there are some that expand to others (previous or upcoming) in more ways than one. In what follows, I shall not abandon the term misunderstanding altogether, but will use it where appropriate to indicate a clear failure in understanding regardless of what the cause may be. I shall be looking at how meanings and understandings are created in the context of organization and how those understandings unravel in meetings that span over two months. I shall not abandon cognitive theories altogether as it is clear that at least local cognitive processing is needed for mutual understanding, too, but I can only analyze the parts that become obvious in the meeting materials – via spoken words.

3.4 Knowing, sensemaking, and learning by participating in practice

The previous sections have explored understanding and both cognitive and social approaches to its investigation. As pointed out earlier, one of the connotations of understanding is some kind of an outcome – even knowledge. In this sense, understanding can be thought of as a prerequisite of knowing. This section continues the discussion of the conceptual framework (Figure 1); hence, its subsections cover theoretical discussions on *knowing*, *sensemaking*, and *learning* in organizations on the one hand, and on the social life of the accumulated *information* on the other. Finally, I discuss how all these relate to one another as the dynamic components of not only organizational life but as the constituents of meanings and understandings that are constantly created and recreated.

Research on organizational knowledge and knowing has for a long time focused on investigating knowledge in organizations as an individual endeavor, something stored in memories organized in categories and mental structures, and learned by transmission, circulation and acquisition. In this view, knowledge can be tacit or explicit, but it is nevertheless something that people need to acquire and store in their minds for later use. Brown and Duguid (2001), in their investigation of literature related to the boundaries of the firm in terms of knowledge, also talk about ‘sticky’ (nonmarketable performative knowledge) and ‘leaky’ (marketable and potentially leaky) knowledge. In yet other terms, these forms of knowledge can be converted to ‘know how’ and ‘know that’. In recent years, research has begun focusing on knowledge and knowing as social and cultural processes that are borne out of social interaction and as a result of learning and activities that takes place via participation in communities of practice. As such, knowledge is in constant motion, continuously renegotiated and recreated (Nicolini, Gherardi, Yanow 2003), and as such, it is subject to active sensemaking. There can be too little knowledge – or people’s knowing and its related understandings can be conflicting, leading to increased need to make sense out of them. All this continuously renegotiated and recreated body of knowledge and the related understandings that are constantly aligned and realigned and made sense of inevitably lead to learning; every so often experience is brought into play, new perspectives are introduced, old premises are questioned or some other – unexpected occurrence happens – creating a need for sensemaking, learning and knowing in interaction.

3.4.1 Nature of knowing in organizations

Lazega (1992) presents a theory of knowledge claims, which is based on the notion of knowledge as a social construct as opposed to a general impression of competence of knowing as an individual phenomenon. Lazega's theory of knowledge claims offers a way of analyzing how people claim that they 'know well', what types of authorities they use for it, and how they legitimize their knowledge claim – in essence, based on what they claim to have the right understanding of the issue at hand.

Lazega draws on Berger and Luckmann's *praxeological conception of knowledge*, according to which knowledge is analytically considered as part of actors' goal-oriented behavior rather than a result of a cognitive performance that can be measured (1992 p. 24). Central to the praxeological conception of knowledge is the idea that work is intentional social action, and hence, knowledge and knowing in work environment has a clear goal-oriented dimension. Interest lies in the actors 'knowing how to do things' and building knowledge within the social relationships. So, Lazega's linkage also highlights the importance of practice; like Gergen (1991) says, knowledge is not something that people possess, but rather, something that people do together.

Lazega continues by describing how the study of language use and communication has almost exclusively been used for a methodology explaining how practical and shared stock of knowledge can be grasped and objectified through everyday experience in everyday language. In these studies, illustrated by research on information control, knowledge itself is represented as a quite unproblematic entity that is a result of knowing well and thus becoming richer in information. According to Lazega (1992 p. 30), these studies "usually assume that we know much more about information as a resource than we actually do. The processes described are operations controlling flows of information once the value of this information is already defined or recognized." Lazega's own view of information is much more dynamic, as in his view, knowing well is a question of information elaboration (rather than control) that cannot be reduced to the use of a stock of knowledge.

For elaborating information and for knowing well, in Lazega's terms, a person needs other people to assess the limits of her/his own ignorance and knowledge. This means that similarly as knowledge, also ignorance "must be defined and negotiated by actors who perceive themselves and each other as knowledgeable or as ignorant, given a

specific problem and compared to others” (Weick 1995, Lazega 1992 p. 27, see also, Linell 1998). The messages that are involved in communication and interaction need legitimation to be counted as knowledge and information, and this legitimation occurs in the social setting where interaction occurs.

Lazega bases his theory on the notion of communication that is a process of negotiation producing the informative value of the message as opposed to a technical notion of communication as the exchange of a piece of information. The informative value mentioned can be understood as the appropriateness of the message, a key term for Lazega referring to the social criteria that is linked to identity, authority, and control. In essence, this means that a speaker – in claiming to know well – needs to identify with a source of authority, who is perceived as having enough of weight for legitimizing the message. She/he/it is the source of authority controlling the value of the message.

3.4.2 Definition of situation

When building the constructs of his theory of knowledge claims, Lazega links it to a theory he calls the “definition of the situation”, which according to Lazega is an essentially symbolic interactionist theory. As Lazega continues to explain, according to symbolic interactionist theories, for a person (or actor, in Lazega’s terms) to become knowledgeable in a field requires that s/he participates in the interaction and engages with the meaning-making processes within that field. This is basically the same process Wenger (1999) lays out in his theory of learning in communities of practice. Similarly, the field Lazega talks about, comprises the community or the local culture sustaining these meaning-making processes. Within the realm being investigated in this research, such a field can be the R&D community; in this case people taking part in the R&D activities within one single company – albeit representing nominally different companies. In essence, “knowledge both represents and embodies (interactional) work and can only be accessed through interaction” (Nicolini, Gherardi, Yanow 2003 p. 10). What happens at a definition of situation is an actor’s differentiation of those they pay attention to and those which they ignore or neglect out of the situation in communicating the environment. To do this, an actor needs to select a “point of view” or a “perspective” which, according to Lazega, should not be understood as “opinion” or “belief,” but rather as an authority that legitimizes the selected perception. The definition of the situation, thus, constitutes an “act of allegiance” to an instance of social

control, which “guarantees the legitimacy of these criteria and the ‘reality’ resulting from the selection” (1992 p. 38). In essence, the actor – or the speaker as the case may be – needs to choose who or which social instance they wish to bring in (in talk) to interaction to work on their advantage in wishing to corroborate their message. As Kuhn and Jackson (2008) note, by linking the process of defining situations to knowledge claims, Lazega aligns with the notion that knowledge is always grounded in the community.

Lazega’s theory of the definition of the situation identifies the three, highly interlinking operations needed in the appropriateness judgement of a message. According to Lazega, they answer the following basic questions:

First, for a given or anticipated behavior, which is the instance of social control recognized by the actor? Second, how is the action legitimized on behalf of this instance of social control? And third, who is entitled to represent this instance of social control among the members of the social setting to which the actor belongs? (1992 p. 39)

The first relates to *identification*: it shows the perspective or audience the actor wishes to show allegiance to. While doing this, the allegiance guarantees the actors with a specific identity and membership. These are the identities that index an organization’s control over individuals (Kuhn, Jackson 2008). In Lazega’s terms, this indexing conveys a recognized ‘signature’ (1992 p. 39). Now, in organizational settings, there are a number of competing identities to choose from and, according to Lazega, the actors rank these allegiances hierarchically. Identification affects not only the position of the actor but also the position of action; it creates an interactive setting in which the actions, either current or anticipated, make sense, and relates them to the social structure.

The second step of defining the situation involves *legitimacy of action*. According to Lazega, the link between the instance of social control and action must be recognizable in this step to the actors themselves. This means that the actors recognize the existence, validity, and legitimacy of the link. In the legitimization process, actors need to weigh the expectations and “the anticipation of induced consequences of one’s behavior as a necessary step when choosing among alternative actions and ways of legitimizing the choice” (Lazega 1992). According to Lazega, the actors equate the legitimacy of action to the expectations placed on the actors. In more simple terms, legitimacy of action

might be forged by identifying with an instance (such as a person, a board, a decision-making body) that carries enough weight to legitimize the action.

The third component in the definition of the situation is *actors' accountability*: Who is entitled to represent the instance of social control? This might be the source an actor identifies with in the first step and to whom s/he 'performs'. This instance would need to be someone the actors can turn to when looking for support for their ideas and for validating the legitimacy of their actions. According to Lazega, these instances can be quite "ad hoc constituencies" the formation of which can change and which actors can also try to establish "by cooptation" and, thus, manipulate the social setting. In essence, this component determines the sources of social control from which actors wish to seek identification and legitimacy for their actions.

3.4.3 *Knowing between organizations*

Brown and Duguid (2000) have taken to trace the contours of *information* on a more general level. While looking at the shapes and sizes information takes, they also discuss the routes that information takes as it travels among well-knowing communities and organizations. They note that *knowledge* – though often used quite synonymously with it – is clearly distinct from *information* in three respects: first, knowledge entails a knower whereas information can exist independent of a person to hold it. Second, where information can be easy to come by, send forward, receive, and so forth, knowledge is not that easy to pick up and handle at your will. Third, given that knowledge is not easy to pick up, it requires more by way of assimilation.

Brown and Duguid offer an interesting insight into the relationship between information and knowledge: while information held by two people can be conflicting, knowledge usually is not, as knowledge entails understanding and some degree of commitment (2000 p. 119-120). However, before these two people can establish something they both acknowledge as knowledge, it needs to be preceded by a fair bit of negotiation.

According to Brown and Duguid, people engaging in common practices, and talking while being engaged in them, ensures that they acquire and make use of the knowledge and information of a community. This thinking coincides with Lave and Wenger's (1991) communities of practice which Brown and Duguid acknowledge. Learning via practice as a member of a community is common not only on the shop floor, but

throughout many professions including scientists, doctors, and lawyers, to name some of Brown and Duguid's examples. The resulting knowledge, generated, deployed and shared within these communities is often highly esoteric, and not easily accessible for people outside these communities. According to Gherardi (2001), this knowledge is not something that resides in people's heads or books or data banks; rather, to know is to be capable of participating with the requisite competence in the given professional communities.

Identity and its development are intertwined with learning; as members of communities of practice, individuals not only learn *about* a trade or profession, they also learn *to be*, that is, develop an identity (Brown, Duguid 2000). This professional identity (could be combined with a position in an organization) is the one that other people recognize when seeking alliances for knowing well.

The fact that people – while learning – also acquire an identity probably explains why the professional identities of, for example, software engineers seem to be highly similar regardless of which country they come from. According to Brown and Duguid, (2000 p. 153) “large organizations stand little chance of forging much of a common identity” as people, when joining large companies, become members of different communities of practice. However, as we have learned from Wenger (see p. 85), people can belong to multiple communities at the same time and as they move from one community to another, one part of the ‘other’ identity remains in the person. In the same way, as a person working for a large organization probably cannot escape having an identity of an employee of that particular organization – especially in the eyes of other people – even when her/his identity within the company might be more strongly be linked with the community of practice s/he is a member of.

The technologies used and taught in universities throughout the world are very much the same, and the jargon used in their deployment is widely spread within the communities where they are used. Like Brown and Duguid say, “learning binds people together” (p. 140). As communities of practice typically form around professions (and a range of other interests, too), knowledge travels relatively easily along the social networks that people sharing a profession form. It is the practice that binds these people globally. Like Gherardi (2006) says, learning is always a practical accomplishment. The flipside of communities of practice is that people belonging to one are necessarily distanced from

many others, and like Brown and Duguid (2000 p. 141) explain, it is not the information that distances these people from one another but their different attitudes and dispositions that they have toward information that might otherwise be common. This is where a “practice-based, cultural gulf” (Brown, Duguid 2000 p. 156) becomes a possibility and a potent source of multiple and conflicting understandings.

3.4.4 Knowledge and power

Power, as is widely accepted by now, is an inherent part of any human existence. As such, it is in some ways necessarily elusive by way of definition. As one thinks of power in terms of communication, one should focus on the issue of “how” as opposed to “what”. Like Foucault says, “[r]elationships of communication imply goal-directed activities and, by modifying the field of information between partners, produce effects of power” (2000 p. 338). These power relations are exercised, according to Foucault, through the production and exchange of signs. Within the realm of this research, these signs are the talk-in-interaction that is observed and analyzed. In Foucault’s thinking, these signs, i.e. talk, are not separable from the goal-directed activities that permit the exercise of power. Depending on the circumstance or occasion, the “equilibrium” between goal-directed activities, systems of communication, i.e. talk, and power relations emerge in different ways, take diverse forms, and appear in diverse places rather than taking shape according to a specific model. Hence, in the context of meetings, the ways in which these three (goal-directed activities, systems of communication, and power relations) interact vary depending on, for example, where the meeting takes place, how many participants there are, and what their roles and relationships are.

The framework (for details, see section 4.3) Kuhn and Jackson propose for knowledge-accomplishing is also useful for studying the political nature of knowing. Although Kuhn and Jackson do not mention the dimensions of power that Lazega proposes – that is, *strategic* or *tactical* – the resources for defining the situation (identification, legitimacy, and accountability) also offer a way to do this: “shaping the situational resources upon which interpretation and action proceed is a distinctive form of power” (Kuhn, Jackson 2008 p. 463). This is the dimension that takes the whole organization into account and offers, like Kuhn and Jackson say, a second level of analysis (the first being the development or deployment of knowledge). On this level, according to Kuhn

and Jackson, actors frame situations through *classifications* and *discursive closures*. Classification of events, objects and people into types or grades is often granted to management. An example of classification might be job titles or job grades to classify people; management can also classify some events as strategy sharing events whereas others might be regular town halls or other info sessions. When people are classified (regardless of criteria), not only are hierarchies created but also work is disciplined by enforcing appropriate interpretation and action. This classification is clearly related to Lazega's notion of *tactical* power. In a tactical relationship, people who lack professional authority depend on others and need to make the dependence work for them: resources used for identification, legitimacy, and accountability are the ways that can be used for classifying. Struggles over meaning – or of knowing well – can be visible in the classification that the use of tactical power makes visible; or they can be visible in discursive closures. Discussion on a topic might be suppressed, or a response to some topic or question might be heavily questioned. Thackaberry (2004 p. 342) introduces Deetz's (1992) 'moves' that can be either deliberate or outside awareness and produce a discursive closure: "neutralization, naturalization, subjectification of experience, pacification, topical avoidance, meaning denial, legitimation, and disqualification." While these moves might be identified in organizational communication encompassing wider areas and contexts, they also manifest themselves in everyday interaction. What is crucial about discursive closures is that they "suppress insight into the conflictual nature of experience and preclude careful discussion of decision making regarding the values implicit in experience, identity, and representation" (Deetz 1992 p. 188, quotation in Thackaberry 2004).

While communicating on a personal level (as in meetings), people use these micropolitical tactics to determine the rule of a relationship, but also to assess the validity of classifications mentioned above (Lazega 1992, Lakoff 1990). What in Lakoff's terms is *metacommunication* about establishing the proximity of the participants, roles in terms of decision-making and dominancy, as well as the directness and indirectness of the relationship, translates into definition of situation in Lazega's (1992). People's relationships with authority are essential determinants in the choice of knowledge claims. As pointed out earlier, the types of relationship Lazega identifies are *strategic* and *tactical*. Assessing this relationship comprises the metacommunication that is used as a micropolitical device.

In Lazega's view, if actors or members of an organization have a strategic relationship towards authority, they can "pull rank" or professionalize problems met by the organization. However, these actors can only use their professional authority in discussions if the organization recognizes them as legitimate sources of authority. This is clearly different from the tactical relationship described above. The tactical relationships tend to be personal and actors try to build them in a manner that yields positive results for them. Lazega's conceptualization is close to Bourdieu's (1991 p. 38) for whom the meaning negotiated in any interaction is a result of a relationship that the speakers establish either consciously or unconsciously between what Bourdieu calls a linguistic product offered by a socially characterized speaker and the other products offered simultaneously in a determinate social space.

Another characterization of this same phenomenon is brought up by Sarangi and Slembrouck who affirm that "people always speak from and in a socially constituted position" (1992 p. 135). People's respective standings, such as managers versus experts, bring in the aspect of power that must be accounted for when studying the ways in which people infer meanings from what is said. Furthermore, when discussing cooperation as the pursuit of goals with social and economic investment, Sarangi and Slembrouck conclude that "individuals are not brought up to cooperate in the absolute sense, but to cooperate with some people rather than others" (1992 p. 136). As Yule points out, "a great deal of what we communicate, is determined by our social relationships" (1996 p. 59). Related to the kind of power that is vested in people because of their position in the organization, Brown and Duguid make an interesting observation. Using an example from an engineering project involving both hardware and software they note that in "getting the job done, the people involved ignored divisions of rank and role to forge a single group around their shared task, with overlapping knowledge, relatively blurred boundaries, and a common working identity" (2000 p.127).

The relationships Lazega identifies, *strategic* and *tactical*, nestle in this realm of social relationships. Lazega investigates them in the two organizations one of which represents a "collegial" and the other a "bureaucratic" structure. Lazega's interesting points of the two versions of organizational structure are that while the bureaucratic structure forces most of its members in a tactical relationship toward authority, the collegiality in professional organizations limits or modifies the powers of formal leaders (1992 p. 72-

74). The way the power mechanisms link to knowledge claims and the constant renegotiation of the criteria used for making them or appropriateness judgments is the manner in which the knowledge claims are made in the two variants. Lazega hypothesizes that in workgroups where members have a strategic relationship toward authority, the knowledge claims tend to be *homogeneous* while a tactical relationship would produce more *diverse* knowledge claims. This way, the knowledge claims in collegial workgroups would, according to Lazega, be more predictable and stable whereas in bureaucratic workgroups they would be unstable, differentiated, and unpredictable. As regards the epistemic alignments or constituencies, Lazega (1992 p. 75) notes that members in both types will try to create them to support their claims and delegitimize others' claims. Although this might be the case, the rationale for creating epistemic constituencies in talk in interaction might be quite different from that in meta-talk, where talk is *about* the relationship rather than *being* the relationship. Lazega's view of the two structures with regard to knowledge claims is dualistic, and maybe necessarily so – given the two organizations wherein he conducted his study, but it also renders a kind of rigidity into his model. Nevertheless, I have chosen to view the problematic situations also through the strategic-tactical power dimensions. In doing this, I have determined whether the participants, in my opinion, use their professional authority in tackling problems (strategic) or need to seek support from their personal relationship with someone who the others recognize as an authority (tactical). I realize this renders the analysis somewhat dualistic, but in an interesting manner, it also reveals that in the majority of cases (~70%), the team is able to find a solution by discussing the case in the meeting.

Lazega's 'knowing well' is closely related to Weick's sensemaking in that both knowing and ignorance needs to be negotiated within the community where the activity takes place. The difference between the two seems to be in that Weick does not bring the political elements of authorities and legitimization into his theory but rather keeps them in the background.

3.4.5 Sensemaking as a lead-up to interpretation/understanding

Weick's sensemaking relates to *deductions from theories* as well as to struggles to *reduce ambiguity*. Sensemaking "is about the ways people generate what they interpret"

(1995 p. 13), and sensemaking as a concept highlights action and activity involved in developing the traces that are then interpreted and reinterpreted.

Weick emphasizes that sensemaking is not only separate from interpretation but something that occurs well before any interpretations takes place. Weick's *interpretation*, to me, reads very close to *understanding* as an outcome of a process that most often – at least, on the level of an individual – takes place instantaneously. As to whether interpretation is an outcome or a process, Weick does not take a strong stand, but notes that “(s)ensemaking is clearly about an activity or a process, whereas interpretation can be a process, but is just as likely to describe a product. It is common to hear that someone made “an interpretation”. But we seldom hear that someone made “a sensemaking”” (1995 p. 13). Sometimes interpretation can be the result of a laborious process of interpreting and reinterpreting that requires a fair amount of sensemaking in between. The latter process might be related to resolving ambiguities that are results of too many differing understandings that cause confusion. In this sense, our individual understandings are something we *think* we know. What we think we know cannot be verified until we have voiced our understanding in interaction with others.

According to Weick (1995 p. 91), the sensemaking occasions that are typical for organizations are ambiguity and uncertainty: “(i)n the case of ambiguity, people engage in sensemaking because they are confused by too many interpretations, whereas in the case of uncertainty, they do so because they are ignorant of any interpretations.”

Weick says that in the latter case, uncertainty and ignorance can be remedied by more information. What's more, it is enough to have this additional information available in some form that people themselves can dig out. However, in the case of confusion that is borne out of ambiguity, which itself can be the result of a number of different reasons, the remedy is not more information, but “different kind of information [...] namely, the information that is constructed in face-to-face interaction that provides multiple cues” (Weick 1995 p. 99). The “cues” Weick talks about here are “simple, familiar structures that are seeds from which people develop a larger sense of what may be occurring” (1995 p. 50). So, for reducing multiple understandings and meanings (understood as a personal ‘impression’ of an experience), people need access to more and more varied cues that, according to Weick, can happen when “rich personal media”, such as

meetings, take precedence over less rich media, such as various channels available via technology. A mismatch in media as a response to either uncertainty/ignorance or ambiguity is a sure way of prolonging the confusion.

Weick lists seven features that are characteristic of sensemaking: sensemaking is (1) grounded in identity making, (2) retrospective, (3) enactive of sensible environments, (4) social, (5) ongoing, (6), focused on and by extracted cues, and (7) driven by plausibility rather than accuracy. Out of these features the fact that sensemaking is *retrospective* is especially interesting.

Weick (1995 p. 12) recounts a story that originally appeared in a book by Graham Wallas in 1926; in the story, a little girl who has been advised to be sure of her meaning before speaking says: “How can I know what I think till I see what I say?” The story relates the retrospective nature of sensemaking well although Weick (p. 18) continues to say that while the assertion may seem obvious, therein is a trap; “no individual ever acts like a single sensemaker” since the individual is a discursive construction with an identity that is constituted out of the process of interaction. However, when the words of the story are put in a slightly different form, using different pronouns, several other characteristics of sensemaking emerge: ‘How can we know what I/you/we think until I/you/we see what I/you/we say?’ also highlights the fact that no individual alone is a sensemaker but rather that sensemaking is always social by nature. It is important to note that Weick anchors sensemaking in social contact and notes that the typical media for the latter are talk, discourse, and conversation.

So, an action, be that a sequence of talk, for example, cannot become the focus of attention until it has occurred. This relates to the experiences constituting meanings as what we pick as “stimulus” from a sequence of talk to respond to affects the choice of what the action/talk means. After all, there may have been a number of stimulus candidates in the words that have been spoken. Both the choice of the stimulus and the choice of what it means is heavily influenced by the situational context (Weick 1995 pp. 25-26). Linell also emphasizes the role of the context – be it immediate or mediate – but notes also that “at the content level, action and meaning in discourse are socially constituted, even if our perceptions and conceptions are not independent of the material world” (Linell 1998 p. 272).

The sequence of action described above may relate to a fleeting moment in any interaction. Weick notes that in organizations, people often have numerous projects under way over which they have differing awareness. Because of this, “reflection is overdetermined and clarity is not assured. Instead, the elapsed experience appears to be equivocal, not because it makes no sense at all, but because it makes many different kinds of sense. And some of those kinds of sense may contradict other kinds. That is not surprising given the independence of diverse projects and the fact that their pursuit in tandem can work at cross-purposes” (Weick 1995 p. 27).

People being involved in multiple projects are rather typical for large corporations. Similarly it is rather typical for people who work as subcontractors; they might have multiple projects ongoing in different customers’ organizations. Hence, Weick’s affirmation of how people involved in joint activities might not develop *shared meanings* is highly reasonable. In discussing the notion of a shared meaning, Weick (1995 p. 42) refers to Czarniawska-Joerges’s (1992) book about complex organizations and notes that shared meaning is not something that is crucial for collective action, but it is the experience of the collective action that is. People can have the same experience, but nevertheless will have a completely different meaning for what they have experienced. These meanings could possibly sometimes be interpreted as being totally opposite.

3.4.6 Learning through practice

For people to understand and know various aspects of their professions and organizational life as well as the details of whatever tasks they are working on, they need to have learned them via some mechanism. Wenger (1999) introduces a *social theory of learning* that starts with the assumption that engagement in social practice is the fundamental process by which we learn and so become what we are. As a primary unit of analysis, Wenger uses the familiar concept of a *community of practice* (as opposed to individual or social institution) that people form as they pursue shared enterprises over time. Community of practice is a concept Wenger introduced together with Jean Lave in the early 1990’s. A key element in learning in a community of practice, and a primary focus of Wenger’s theorizing, is *social participation*. Wenger characterizes social participation as a process of learning and knowing that involves the interconnected components of meaning (experience), practice (doing), community

(belonging), and identity (becoming) – in essence, the components that communities of practice integrate.

So, if and when learning takes place via social participation, it is not an isolated and individual phenomenon or activity nor is it available only for individuals. Where learning of an individual takes place by participating in communities of practice and contributing to them, communities, for their part, refine their practice and ensure new generations of members. Organizations learn, too, by “sustaining the interconnected communities of practice through which an organization knows what it knows and thus becomes effective and valuable as an organization” (Wenger 1999 p. 8). The type of learning Wenger describes does not happen by storing well-designed pieces of information into the brain, from where it can be retrieved when needed. Instead, learning and knowing involves active participation in meaningful activities in social communities, wherein resources are available to enhance participation and open horizons for learners (Wenger does not deny that information stored in the brains of people is needed, but maintains that it is only a small part of knowing). So, learning and knowing is quite similar to understanding in the sense that all three unfold under the same existential conditions, via interaction and out of experiences we share while interacting.

By associating practice with *community*, Wenger (1999 p. 72) distinguishes practice from, for example, cultural practices that he says are less “tractable” while also defining a special type of community. The key dimensions or properties of a community involve the following: (1) a mutual engagement, (2) a joint enterprise, and (3) a shared repertoire. These dimensions also define competence within a community: to be competent, one needs to engage with the community and be a trusted partner, one also needs to understand the enterprise well enough to be able to contribute to it, and one needs to be able to use the tools, language, and routines, among others, appropriately (Wenger 2003).

Wenger’s description of the relationship between learning and practice reflects the cyclical and open-ended nature of the process: “learning is the engine of practice, and practice is the history of that learning” (1999 p. 98). I would be tempted to flip this the other way around and say that practice is the engine of learning as well as the history of that learning. So, to me, practice reflects both the ongoing learning and the accumulated

learning. Practices evolve as its members interact, do things together, and negotiate new meanings. By so doing they learn from one another while at the same time share their competence with new generations of members.

3.4.7 Multimembership in communities of practice

Communities of practice – although often unofficial in their lack of explicit markers of membership (titles, dress, etc.) – nevertheless can and often do have many ways of barring participation. In the realm of R&D, for example, such a boundary can be the jargon of a professional community – the shared repertoire. The idiosyncratic ways of engaging with one another combined with the detailed and complex understanding of their particular enterprise also ‘seals’ the practice from outsiders. These boundaries, however, are not rigid in the sense that the products of reification – such as documents and tools – can cross the boundaries. At the same time, people can participate in multiple communities of practice at once. These two, the products of reification and people belonging to multiple communities of practice, also form the connections that can exist between different communities of practice. The first (products of reification) Wenger calls *boundary objects*, and the second activity (people belonging to multiple communities of practice) he calls *brokering* (1999 p. 105). People who might typically have a brokering role in organizations are managers and supervisors participating in, for example, different management teams as well as the actual R&D work (as might be the case in the activity studied in this dissertation).

Apart from work, people belong to multiple other communities that craft their identities. Some are parents, and they do not cease to be parents when they go to work. Most people move from one community to another during their lifetime – always taking a piece of the previous to the next; us having belonged to a community does not disappear, but rather stays as an element in our identity. This way, like Wenger says, multimembership is an inherent aspect of our identities (Wenger 2003 p. 91). For learning, identity is important as it combines competence and experience. These two decide what is important, with whom we identify and trust, and with whom we share what we understand.

From the point of view of understanding in practice, the act of brokering that occurs in workplace is of interest as it involves the complex processes of translation, coordination, and alignment between perspectives (Wenger 1999 p. 109). Brokers can

be *boundary spanners*, taking care of one specific boundary over time; *roamers*, going from one place to another, creating connections and moving knowledge; *outposts*, bringing back news from the forefront and exploring new territories, and *pairs*, involving a personal relationship between two people from different communities (Wenger 2003 p. 88). Further, like Wenger says, whoever has a role in brokering, needs to have “enough legitimacy to influence the development of a practice, mobilize attention, and address conflicting interests.”

The way Wenger describes the people in the role of brokers makes them seem like people who do not actually belong in any community: “brokers must often avoid two opposite tendencies: being pulled in to become full members and being rejected as intruders” (1999 p. 110). In Wenger’s view, the brokers’ contribution lies in being neither in nor out. Whether the boundaries of communities of practice are as solid as Wenger makes them seem, and whether the role of a broker mostly belongs to a person not affiliated with any community of practice remains to be seen. It may well be that the role of a broker, especially, may be much more fluid and assumable by almost anyone in a community.

While boundaries can be a source of separation, disconnection and misunderstanding, they can also be areas of “unusual learning” as boundaries are sites of differing perspectives and points of view that can be eye-openers. The interplay of experience and competence need divergence – that is, experience and competence must not always match – for learning and innovations, but also “active boundary processes” are needed for unleashing the potential of innovativeness (Wenger 2003 p. 85). Boundary projects that from the point of view of task accomplishment are cross-disciplinary projects, force the participants to negotiate their competence with the competences of others. As such, these types of projects “provide a great way to sustain a creative tension between experience and competence” while also promoting learning and knowing in future cross-disciplinary projects. These are what Wenger calls “learning loops that combine application with capability development” (Wenger 2003 p. 90). What actually takes place in these learning loops can be interpreted as “creative tension” (like Wenger does), but it can translate into frustrating friction and, at best, staggered progress for the people engaged in the actual activity. In many cases, it is likely that the learning is only acknowledged retrospectively, after the fact.

Although the practices themselves can be sources of boundaries in being, for example, highly specialized with a repertoire that is not meaningful for outsiders, they can also be a form of connection. The boundary practices and the relationships and connections maintained can become part of the enterprise, and the forms of membership evolve. Wenger's (1999 p. 115) example of engineers of a supplier company working with engineers of a customer company creating a community of practice over time is very much a reality in the life of software service companies today. According to Wenger, this reflects deep working relations and creates a bridge between the organizations "to the point of blurring allegiances." Clearly, given that many software service company employees work in the premises of their customer companies, and that action and structure are mutually constitutive, they cannot but have a role in the organizing of the company.

The boundaries of practice can, however, work adversely: Brown and Duguid (2001) note that while it seems that culture, identity, and knowledge are most densely shared on the level of communities of practice (or: some other internal unit or subculture), the perspective of practice helps in identifying quite distinct demarcations between people at work. Given these distinct divisions, people involved with different practices develop an outlook on work that can differ considerably from each other, even when the people involved work in the same organization/company. And this is why, as Brown and Duguid (2001 p. 202) continue, communication between different communities-of-practice can be more problematic than might at first appear.

Where communities of practice are situated and characterized by locality and face-to-face interaction, *networks of practice*, according to Brown and Duguid consist of people who belong to local communities of practice but have practice and knowledge in common with people who they do not necessarily know in person but might keep in touch with using a variety of technologies. These networks, as Brown and Duguid say, can be vast, reaching over national borders and time zones while being "fortified by information technology". Although Brown and Duguid maintain that people belonging to networks of practice form links that are indirect, rather than direct, and that members communicate through third parties, evidence of more blurred boundaries exists, too: an example being intranets that allowed practitioners extend the distinctive features of communities of practice – mutual engagement, joint enterprise, and shared repertoire – to the network level (Vaast 2004).

Besides the negotiated meanings and practices in a community, an important characteristic of a community of practice is a degree of *locality*. Like Wenger (1999 p. 126) says, not everyone needs to interact intensely, or account for everything they do to a joint enterprise, but for a community of practice, “a community of mutual engagement, a negotiated enterprise, and a repertoire of negotiable resources accumulated over time” need to be present to a substantial degree.

As to knowing in practice, it is related to the acknowledged competence within a community of practice; that is, knowing is defined as what would be recognized as competent participation in the practice (Wenger 1999 p. 137). This knowing is always locally negotiated within the community of practice, and hence, it is not static and not limited to what is already known. Knowing can also be discovering something entirely new – and almost invariably an act of participation:

What transpires is that knowing is defined only in the context of specific practices, where it arises out of the combination of a regime of competence and an experience of meaning. Our knowing - even of the most unexceptional kind - is always too big, too rich, too ancient, and too connected for us to be the source of it individually. At the same time, our knowing - even of the most elevated kind - is too engaged, too precise, too tailored, too active, and too experiential for it to be just of a generic size. The experience of knowing is no less unique, no less creative, and no less extraordinary for being one of participation. As a matter of fact, on the face of it, it would probably not amount to much otherwise. (Wenger 1999 p. 141-142).

To me, what transpires is that similarly as knowing, understanding – while being an individual’s process – is never one’s own but rather something that is always connected and brought on by a regime of competence and meanings of experiences. Similarly as knowing, understanding cannot come about without participation. In organizational settings and in meetings studied in this dissertation, understandings evolve within a community of practice as a result of locally negotiated meanings but also as a result of active brokering. As to exactly *how* this is done, Wenger’s theory provides little guidance. Wenger leaves the nature of the negotiation of meaning open; although Wenger says that joint enterprise, for example, is a result of a collective process of negotiation, how this happens is somewhat opaque. Contrary to Weick, the role of communication, talk and language in Wenger’s negotiation of meaning also remains vague. So, although Wenger emphasizes the centrality of the negotiation of meaning, he does not draw out ideas about the relationship between language and meaning making

despite the centrality of language and talk as means by which meaning is reified. Wenger's model is first and foremost a conceptual framework, but as many researchers suggest it would certainly benefit from considering the central role of language and talk in the processes of meaning making and the relationships between different processes and other social dynamics (Creese 2005, Rock 2005, Tusting 2005). For investigating understandings and how these understandings are jointly crafted, Wenger's theory must be complemented with theory that allows us to see how people claim they know (they have the best understanding) something and how the community makes sense of their varying degrees of knowing.

3.4.8 Practice as culture

Networks of practice could also be thought as *cultures* in that culture, too, implies that people are bonded together, albeit not as tightly as in communities. Yanow (2003) sees the 'grouping' features of both communities and cultures, but says that where communities engage in action rather visibly, cultures are more diffuse and global. Given their backgrounds that can at once be very heterogeneous (origins, nationalities) and similar (education), software developers could globally be said to be representatives of the same culture. Like Brown and Duguid (2001 p. 201) say, the cultural forces most salient for the members of an organization are probably not those that are imposed by leaders, but those that arise through an individual's engagement in the organization and its work.

Nevertheless, whether the boundaries are those created by networks or communities, the boundaries created by practice stand to reason. Given this, Brown and Duguid question the possibility of a uniform workplace or organizational culture since the divisions are not created, say, between companies or organizations, but between different practices. Cultures, after all, are borne to bind people "who do things together"; these people share an experience although they might have differing interpretations of that experience (Weick 1995 p. 189). Yanow (2003 p. 45) sees that culture as a concept is more useful for conceptualizing cross-group communication and the friction that sometimes ensues from tacitly known habits colliding. Although some networks and cultures may extend over boundaries created by practices, they can also create discontinuities where meaningful communication breaks down. Professional communication can thus be considered a culture; it is an interpretive sensemaking process via which community

participants understand, learn and know. Given this, one can logically deduce that a large corporation hosting professionals from many disciplines might have many cultures, instead of just one organizational culture. This does not deny the fact that there can be traits of cultural behavior that can be attributed to one corporate culture.

Keyton (2005) defines organizational culture first of all as something that must be shared by a collective the size of which can vary. Second, Keyton states that organizational culture is a multilevel construct comprising many elements, such as artifacts, values and assumptions. According to Keyton, it is these elements that guide the organizational behavior and help people make sense of the organizational world they operate in. Thus, for Keyton, “organizational culture is the set(s) of artifacts, values, and assumptions that emerge from the interactions of organizational members” (2005 p. 28).

Similarly to Keyton, Carbaugh (in Beamer, Varner 2001 p. 302) defines organizational culture as a “shared system of meanings, performed in speech, that constitutes and reveals a sense of work life; it is a particular way of speaking and meaning, a way of sense-making that recurs in the oral activities surrounding common tasks.”

The descriptions and definitions of organizational culture seem to be startlingly close to a definition of a community-of-practice: Lindqvist (2005), for example, describes a community-of-practice as a “tightly knit group that has been practicing together long enough to develop into a cohesive community with relationships of mutuality and shared understandings.” Handley et al. (2006) note that Wenger himself does not presume that communities-of-practice generate shared understandings. Wenger (1999) remains on a rather general level with his own definition of a community-of-practice, which for him is a particular way of social participation that involves learning and knowing by linking the interconnected components of meaning (experience), practice (doing), community (belonging), and identity (becoming). Nevertheless, the fact that the definitions of communities-of-practice and networks of practice (for more, see page 87) are congruent with the definitions of organizational culture is not that surprising – given that members of these communities and networks reside in organizations. However, a more interesting question is whether an organizational culture can be shared over the boundaries of communities-of-practice; after all, as pointed out by Brown and Duguid (2001 p. 201), a CEO of a large company and an engineer of that same company might have somewhat little in common. Both the CEO and the engineers (Brown and

Duguid's example was a CEO and a technician) are likely to have more in common with their peers in other organizations than with many other employees in their own organization. Their point is that a focus on the organization as a cultural unit tends to overdetermine the contribution of groups of people who are quite distant from each other in terms of practices.

3.5 Conclusion

As can be seen from chapter 2 where I discussed research that has been conducted in the area of business meetings, most research focuses on phenomena occurring *inside* the meetings themselves. Typically, meeting and negotiation research has looked at linguistic phenomena and left the organizational aspects aside. What's more, there is no research that looks at meetings as contributing to understanding, knowing, and learning on both the individual and the organization's level. In this chapter, I have discussed the theoretical concepts relating to the latter territory, and introduced the salient processes of understanding, knowing, learning, and sensemaking, and the theoretical discussion related to them. This is also the area where the focus of my analysis will be.

As I began this study, my focus was on multiple understandings in company internal meetings. However, as I familiarized myself with the theoretical literature related to understanding and tried to relate that to the experience and insight I had of not only through my materials but also through my own daily work, I realized that focusing on understandings only would not be enough. It would have equaled to watching a late night soccer match with only one corner of the field illuminated; one could hear the game going on elsewhere, too, but the other parts of the field would not be visible, and following the game would be rendered nearly impossible. This led me to finding out more about the related processes and concepts, and so knowing, sensemaking, and learning entered the picture.

In this chapter, I have introduced the slippery term – understanding – and discussed it in terms of cognition as well as a social accomplishment. Both sides are always present when one strives for an understanding, but from a researcher's point of view, only the social part – the one produced in social interaction – is readily available for analysis. Although Schwandt, Linell and Lazega convincingly argue that understanding and knowing are thoroughly social accomplishments for both the speaker and the interlocutor one can hardly deny that cognitive processing is involved, too. And in fact,

Linell does emphasize the use of local cognitive processes when people, for example, extract the contexts and fragments of previous discussions and contexts and recontextualize them in speech. Being an active member in a similar organization where this study takes place, I recognize additional processes, too. This is the rest of the soccer game: the rest of the organization participates and its involvement cannot be shrugged off by insisting on analyzing one side of a phenomenon only. For analyzing understanding and knowing in relation to the organization where it takes place, one benefits from the theoretical concepts that have been developed for discussing communication in organizations and otherwise. In addition to understanding and knowing, I have also chosen to discuss sensemaking and learning (in communities of practice). They offer the kind of theoretical concepts that one can use for explaining the activity and reality that unfolds in the speech of the participants. However, the important fact remains that we cannot establish or witness any of these processes – most importantly understanding and knowing – unless they are brought out to the open via talk in interaction (see the centrality of talk in Figure 1). When there's a conflict in meeting participants' understanding or knowing, and it is caught in interaction, the participants engage into a sensemaking process (Weick), or, in Linell's words, into a communicative project that allows them to probe their respective understandings and knowing, challenge them, and even use strategies for legitimizing the understanding they feel is the proper one for the issue at hand. It might also be that possible underlying conflicts are not caught, but there is a degree of ambiguity or confusion – or at least, lack of clarity – that forces the participants in meetings to delve deeper.

All of the above, the conflicts in understanding and knowing as well as various degrees of ambiguity and confusion translate into *problematic situations* in talk in interaction. As pointed out, not all the communicative breakdowns that constitute problematic situations are related to knowledge or knowing as such (although, once these problematic situations are resolved, people are more knowledgeable). Hence, my focus will be on problematic situations regardless of whether they are borne out of the need to know, out of having a different understanding (and voicing it), or out of other communicative challenges. In the analysis chapters (5 and 6), we will learn how the concepts or processes depicted in Figure 1 come alive and revolve in and around talk in interaction. While these processes move in interaction, we also see how the rest of the

project team (absent people) and the rest of the organization (not part of the project team) dynamically influence the knowledge accomplished in the project meetings.

4. DATA USED AND ANALYTICAL FRAMEWORK

In this chapter, I first give a brief account of the company wherein the research was conducted, and give an overview of the data. I then move to introduce and discuss the analytical tools and approaches I later use in my analysis from chapter 5 onwards. My approach could be called ‘discursive analysis’ rather than ‘discourse analysis’ (see Broadfoot, Deetz, Anderson 2004), as I consider the structure of meeting talk and try to understand it within the larger context of the organization through the lens of problematic talk – which in turn, constitute the discursive moments. These discursive moments, then, are identified as episodes of problematic talk. In more detail, the analytical tools and approaches mentioned are the analytical framework proposed by Kuhn and Jackson (2008) for investigating knowledge accomplishing in organizations and *dialogism*, an approach introduced by Linell (1998). I explain my combination of the two approaches through a diagram on page 102. Finally, I discuss my own role as a researcher in the company where I myself am employed as well, as that has a bearing on the analysis.

4.1 Background to the company

The communication observed and analyzed in this study occurs in regular everyday internal meetings within a large multi-national company (MNC), headquartered in Finland.

In contemporary business world, especially in the information technology (IT) sector, companies are networking intensely, sometimes forming alliances and partnerships that involve very close relationships. In the current research, some participants of some meetings are employed by subcontractors or partners, working, however, fully for the project within the company where the research takes place.

As modern technology allows meetings between people in different rooms, buildings, cities, countries, and continents, this study looks at face-to-face meetings where connectivity technologies (teleconference + virtual meeting) are used to connect people from remote locations. This is a necessity, since pure face-to-face meetings are becoming increasingly rare in organizational life of globally operating companies. Thus, participants of the meetings observed are not necessarily in the same room meaning that not all communication between the participants is free. However, most of the

participants in the meetings studied always benefit from the help of facial expressions and body language.

The team whose interaction is observed in the data in this study consists of experts and professionals from the fields of software engineering and business. The team's task is to resolve the open issues related to the features about to be developed for the next version of the software product ATM². The team is working towards a deadline, a major milestone where the future functionality is decided and a GO/No-GO decision for the project is made.

The interaction studied in this work is oral and takes place in meetings revolving around an R&D project. Inevitably, *language* and *talk* play a central role in any and all communication therein, and meaning is conveyed using utterances. In most meetings, different kinds of tools (mostly software-based) are used to assist in either demonstrating what is meant, recording what was decided, or simply indicating what the topic of discussion is.

4.2 Data

The meeting materials used in this study comprise a series of R&D meetings (nine in total) that take place approximately once a week over a period of two months.

All data used in this research is authentic (as opposed to simulated, quasi-natural, or manipulated data), and the materials can be deemed quite valuable by the virtue of their sequential nature alone. Gaining access to businesses is an obstacle mentioned invariably in any business discourse research related discussion (Charles 1994, Poncini 2004, Bargiela-Chiappini, Harris 1997, Bargiela-Chiappini, Nickerson, Planken 2007).

Due to the confidential nature of the materials, the mini-discs containing the recordings of the meetings are kept in a safe place according to the agreement with the company where the recordings were made. In transcribing the materials, I have focused on the problematic situations (where the team hits a 'snag' of some sort) that are directly related to the phenomena this research studies. Further, in addition to people's privacy and anonymity (discussed in section 4.6.1), the details in materials – such as names of tools, geographies, countries, teams – are converted to aliases to safeguard any and all

² ATM is a pseudonym for the product. Given that the focus of the study is on problematic talk, the subject of discussion bears little relevance.

info that might give clues to actual products, people and places. Although the topic and the ‘snag’ the team hits might be somewhat small, the extract where it is highlighted reflects the central themes of this research: understandings, collaborative constitution of understandings (sensemaking), the role of understandings in individual and organizational learning, and the way understanding and knowing link with the existing overall organization. Finally, a point to note is the fact that as I began transcribing the problematic situations, I used transcription conventions used in conversation analysis (reflected in appendices). This is because I initially thought that I might explore the aspects (pauses, overlaps etc.) revealed by the CA conventions. However, as it turned out, I ended up exploring different avenues. Hence, to increase readability, I have removed those markers from the extracts in this study. The markers remain in the appendices as they might come in handy in later studies.

The data analyzed in this research comprises 16 hours 12 minutes of audio-recordings (on mini-discs) of meetings (nine in total) with the following details/characteristics:

Table 2 Data

Meeting number	Date	# of participants	Duration	Transcribed
1	28.11.2007	5	02:17:00	00:14:15
2	04.12.2007	6	02:21:00	00:26:08
3	10.12.2007	7	01:58:00	00:24:45
4	18.12.2007	6	01:57:00	00:05:27
5	28.12.2007	6	01:59:00	00:48:05
6	03.01.2008	6	01:28:00	00:09:26
7	07.01.2008	7	01:43:00	00:04:05
8	16.01.2008	7	00:59:00	00:06:07
9	25.01.2008	7	01:30:00	00:10:25
			16:12:00	02:28:43

The meetings in the table above are all related to one R&D project covering a period of time when the R&D project members were working towards a specific milestone. What is of special interest in these clarification and scoping meetings is the fact that some of the participants are actually employed by contractors (four separate companies) although the participants work full-time for the project, and hence, for the MNC wherein this research was conducted. The physical workplace of almost all the contractors is within the premises of the MNC. Although the number of people

physically present in the meeting room varies between 5 and 7, altogether 12 individuals participated in the meetings at different times. All these 12 people were never present at the same time. Out of the 12 people who participated in the series of meetings being investigated in this dissertation, only one (1) person participated in all of them. This one person was a representative of business ([A] in extracts) who not only had a key role in being the business representative but also clearly had a brokering role (Wenger 1999) in the team. He was brokering information between business and the software developers participating in multiple communities at the same time. [A] took part in *core meetings* (this becomes evident as [A] talks about them in the meetings within the scope of this study) where people from various parts of the world got together and where many of the decisions regarding the requirements for the software were made.

4.3 Frameworks for analyzing knowing and understanding

This section introduces a slightly modified version of the knowledge-accomplishing framework developed by Kuhn and Jackson (2008) that provides a way for investigating diverse or heterogeneous knowledge leading to problem-solving ambiguity. I also relate Kuhn and Jackson's approach to *dialogism*, which is a general approach (for details, see section 3.3.4) for understanding discourse, cognition and communication as it has been proposed by Linell (1998). I then discuss how the two frameworks or approaches are analytically different but conceptually convergent by devising an additional diagram for conceptualizing the relationship of understandings manifest in talk and the higher level of "knowing well" as something that enables action within the organization. The latter framework is developed for the purposes of this research to show the levels of analysis and also to indicate the dynamics involved in the negotiation of meaning in an organizational context.

4.3.1 Situated problem solving as knowledge accomplishing episodes

Kuhn and Jackson have developed their framework specifically for the micro-level analysis of knowing that they define as *situated problem solving* (2008 p. 458) as a response to methodological criticism related to the practice-based view. Kuhn and Jackson divide this criticism into three groups: one contending that operational definitions of knowledge and knowing tend to be vague, failing to make meaningful analytical distinctions between action and knowledge; the second laments lack of

sufficiently complex methodology or overtly abundant conceptual development making comparison between studies difficult; the third claims that existing models developed for studying knowing rely on intracommunity consensus, thus preventing the study of power. Kuhn and Jackson approach knowledge and knowing from a practice-based angle that contributes to organizational theory by showing how knowledge always plays a part in problem-solving in enabling action, how knowledge is deeply social and closely connected to a community, and how knowledge in a given context enables action without making claims of knowledge being true.

In developing their framework, Kuhn and Jackson draw on the conceptualization of the definition of situation and knowledge claims Lazega has introduced (see section 3.4.1). The situational features judging the message appropriateness (identification, legitimation, accountability) are used in Kuhn and Jackson's framework as features gauging or indicating the level of determinacy of the situation. These are divided into determinate and indeterminate situations. In determinate situations, where "many circumstances appear routine and mundane [...] (t)he resources of identifications, legitimacy, and accountability are framed as being unproblematic" (2008 p. 460). In these situations, people know how to proceed and rely on others doing the same based on their mutual understanding of the requirements of the job. In indeterminate situations, however, Kuhn and Jackson explain that there might be multiple conflicting identities, uncertainty as to the validation of action, and ambiguity marking both role requirements and action scripts.

In determinate situations, according to Kuhn and Jackson, accomplishing knowledge is a matter of *knowledge deployment* – knowledge is simply rendered as information and passed on to the person requesting or needing the piece of information. The moves that according to Kuhn and Jackson characterize knowledge deployment are *information transmission* and *information request*. These are relatively simple looking moves that are enough for conveying information between people.

Indeterminate situations, where the resources for identification, legitimacy or accountability are ambiguous, knowledge deployment is not enough. These situations call for *knowledge development* – either seeking *instructions* from other, more knowledgeable people, or, in very ambiguous and uncertain cases, *improvisation*. While seemingly similar, *information requests* of determinate situations differ from

instructions in indeterminate situations in that they do not involve “the type of interactive move that, in the moment, creates teachers who instill lasting lessons in students” (2008 p. 468). In this type of knowledge development, Kuhn and Jackson identify three characteristics: the self-presentation of an identity as one who seeks to teach or to be taught, the assessment of an other’s (lack of) knowledgeability in comparison to the self (obtained interactively), and instruction as showing how and to whom the other is accountable. Thus, the indeterminate situations also reveal how the resources for identification, legitimacy or accountability are used in claiming to know; at the same time, they can be used for introducing topics that might otherwise be overruled as items to be discussed. As a knowledgeable person identifies an opportunity to teach, s/he might launch into a lengthy explanation (teaching session) where the ‘lesson’ goes well beyond the needs of that particular situation.

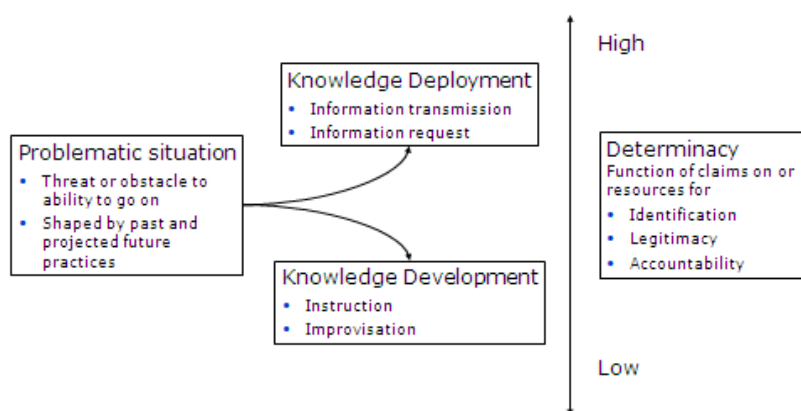


Figure 3 Episodes of Knowledge Accomplishing Activity as a Function of Determinacy – Kuhn and Jackson, 2008

The dynamics of the framework are depicted in Figure 3 drawn by Kuhn and Jackson (2008 p. 460, reproduced above). Depending on the problematic situation, the resources for identification, legitimacy, or accountability (see section 3.4.2) may be highly determinate or indeterminate (in which case determinacy is very low). The degree of determinacy is defined upon encountering a problematic situation that creates an

obstacle for smooth passage forward. If the resources for identification, legitimacy, and accountability are determinate, the problematic situation can be remedied by deploying knowledge that exists by rendering it as information. Conversely, should the determinacy be low, the situation turns indeterminate and will turn into developing knowledge. However, as Kuhn and Jackson themselves indicate, any investigation taking place in complex organizations needs to methodologically accommodate for the fact that “communication that identifies, constructs, and defines problems is likely to be spatially and temporally distributed” (2008 p. 472). A case in point is the current study where knowledge accomplishing and understanding is studied in meetings – but also outside of meetings to the extent that they become manifest in meeting talk; these spatial and temporal dimensions are discussed insofar as they affect knowledge accomplishing and understanding.

Although Kuhn and Jackson point out that not all knowledge-accomplishing activity resolve the problematic situations, they do not remove obstacles to action by bringing episodes to a close, they do not note on the recursive nature of some problems or episodes. A problem already once ‘closed’ may surface again and constitute a problematic situation anew – due possibly to quite different reasons. Further, the knowledge accomplishing activities Kuhn and Jackson investigate in their empirical study are somewhat straightforward – although, of course, in many ways intricate and complex. They comprise interaction taking place in a Help Center providing computing and telecommunication assistance to callers in a U.S. university. Calls, obviously, are person-to-person interaction, and similarly, when help is requested from colleagues, that interaction is mostly one-on-one, too. In the meeting materials investigated in this dissertation, interaction is much more “messy” and reflects the spatial and temporal dimensions that govern the interaction, too. Additionally, problematic situations where the team faces an obstacle may relate to many kinds of ambiguities and confusions that disrupt the flow of communication. They may or may not have anything to do with knowing and the related resources for identification, legitimacy or accountability. Because of this, the analytical framework developed by Kuhn and Jackson (see Figure 3 above) needs to be modified to allow for the “messy moment-to-moment manner” in which people in institutions and organizations fashion coherent worlds out of encounters that are necessarily incomplete and fragmented (Alvesson, Deetz 2000 in Broadfoot et al. 2004). Interaction in meetings is closer to freely occurring talk which is

inherently different than telephone conversations wherein there are very specific rules governing interaction (as Sacks (1992), for example, found when he first investigated calls coming in to a help line). Hence, this talk is also riddled with features that bring in the element of the unexpected.

Where Kuhn and Jackson were able to trace knowing and the way in which individuals' identities were formed both in interactions with the callers as well as colleagues, similar investigation is not possible here. Kuhn and Jackson were able to relate the problematic situations with individual knowing as individuals' accumulated knowledge played such an important part in the definition of situation, for example. Not having access to individuals' work outside of meetings, this study takes a step back, and rather than viewing individual participants' knowing, it looks at meetings as snapshots into knowledge accomplishing sessions wherein participants' knowing emerges in micro-level knowledge accomplishing in practice.

Another point to consider is what Kuhn and Jackson (2008 p. 473) indicate, too: tracing the structuring effects of resources for identifications, legitimacy, and accountability requires several data sources. These are the resources people in organizations (in meetings, too) can use for claiming to know; they also define the appropriateness of these claims. Hence, an account of organizational settings is needed.

According to Kuhn and Jackson (2008), to employ the framework they have proposed, one needs to have access to interaction that constitutes episodes of knowledge-accomplishing. Further:

Episodes are made up of knowledge-accomplishing activities that are mediated by and productive of local situation-framing resources. Because communication performs framing and reframing functions as well as problem-solving functions, access to actual interaction rather than reports of interaction is desirable. Only with data on a series of moves (perhaps even over an extended period) could studies hope to understand the three themes of the practice literature mentioned above: the community-based interactive framing of problems, the dynamic and provisional nature of knowing, and the moves that pragmatically accomplish knowledge. (Kuhn & Jackson 2008 p. 473)

So, Kuhn and Jackson's framework would seem to provide a useful framework for analysis of the current empirical materials. However, as the interaction in the materials is layered or "laminated" (Boden 1994 p. 91) in more ways than one and the disruptions

causing breakdowns in communication may be related to other factors than knowledge or knowing (to be shown in the analysis), the framework needs modifying. Figure 4 shows a modified version of the framework that now also takes the recursive features of problematic situations in meetings and the process-like development of topics and issues as well as the layeredness of multiple understandings into account; further, the strategic or tactical dimension of the definition of situation is depicted, too:

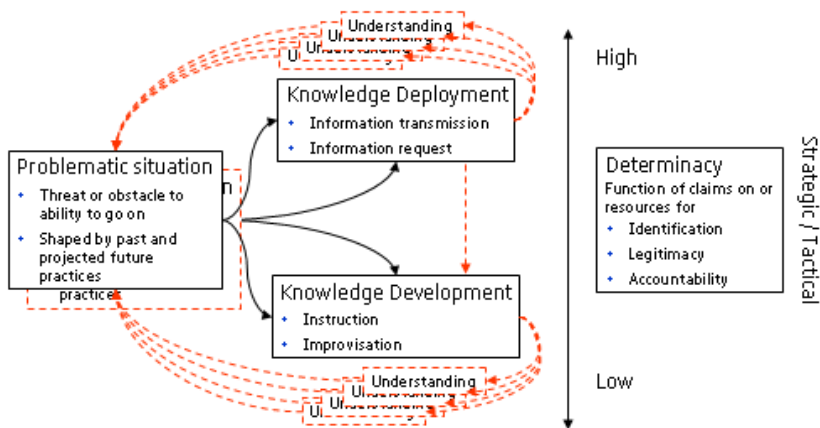


Figure 4 Episodes of knowledge accomplishing activity as a function of determinacy (Kuhn & Jackson, 2008; modifications made for the purposes of the current study shown as hyphenated arrows)

The modified framework above takes into account the fact that the problematic situations occur in tasks (manifest in talk) that are not trivial, span over many parts of the organization and time (possibly weeks and months), and are recursive by nature (see hyphenated arrows in the framework above). It may be that a topic has been closed in some meeting, but it resurfaces because of some contingencies not taken into account in the first place. It may also be that some issues or topics require input from various people, are technically complex to resolve, and possibly require concessions and compromising that stretch the problems over multiple sessions. It may be that recursive topics are just that by design (complex issues requiring a lot of work not only during meetings but also outside of them), or, it might be that some topics recur because of

multiple understandings or other ambiguities or contingencies that cannot have been taken into account when handling with the issue in the first place. While the figure above now indicates a cyclical motion with issues resurfacing as problematic situations, one could also imagine these issues moving along a more linear line that might better indicate the progress that is nevertheless made with the topic while its handling stretches over time.

While the framework that Kuhn and Jackson have introduced is comprehensive and as such a useful way of organizing and handling data concerning knowledge accomplishing episodes (like the calls Kuhn and Jackson analyze), it benefits from additional explanation. The following figure is another illustration of the kinds of instigators of problematic situations that come into play in the meeting talk that is close to natural talk. These comprise understandings, ambiguity, confusion, and non-understanding, among the most important ones. The following depicts my additional layer for the analysis of problematic situations within the context of organizational communication – laying out the level of talk in interaction wherein confusion, ambiguity, and other features of ‘problematic’ talk become manifest.

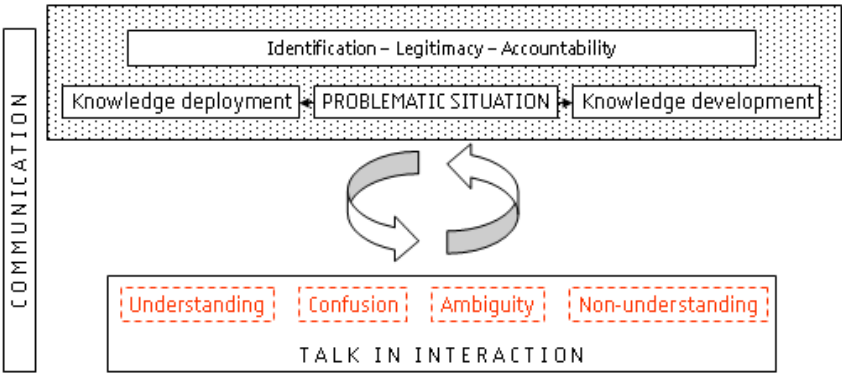


Figure 5 Understandings, confusion, ambiguity, and non-understanding within knowledge accomplishing episodes

The figure above looks at Kuhn and Jackson's framework (the shaded part above) from another angle. One needs to envision the framework depicted on page 102 so that first, it is flipped backwards (as if lying horizontally) and then rotated so that one looks at it from the other end (Figure 5, above). Where Kuhn and Jackson's problematic situations comprised the calls made by faculty, staff, and students to the Help Center, the problematic situations in this study arise from understandings, confusion, ambiguity and non-understandings; they are the fodder that threaten the ability to go on, feed into problematic situations and break the normalcy of interaction.

In the analysis of problematic situations – whether their resolution be determinate or indeterminate – I study those episodes and those moments wherein I detect understandings, confusion, ambiguity, or non-understanding that upset the fluency of interaction. If Kuhn and Jackson say that their framework involves a *micro level* analysis of problematic situations, the confusion (as an umbrella term here) I investigate offers a side-street of sorts for approaching problematic situations in interaction that is very close to naturally occurring talk. Taking this avenue allows for the analysis of understandings and confusion which are necessarily manifest on the level of talk, and usually have little bearing in the analyses of knowing well as a practice-based accomplishment.

4.4 Focal points of analysis

The focal points of analysis in this dissertation comprise problematic situations that Kuhn and Jackson (2008) label as knowledge-accomplishing episodes; to me they constitute episodes wherein multiple understandings, confusion and ambiguity are sometimes rectified, sometimes aligned to be closer to one another, and sometimes confused even more. Very often, in what follows, understandings revolve around a topic (for a definition of what starts a topic, see 5.3) in one meeting, or understandings can span across time from one meeting to the next or throughout almost all meetings – the topic remaining, however, the same. Similar to what Kuhn and Jackson (2008) call knowledge-accomplishing episodes, the understandings, confusion, ambiguity and non-understanding (problematic situations) being analyzed also reflect action, problem solving, and community, and enable the analysis of these. I follow Linell's (1998 p. 183) definition of an episode; for him "an episode is a bounded sequence, a discourse event with a beginning and an end surrounding a spate of talk, which is usually focused

on the treatment of some ‘problem’, ‘issue’ or ‘topic’.” Given that Linell’s definition relates to more naturally occurring talk-in-interaction (as opposed to Kuhn and Jackson’s calls to helpdesk), Linell’s definition is the one that closely matches the identified episodes in the current study. The episodes themselves move in what Linell calls a topic space (as a train of discursive events) and there can be multiple episodes within one topic space; in this type of case, the episodes are linked across episode boundaries by various resources that help the transition from an episode to the next.

When engaging into solving the problematic situations, the participants launch themselves into ‘communicative projects’ which, for Linell, are coordinated activity that aims at solving a communicative problem of some kind. Within the context of this study, problematic situations constitute communicative projects that are, as Linell says, necessarily collective or social in the sense that they cannot be performed or completed by only one person but always involve others. According to Linell, communicative projects can be local or global; an example of a local communicative project is the endeavor to solve and repair some interactional problem, such as a misunderstanding or a suspected misunderstanding. Interestingly, Linell says that while communicative projects are typically collectively accomplished, participation in them is asymmetrical. Another typical characteristic of a communicative project is that one can be nested within larger communicative projects, and the performance of one project often provides the initiative for another one. This obviously means that communicative projects are organized sequentially. Since whole encounters can also be taken to be communicative projects, they are especially salient for this research: meetings can be considered as communicative projects that contain further communicative projects in their nested formation. Like Linell (1998 p. 231) says, task-oriented (institutional) talks are a case in point as they are characterized by past- and future-orientations that extend beyond the boundaries of the encounter.

As regards the analytical units in the actual talk-in-interaction, Kuhn and Jackson are relatively vague: they talk about ‘discursive moves’ within knowledge episodes that frame, reframe and resolve perceived problematic situations. In more specific terms, these discursive moves are *knowledge-accomplishing activities*, i.e. segments of episodes wherein the participants attempt to generate knowledge. In Linell’s terms, this translates into *turns*, which is a familiar concept in conversational analysis. A turn is an elementary dialogue contribution that serves to regulate the current speaker’s moment-

to-moment discursive and social relations to other participants and their contributions (Linell 1998 p. 159). Where Kuhn and Jackson do not elaborate or distinguish layers or hierarchies beyond the knowledge episodes and knowledge-accomplishing activities therein, Linell identifies further elementary units, those being idea units and complex (multi-unit) utterances (1998 p. 203). Further, on the level of interaction, Linell's hierarchy begins from local sequences and sub-episodes to episodes (problematic situations in this research) and further to phases and encounters. The latter, in the context of this research, is the meeting.

As is understandable, Kuhn and Jackson as well as Linell, respectively, discuss talk-in-interaction and while they are similar in many respects, their difference can be found in the facets from which they view this interaction. Kuhn and Jackson focus on problematic situations and knowledge accomplishing gained through them, whereas Linell is more on the general level of dialogue, investigating various aspects of dialogism (such as contextuality). Where Kuhn and Jackson remain within the realm of organizational communication, Linell does not tie himself down to any particular type of interaction. What Linell and Kuhn and Jackson share is that both link understanding (Linell) and knowing (Kuhn and Jackson) to situated practices and interaction therein.

4.5 Role of the researcher

As the researcher, I was invited to the meetings similarly as the actual participants, via a calendar application allowing the sending of meeting invitations. In the meetings, I sat at the same table as the participants without, however, participating in the discussion. Typically, I would try to place the microphone to a central location so that it ideally picked up not only what was said in the room but also those people's voices who were participating over the conference line. As an example, below is a sketch of the seating arrangements from the meeting that took place on December 10, 2007. Notice that in this meeting, [A] participates over the conference line, so [A] is placed in the middle, together with the offshore participants.

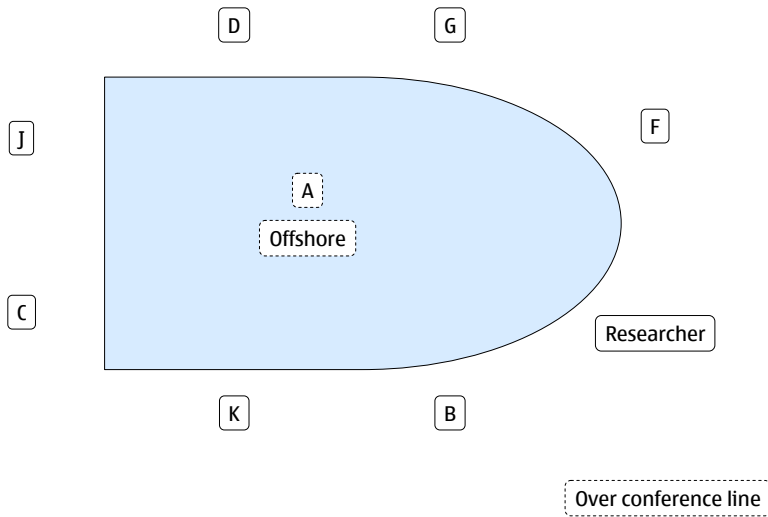


Figure 6 Example of seating arrangements, Dec 10, 2007

In the meetings, people sat in no particular order, and found a seat according to their own preference as they came in. Most often, the meeting rooms were spacious enough to allow a choice; the only exception was the meeting of December 10th when the room was smallish, and all seats were occupied.

Given my own experience in software development and my employment in the company, my role as the researcher was not that of a complete outsider. Further, although I had not worked with the people or the organization where this project was being developed, I had worked in similar projects elsewhere (in other companies, too) earlier so having an idea what was being discussed was not as difficult as it might have been for a complete outsider. Details such as references to various parts of the organization and people therein were often familiar to me, and I had a good understanding of the role of the units in the organization. Bargiela-Chiappini and Harris (1997 pp. 58-59), for example, noticed that understanding the technical jargon used in the meetings they investigated was beyond their capacity: “For, while we were allowed to observe and record meetings and we called upon all our mental resources to share in their meanings, it was clear that a vast amount of shared knowledge remained beyond our reach. ... Moreover, in the specific case of corporate settings, an important element

contributing to coherence is familiarity with technical knowledge.” There were some unfamiliar elements in the meetings for me, too. The software product being developed was not familiar to me beforehand, and I did have some initial difficulties in understanding how the system worked, but grasped it on a general level fairly quickly. I also asked questions outside the meetings (before, after, and during breaks) to resolve and understand the parts where I needed clarification. I also contacted [A] and [G] via e-mail while working on the analysis to confirm some of my own understandings. Having a background in the business studied and the related technologies obviously has helped my analysis, but otherwise my role in the meetings was limited to observing the interaction, recording it, and analyzing it for this dissertation.

4.6 Ethical considerations

Since this dissertation involves human beings working mostly within the premises of a large corporation, in terms of research ethics, two major themes rise to the foreground: the privacy and anonymity of the people involved, and the confidentiality of the research data. Like Eriksson and Kovalainen (2008 p. 71) say, all research has a responsibility towards its subjects, and the respect for privacy and protection of personal and genetic data are the most basic features of this responsibility. In the following, I discuss both the people and the company from the point of view of research ethics.

4.6.1 Privacy and anonymity

As already described in section 4.2, altogether 12 people attended the meetings in the data.

Before attending the first meeting in the series of R&D meetings, all the project members got an e-mail from the sponsoring person from whom I had requested permission to attend their meetings. In the e-mail, the sponsor asked the team to support me in my dissertation work, and explained the overall targets of my research. The e-mail also contained my introductory note explaining the security precautions agreed with the company, the respect for individuals’ anonymity and privacy, and the focus of my interest, that being interaction, multiple understandings, and the construction of understandings. I further explained that I am not interested in the content as such, but rather in the interaction. I also explained that not all meeting details will be transcribed, but the focus will be on those sequences that relate to the phenomenon of multiple understandings.

As I began attending the meetings, I initially explained the purpose and also answered questions regarding my research whenever someone expressed an interest in it. I had also agreed that the two people responsible for the project (the sponsor and the global concept owner) will read the dissertation before its publication to ensure that no confidential data is revealed.

Despite the fact that I physically attended the meetings and sat together with the participants, it seemed to me that the other attendees quickly forgot my presence and the meeting was as typical as any R&D meeting I had attended earlier in my career. Surely my familiarity with the company and other, somewhat similar meetings, and my badge made me seem more like a part of the setting than a visitor would be.

Since the interest is in human, live, and mostly face-to-face interaction, people necessarily are in the center of the research. However, their anonymity is guarded simply by using alphabets (instead of names or pseudonyms, participants are referred to as [A], [C], [D], excluding the letter 'I' to avoid possible confusion with the personal pronoun). People, who do not attend these meetings but who are referred to in them, can be distinguished from the word 'person' preceding the letter an example being [person_M]. Similarly, references to other teams, areas, countries, systems, and tools have been rendered unidentifiable and enclosed in brackets.

Although the people represent four different nationalities, this is not indicated in any way. While it is fair to say that most of the interactants in the empirical meeting materials were men, there were also some women in some meetings. However, gender issues are not central to this study. However, although I did not focus on nationality or gender as constituents that might have revealed something in terms of understanding, they might, of course, be salient features if the lens through which meeting interaction was viewed was different than the one used here.

5. ANALYSIS OF MEETINGS: ORGANIZING REALITY

In this chapter, I will firstly describe the analysis process and the way it was guided by my investigations into theoretical literature. In presenting the results of that analysis, I do not follow the exact same sequence as in the analysis itself, but rather introduce one topic at a time. Following this logic, I first examine the meetings, starting from how they were organized and what their purpose was. I introduce the internal organization of meetings by describing their agendas and by discussing how the actual handling of topics was run within the meetings. I then discuss problematic situations, including their categorization in terms of determinacy as well as their identification. I move on to discussing a new concept, *tagging*, which is a term I adopted for the particular kind of referencing taking place in the meetings. Finally, I look into power and the way I have chosen to view it in my analysis. I also take the advantage of having materials from a series of meetings, and look at the meetings in terms of numbers on the salient features identified.

Since the meetings in the materials revolve around the same software product, and the meetings have been held in relatively rapid succession – approximately once a week over a period of two months – they offer interesting points of comparison. When discussing the features mentioned above, I present some numeric details related to them. These details cover information such as the number of topics in the meetings (including info on their duration), information on the number of *tags* to people, teams or areas outside the meeting, as well as occasions other than the current meeting. These descriptions are included to help the reader to form an image of how an interaction process in meetings proceeds.

As regards knowledge and knowing, the team members know *how* to do their work (develop, configure, and test software) for the most parts, and if they do not, they know how to figure out ways of developing it. The developers – most often – work in teams that often sit closely together and interact frequently. In other words, they are professionals of varying skill levels who are members of a community-of-practice, a particular way of social participation that involves learning and knowing by linking the interconnected components of meaning (experience), practice (doing), community (belonging), and identity (becoming) – in essence, the components that communities of practice integrate (Wenger 1999). What is of paramount interest for the developers and

what they need to know is *what* to develop for the product. While learning *what* exactly needs to be developed, that is, the new and changed features of the product, it is also important that the team members share a close enough understanding of the *what*; otherwise the product development may experience unwelcome bumps along the way. The *what* is an outcome or a somewhat cohesive understanding of the multiple requirements that the team faces from various stakeholders.

As is evident, the discussion that goes on in the meetings is not casual conversation, although, for example, the beginnings and ends of meetings are often filled with casual conversation and small-talk. Casual conversation, however, is not the focus of this research, but rather, the focus is on the purposeful talk and interaction that takes place in the heart of the meetings.

5.1 Analysis process

Once one sets off to investigate understandings in company internal meetings (and initially thinking of them as misunderstandings) one can stake out few criteria. Hence, the only criterion I could claim already at the onset was the fact that this study will be qualitative. The exact approach did not become obvious until I had begun diving deep into the materials themselves while at the same time considering them vis-à-vis with the theoretical literature I kept plowing through. In a sense, this was kind of an exclusion method, where I tested the plausibility and feasibility of the given approach to see if it made sense. If not, I wrote the approach off.

In analyzing the materials, I first identified the topics that were handled in the meetings (see section 5.3). After that, I moved on to identifying the problematic situations in the discussion revolving around the topics (see section 5.4). While working on this bit, I began paying attention to the numerous spatial and temporal references – or *tags*, as I ended up calling them – in the meeting talk, and began pondering on their significance (see section 5.5). At around this time, I took part in a training course where I was introduced to the world of practice-based approach and knowing. Given the close link between understanding and knowing, I was driven to view my materials from the practice-based angle, and in my mind's eye, I could see pieces start fitting together. Having been introduced to Kuhn and Jackson's newly published framework (2008) for analyzing knowledge-accomplishing, the course was set. The part that followed was a

new review of the problematic situations with an eye on their determinacy and the use of power (see sections 5.4.2 and 5.6).

5.2 Arrangement of meetings

In what follows, I describe how the meetings were arranged, what types of agendas they had, and how were the topics discussed in this research developed from what was called a clarification log.

5.2.1 Agendas in meetings

Agendas of the meetings studied in this research are typically very short – if one exists. Out of the meetings in Table 2 (page 96), three first ones did not have an agenda to talk about whereas the six last ones did. Not having an agenda for a meeting that could be considered a standard item in software development is common. When people are invited to a clarification and scoping meeting, they share a good understanding of what it is all about and what sequence it is likely to follow. A good example of a meeting invitation for which there was no particular agenda relates to the meeting held on December 4, 2007:

Example 1 Meeting invitation, Dec. 4, 2007

Hi,
Let us meet to look at the progress on the ATM requirements clarifications.
We can also use this session to complete the CR discussions..
Thanks & Regards,
[C]
PS: The latest versions would be available in <link_to_log>

In case there was an agenda, it typically consisted of just a few items, as in the following example:

Example 2 Agenda for the meeting held on Dec. 18, 2007

Dear All,

Here is proposed agenda for this clarification session :

0. Recap of previous clarification session (using memo for previous session)
1. [A] to walk us through business feedback on view mockups (some of these items were already covered during Gap Analysis discussion on 14th Dec Friday)
2. Discussion on open items in Gap Analysis that require further business / concepting inputs
3. Walkthrough of open clarification items
4. Walkthrough of [process] / functionality proposal for next release

Please suggest any items that you would like to include.

P.S - As an upkeep 17 Dec 07 Clarification Log has been updated today for items : 33, 45, 66, 72, 78, 83, 99, 101, 111, 119, 122, 123, 124

With regards,
[B]

What accounts for the number of topics identified in Table 3 (page 114) are the clarification items discussed on various levels. The items that emerge as topics follow the agenda only loosely. While the overall topic is the tool for which the team is sorting out requirements, the actual discussion items emerge from the clarification log mentioned in the invitation (agenda contents above). Thus, both the agenda and the clarification log are co-texts that serve as topic generators. For the most part, the clarification log and a list of items therein, guide the discussion. These items are the issues to be clarified and as such, they are something that the development team needed to sort out to have a proper understanding of the features to be amended or created for the new version of the product. In the data for this research, these items emerge as topics that are quite well delineated in the talk of the chair.

Although Boden (see p. 16) says that talk occurring in meetings is not natural in that it is governed by predetermined agendas, a lot of the discussion in the meetings analyzed in this research does allow for lengthier sequences where participants seem to associate quite freely. Of course, there are also times when the chairperson restricts the discussion in order, for example, to cover all the items that need still be discussed in that same meeting.

Given that the issues discussed in meetings were often very detailed, agendas (if available at all) were very loose and allowed for interaction that was at times allowed to sprawl into many directions. Based on the fact that the chair very seldom interrupted a sprawling discussion, one can assume that the interaction was valid for the item under discussion.

So, the topics in a meeting were not agenda items but something that emerged as discussion items mostly from the clarification log – such as a feature or functionality of the tool being developed. The topics were, thus, named as ones for the purposes of analysis. Also, while a ‘topic’ can develop into a problematic situation or contain problematic situations, not all topics had problematic situations in them. Some topics were discussed smoothly from the beginning to the end. Linell (1998 pp. 181-182) notes

that topics are notoriously difficult to define in substantial terms, and suggests that we study how the interactional flow is structured in terms of junctures which are boundaries or boundary-like phenomena. This way, topics become islands of coherence where interaction has a single shared focus of attention. The more basic unit for Linell, however is an episode, or a topical episode which is characterized not only by their content but also by how participants shape their discourse and organize their interaction. Given that the nine R&D meetings that I study closely were devoted for mostly going through the clarification log, each item, or topic, might also well be labeled as a knowledge accomplishing episode – since there clearly was something to clarify – but as they, for the most part, were items that were fairly clear-cut and unproblematic, I have chosen to identify them as topics, not problematic situations.

In the following section, I describe a typical start of a topic to indicate the logic.

5.3 Topics in meetings

The first table contains the number of topics or items covered in the meetings, duration of the meetings, average time spent on each topic as well as the range of time in minutes actually spent on topics. Although the statistics below might seem superficial, they nevertheless give some indication of how time is spent in R&D meetings scoping the features of a new version of a software product.

Table 3 Meeting topics and their length

Date	Topics covered	Duration	Min./topic/ avg.	Range/topic length
28.11.2007	34	02:17:00	4.03	00:00:17- 00:15:40
04.12.2007	25	02:21:00	5.64	00:00:32- 00:22:20
10.12.2007	31	01:58:00	3.81	00:00:26- 00:17:20
18.12.2007	30	01:57:00	3.90	00:00:16- 00:11:07
28.12.2007	23	01:59:00	5.17	00:00:14- 00:23:02
03.01.2008	19	01:28:00	4.63	00:00:15- 00:20:05
07.01.2008	19	01:43:00	5.42	00:00:47- 00:17:49
16.01.2008	10	00:59:00	5.90	00:00:52- 00:14:38
25.01.2008	13	01:30:00	6.92	00:00:51- 00:24:54

As can be seen from the table above, the average length of time spent on topics does not vary considerably – except maybe for the two meetings held before the Christmas holidays, and the last meeting closest to the major milestone. As can be seen from the range of topic length, a topic that most time was spent on was discussed in the last meeting. Otherwise, meetings resemble each other closely: topics where the participants spent the least time on are all dealt within seconds rather than minutes. This does not mean that some topics were so simple that they could be shrugged off and marked closed, but sometimes, there simply was not enough information for handling the item or the knowledgeable person might not have been reached or was not present in the meeting.

5.3.1 Identifying topics

Introducing a topic in a meeting differs from the way it is done in informal conversation. In the latter, topics can be introduced and developed by “local coherence” from one utterance to the next. Like Linell (Linell 1998 p. 143) says, “(s)ometimes, topics gradually share into new topics, sometimes new topic spaces are built using only one or two brittle links, e.g. from the prior topic space(s) or from other contexts.” This is not the case in meetings despite the fact that the agenda might be fairly loose and umbrella-like.

The first topic (of recordings) in the meetings analyzed was, obviously, the start of the meeting. Sometimes, discussion began before I could set up the recording equipment and press the REC button so the beginnings of the first topics vary as do their content; some, for example, begin with casual conversation and some begin with a discussion on an issue with a person due to leave the meeting shortly after the meeting had begun (a case in the first meeting). There are also two meetings (Jan 7, 2008 & Jan 25, 2008) where a considerable time from the beginning (covering topic #1) is spent on waiting for people to arrive: on January 7 because of a heavy snowfall in the area affecting traffic, and on January 25 because one key person was held up in another meeting. These are not, however, the longest “topics” in the meetings; the longest ones contain discussion on issues pertaining to the product.

In the first meeting, the chairperson was [C], a project manager substituting [B] while the latter was on holiday. In the remainder of the meetings, [B] took care of the chairperson duties, sending the invitations to meetings (including their agendas if one had been thought of) and the memos after the meetings. Both [C] and [B] have a somewhat straightforward manner in introducing the topics, typically just “okay, next” type of expressions. Sometimes, [B] used a more elaborate style in that he used a lot of meta talk in introducing the items also reminding the people responsible to perk up when the topic handled something within their responsibility area.

The topics and the shifting from one topic to another is not always clearly defined, and hence, it is possible that some sequences of talk identified as one topic in the analysis may, in fact, cover multiple items. However, most of the time the demarcation is very clear and the topics listed above are identified by a clear change of topic signaled by the chairperson. Examples from the meeting of November 28, 2007 that was the only one chaired by [C], include the following (each line representing the beginning of a topic sequence):

Example 3 Starting a topic – Nov 28, 2007

- [C]: **okay** .hh next one will we still (.) require to capture
- [C]: **next** (.) account snapshot business environment [company] share
- [C]: **Next one** was indicative gross margin (.)
- [C]: what is eh: the GMT organization as a category management responsibility
 area
 ((reading the topic from a list))
- [C]: **okay**: .hh **next one** (.) [System_2] forty-five forty-six
- [C]: **okay** campaign, this (.) [D], I think, and [A], this is an open item eh
- [C]: **okay** .h **next**: eh:

As can be seen from the text in bold above, most topics in this one meeting that [C] chaired, begin with either and “okay” or “next” or “next one” or both. The examples above cover the beginnings of topics number 3-11. The one exception where a topic is begun with a different choice is when [C] is reading the issue directly from the log. This is evident in the prosody of the sequence of talk. As pointed out, [B], who chaired all the rest of the meetings in the materials recorded for this study, had a somewhat different style in presenting the topics, sometimes opening the rationale of why the topic

was problematic and needed clarification. Overall, though, [B] also had a very economical style as in the examples (first series of lines all begin a separate topic sequence; second series of lines is a single opening sequence indicated with comments; third, again, another kind of opening) below:

Example 4 Starting a topic – Dec 4, 2007 & Dec 12, 2007

[B]: Alright eh **let's move on to next item** (.)
[B]: Alright eh **moving on** (.) to [person_N]'s comment

((starting a new topic, Dec 12))
[B]: so eh **[A] I'm showing you** that report eh (.)
[A]: mhm
[B]: [name-of-the-report]
((continues with introducing the topic more thoroughly))

[B]: **okay we will** (.) **resume** the category **discussion** now

As said, [B] chaired all the other meetings and was faithful to his style when introducing new topics. His style remained very much the same as illustrated in the examples above.

5.4 Problematic situations in meetings

In this section, I first explain how I have identified the problematic situations in the materials. I then move on to looking at the problematic situations in terms of numbers and discuss the information these numbers seem to reveal.

5.4.1 Identifying problematic situations

It is important to note that in the R&D meetings being investigated, the participants go through a list that they call clarification log (see section 5.2.1). While doing this, they, for example, look into specific requests that the users and testers of the tool have submitted for the team as requirements for the product. This means that all the meetings themselves could be labeled as knowledge-accomplishing episodes and each topic handled could further be – and indeed is – a knowledge-accomplishing event as the team needs to find out more to be able to proceed or they need to have a decision on

some of the features of the product. I am not focusing on these only but look at those topics where the team ‘hits a snag’ of some sort. This snag can be inherent to the meeting only, it can relate to the varied background knowledge (limited shared knowledge), or it can be something that is somehow inherited from some previous meeting (either on in scope of the current study or some other meeting or discussion), among others. Further, one topic can include many snags as the discussions on topics can run for more than twenty minutes. For their analysis framework, Kuhn and Jackson (2008) have described problematic situations as ones that create a threat or obstacle to the ability to go on; at the same time, problematic situations are shaped by past and projected future practices.

As mentioned, the first round of analysis involved identifying the topics, and the second resulted in the identification of problematic situations where the team ‘hit a snag’ of some sort, that is, encountered a problem that needed resolving. These range from clarifying questions to longish discussions on problems displaying not only the complexity of the topics but also very differing backgrounds in the product knowledge and its features. As the topics or items discussed in the R&D meetings were questions of sorts themselves, they were not necessarily counted as problematic situations; conversely, there can be several problematic situations within the discussion involving one topic. Distinguishing the problematic situations and labeling them as indeterminate or determinate (see below, the explanation of the fourth round of analysis) is not an exact science. In the following, I lay out some examples of problematic situations, indicating what in particular I heard that made me identify it as a problematic situation.

In the first meeting on the series (November 28, 2007), the team has been discussing certain metrics and how they are displayed in the tool in terms of new organizational units. The extract below (for a longer version of the transcript, refer to Appendix 2, item 2) is also an example of ambiguity and confusion as well as *improvisation* in an *indeterminate* situation.

Extract 1 Identifying ambiguity + confusion

1. [D]: I think eh can you decide [A] that .h do we want this mmm category share shares or not so if they have business groups now or who can make that call
2. [A]: mm
3. [D]: that's the biggest (in here)
4. [A]: yea
5. [C]: mhm ((mumbles in the background))
6. (3)

7. [D]: if you go up to those [Info1] and ehm "was it [Info0]"
8. (3)
9. [D]: so under sellout there is [Info1] and [Info0]
10. ((typing in the background – 3 seconds))
11. [A]: no no category is working assumption here is that categories are not going to replace
12. [C]: business
13. [A]: business groups in here in the [ACRONYM] metrics so the but so we can continue by eh having only that [Info1] and [Info0] for ()
14. [D]: okay
15. [C]: so should we call it at least [Unit_1]
16. [A]: **yea but er or I don' know actually because then we should have there [Unit_2] as well but why not to have it actually in the [ACRONYM] metric side**
17. [D]: mm
18. [A]: **but then we can't compare actually af as we're not getting those figures from the [ABC]**
19. (5)
20. [D]: so it would be only two lines
21. [A]: **oh yeah hey it's going to in the incentive yea that's that's that's right** we we'll replace business groups by [Unit_1] and and [Unit_2] yea
22. [C]: [Unit_2] and it's coming from [System_2]

As one can see from the extract above and the longer transcription in Appendix 2, the topic is not exactly straightforward and requires quite a bit of understanding of the new organization. In the extract above, [A] (line 11) has the best understanding but even he has to do quite a bit of thinking (aloud). He launches into improvisation and thinking aloud on line 11 and seems to be swinging back and forth in trying to decide whether [Unit1] and [Unit2] should replace business groups in the tool (line 16). His thinking process is facilitated by the fact that the view in the tool is displayed with the projector for all. Had [A] not done his thinking aloud, we might not have any idea of the ambiguity and the related conflicts he seemed to experience (lines 16 & 18) in reaching the conclusion.

The following example comes from the same meeting (Nov. 28, 2007) and involved a simple case of multiple understandings. It is also a *determinate* situation in that the correction to [D]'s understanding is readily available in the meeting; thus, it could be categorized as an *info transmission*, too.

Extract 2 Identifying multiple understandings

1. [D]: → but didn't eh [person_M] say that country monthly scorecard is basically not needed
2. [H]: → **no**
3. [C]: → **no no no country monthly scorecard is needed**
4. [H]: → country monthly scorecard is needed
5. [D]: yea well
6. [H]: country overview he was saying
7. [D]: → no but also country monthly scorecard he () but yea let's not go to that now but (I-I understood him correctly) ()

The extract above is a very simple case of multiple understandings; the case above involving two different understandings of what a third person (not present in the meeting) had said in an earlier context. The following (item #18 from the meeting on Dec. 10, 2009) is another simple case of verifying understanding in a situation that can be categorized as *determinate* one (info transmission):

Sometimes, the problematic situation emerges from new requirements and functionalities about which there simply is not enough information. The team has a hard time understanding the requirement and as they try to figure out different usage scenarios, they foresee challenges in implementation. These types of situations are highly *indeterminate* and there is quite a bit of confusion.

Extract 3 Identifying confusion + lack of information

1. [B]: So you will have here
2. [A]: mhm
3. [B]: [company] opportunities [company] risks
laid out as a list and therefore they will sort of
not be (sorted) table and then
we'll have to sort of go back to something like this .hh so what [J] is ()
4. [A]: **so actually that that would m actually that would mean that then
we should have that kind of applet**
ah below
5. [B]: () **in in theory yes,**
6. [A]: issues and opportunities and then there would be like three applets
7. [B]: yes then it becomes
8. [C]: yes
9. [J]: ()
10. [B]: yea so **in theory yes, but practically speaking once you already
have two applets (it's hard) it's it's it's well it's a problem**
11. [A]: yea
12. [J]: it will not look good. We can have one () but they will not look good.
You will have issues applet and issues from applet and then () it will
not look good ()
13. [C]: and how much text is usually entered in the:se fields?
How much is anticipated to be entered in these fields if you are having
multiple issues currently I think the
14. [A]: mhm
15. [C]: reason they wanted a long text area was because they only had one
field to enter everything
so they were entering like multiple issues in one box
16. [B]: mhm mhm
17. [C]: but now if we are giving them the flexibility of adding multiple issues so
they might actually have different rows for each issue
so my question primarily to you, [A], what is:e the expected test text
length to be entered in each field?
18. [A]: **yea, that's a good question I-I can't answer that one**

The confusion can largely be attributed to lack of information, but also to the fact that [A] is not aware of the limitations that the development environment proposes. In terms of developing, the team's hands are tied when it comes to the capabilities of the development environment. Their anxiety grows as they realize the mismatch (lines 5 &

10) between the requirement (*instructions* [A] is giving) and the development tool capability. This is clearly a problematic situation that causes confusion.

5.4.2 Identifying determinacy (indeterminate & determinate situations)

Having identified topics and problematic situations, I began to categorize problematic situations into determinate (knowledge deployment) and indeterminate (knowledge development) ones. For doing this, I determined whether the episode constituted information transmission or information request – in which case it was a determinate situation – or if it constituted instruction (someone being taught or teaching) or improvisation, i.e. an indeterminate situation. While I used Kuhn & Jackson's (2008) descriptions of information transmission or information request on the one hand, and instruction and improvisation on the other, I did not categorize the problematic situations methodically on this level as I did not see additional value in that type of categorization. Also, categorizing on that level was highly problematic as the materials I analyzed are rather different from the ones Kuhn and Jackson used in their analysis.

In section 5.4.1 above, Extract 1 is an example of an indeterminate situation where the resources for identification, legitimacy or accountability are ambiguous to the point that [A] is improvising. Another example of an indeterminate situation is one where people resort to seeking instructions in a manner that creates teachers and students (or people subjecting to the position of being taught) out of people in interaction. Another example of an indeterminate situation is Extract 3 above in section 5.4.1. In this extract, there is quite a bit of confusion. This is also an interesting case of sensemaking where – although [A]'s ignorance on development environment limitations is remedied – additional information is clearly needed. This information cannot even be built within this meeting but it needs to be either found from the rest of the organization (based on the transcript, this option does not look likely) or it needs to be learned later in testing phase (this is not mentioned, but is my conjecture of the situation).

Section 5.4.1 also holds examples of determinate situations: Extract 2 and Extract 5. In both examples, information is readily available – although in Extract 2, [H] seems to have landed in a differing understanding from the one of [D] and [A]. Extract 5, for its part, is the simplest type of information request and info transmission. Notice that the difference between an information request in a determinate situation and an instruction

in an indeterminate one is the ad hoc teacher-student relationship that is suddenly created.

5.4.3 Numeric overview of problematic situations

The table below contains a numeric overview to the problematic situations in the meetings studied: the number of problematic situations and their hourly ratio, and the distribution of problematic situations into indeterminate or determinate ones. For how the problematic situations were divided into indeterminate or determinate ones, see section 5.4.2. The table also contains my classification of the power dimension (see section 5.6) and whether I considered the team to use or needing to use strategic (as an authority on their own) or tactical (making dependency work for them when lacking professional authority, for more, see section 3.4.4):

Table 4 Problematic situations

#	Length	Problematic situations/ Ratio		Indeterminate	Determinate	Strategic	Tactical
1	~2 h, 17 m	13	5.7	5	8	9	4
2	~2 h, 20 m	16	6.9	11	5	9	7
3	~2 h	18	9.0	7	11	14	4
4	~1 h, 55 m	16	8.3	8	8	15	1
5	~2 h	15	7.5	13	2	10	5
6	~1 h, 28 m	11	7.5	8	3	7	4
7	~1 h, 43 m	17	9.9	10	7	11	6
8	~1 h	5	5.0	4	1	4	1
9	~1 h, 50 m	8	4.4	7	1	5	3
				73	46	84	35

Since the meetings are not of equal length, an index (per hour ratio), the Problematic situations / Ratio column indicates a per hour ratio that gives a number that is comparable vis-à-vis other meetings. When the index is plotted on a graph, one can see, first, that the number of problematic situations (hourly ratio) rises from the beginning – making two peaks in the number of episodes (meetings on December 10, 2007 and January 7, 2008) along the way. This would seem to indicate that as the team starts

working on topics that need clarifying, they hit an increasing number of snags until they reach a point where most problems have become sorted and the number of problematic situations decrease. This stands to reason as the team is bound to have resolved more problems than it is likely to encounter anymore. At the same time, the team has worked together for weeks and the cooperation not only among themselves but also vis-à-vis the rest of the organization becomes increasingly smooth.

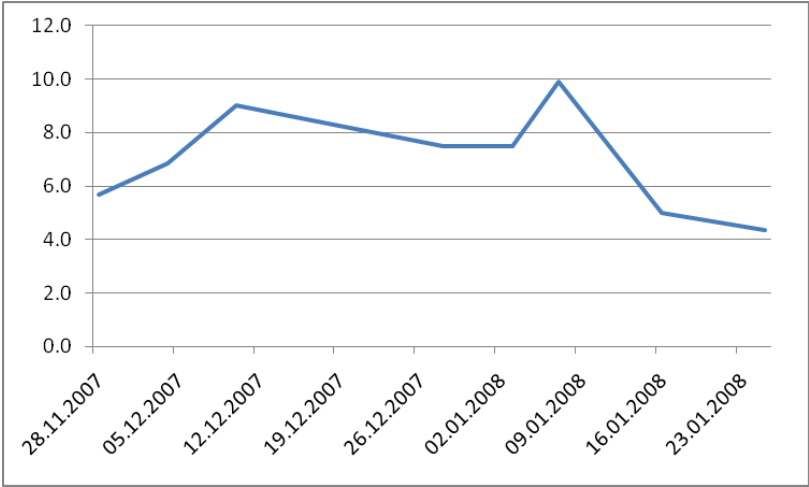


Figure 7 Problematic situations – per hour ratio

Looking at the distribution of indeterminate and determinate situations below, one can see that there seems to be more determinate than indeterminate situations at the beginning of the series, but indeterminate ones soon start to dominate the scene.

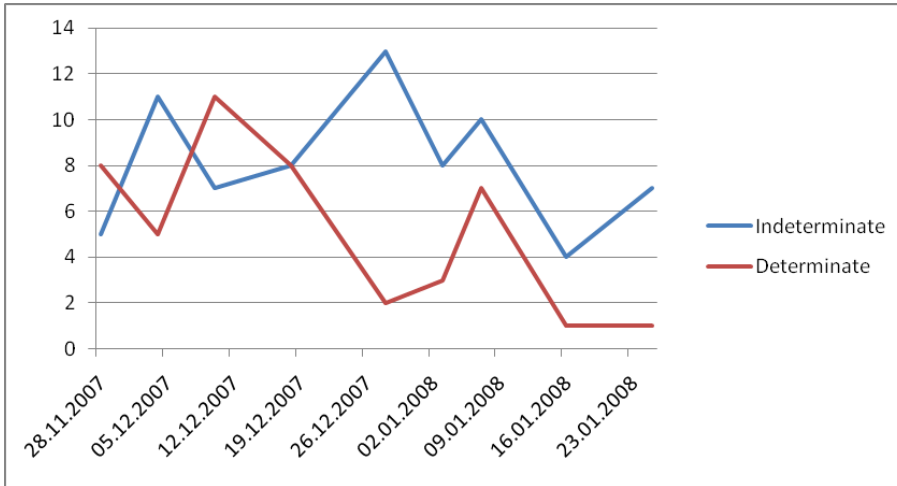


Figure 8 Distribution of determinate and indeterminate situations

Here, the turn seems to take place after the fourth meeting when the indeterminate situations begin to dominate the meetings. These graphs are based on absolute figures (as opposed to hourly ratios) as here the comparison is not along the series of meetings but between determinate and indeterminate situations in each single meeting. Looking at the distribution of tags to people and teams outside these meetings on a graph (Figure 10), one can deduce that as the number of tags to people and teams outside the meetings reduce and the team concentrates more on the actual features of the tool, the complexity of issues and topics increases.

It seems that the team clearly needs find their bearings by first assessing the requirements on the tool itself (the first two meetings) and then by assessing those requirements vis-à-vis the rest of the organization who has a stake in the tool. This is visible in the number of tags in the third meeting. However, it seems that the understandings and the level of ambiguity and confusion are still on a rather moderate level as the indeterminacy increases only once the team has clarified a number of items with the rest of the organization.

5.5 Tagging in meetings

Having identified the problematic situations (examples above) and categorized them according to their determinacy, I moved to the third round where I examined the spatial and temporal features of interaction where references to the rest of the organization and other meetings, discussions, and events that have either taken place already or are about

to take place in the future were identified. This is related to the ‘interdiscursive’ features inherent within any organization – and indeed – in the society surrounding it. As Broadfoot et al. explain, “we begin to visualize ‘organizations’ as hypertext or layered, interrelated and linked texts, where engagement with one can lead to a network of diverse texts in diverse sites” (Broadfoot, Deetz, Anderson 2004 p. 203).

As I began to notice these interdiscursive features that were quite abundant in the materials, I realized that it closely resembles ‘tagging’, an activity whereby you pinpoint people and place them in context and time especially in social media online. While this tagging in social media is virtual, it is at the same time rather physical as one can create tags to texts or photos, for example, and they serve as links to different kinds of realities and contexts. Tagging in speech works very much the same way. So, looking at the referencing that was occurring in talk-in-interaction in meetings, I began to see pictures of sorts that reflect the organizational reality the meeting participants live in. This is also the organizing capability of speech; when talking in everyday interaction, people in organizations organize and reorganize their reality by tagging people, occasions, discussions, meetings, and tools or systems, among others. Very often too, not only does tagging organize the reality, but it also serves as a way of indicating knowing and having the best understanding. Lazega’s (1992) *tactical* relationship to power (see section 3.4.3) is also all about tagging: we tag the people we think serve us at that given situation to our advantage. In Lazega’s terms, this is about creating ad hoc constituencies. It’s important to remember that for a tactical relationship to work other interactants need to recognize the person or team (or even place or occasion) tagged as having enough of authority to legitimize the claim to know.

5.5.1 Identifying tagging

The following is an example of tagging a person ([person_M]), who – as it becomes evident elsewhere in materials – is an influential person, who definitely is recognized as a source of authority. In Extract 4, however, the tactical relationship [H] is trying to use fails as he clearly seems to have come to a very different understanding than [D] and [A] who have possibly been in the same call. So, the extract below is also an example of multiple understandings. Additionally, it contains a tag to a geographical area ([Area_1]).

Extract 4 Identifying tagging + understandings

1. [H]: → actually we-e that in that call **we had one call with [person_M] myself and [D] and what [person_M] was saying** that was he was not very sure whether even country managers also can see ()
2. [D]: → yea in [Area_1]
3. [A]: → in [Ar] in [Area_1] yea but in all the other areas it's gonna be
4. [H]: mhm

Extract 5 Identifying verification of understanding & tagging

1. [B]: eeh next item eh all reports that are >okay< this is: eh the one that was (say [J]) one action item **during last call** also
2. [D]: mmh
3. [B]: **ooh just eh refresh my memory what did we agree eh**
4. [C]: mm on this we agreed that it'll still remain open

Extract 5 is an example of tagging another meeting (line 1, latter part). In the extract, [B], although he was present in the previous meeting, cannot remember what was decided then. The fact that the item still remains on the clarification log should, perhaps be enough of an indicator for [B] but he clearly wants to verify what its status is and why it remains open.

5.5.2 Number of tags in meetings

From the data, one of the first observations to strike me were the multiple references to external parties, other meetings and discussions, missing team members, and tools and systems. The table below gives statistics on the multiple references within meetings.

Table 5 External references

Date	Temp. / meeti ng	Person/ Team/ Unique	Absent	System / tool	Altogether/ per hour ratio		
28.11.2007	13	33	17	5	6	56	24.5
04.12.2007	5	31	8	1	8	45	18.7
10.12.2007	11	40	14	1	14	66	33.6
18.12.2007	5	10	7	3	2	20	10.3
28.12.2007	6	12	8	0	2	20	10.1
03.01.2008	9	13	11	4	1	27	19.1
07.01.2008	7	12	6	1	1	17	9.9
16.01.2008	3	7	7	3	0	13	13.2
25.01.2008	4	16	10	1	1	21	14.0
Total	63	174	88	19	35		

The second column (Temp./meeting being shorthand for ‘Temporal reference to an occasion, discussion, meeting, or similar other than the current one’) includes references (often temporal) to occasions, discussions, or meetings – other than the currently ongoing one – where the topics of the meeting had been or were about to be discussed. The third column (Person/Team/Unique means ‘Reference to a person/team who is never in these meetings’ plus the number of unique tags) indicates the number of references to persons or teams that are not participating in the meetings. For understanding how the numbers in the columns with the shaded titles were gathered, see Appendices 11-19 for examples of how the numbers were gathered.

The last column in Table 5 sums up all references in the meeting and calculates an hourly ratio (in bold numbers) for them. This is done for allowing comparison between meetings that are not equally long. The comparison ratio is calculated simply by dividing the length of a meeting (in minutes) by the total number of references, and then by multiplying that quotient by 60. In the case of the meeting on November 28 that lasted 2 hours 17 minutes (137 minutes) the simple formula for calculating the hourly ratio reads as follows: $(137/56)*60$. Together with the third column that offers insight into tagging to people and teams, the summed references offer interesting patterns.

When all tags or references are summed together and put to a graph, the drop in references is quite clear. Below is a graph visualizing the development of tagging (all tags) over the period of almost two months that was being observed. The values comprise the per hour ratio to make them comparable (meeting length is unequal, and hence, no direct comparison can be made).

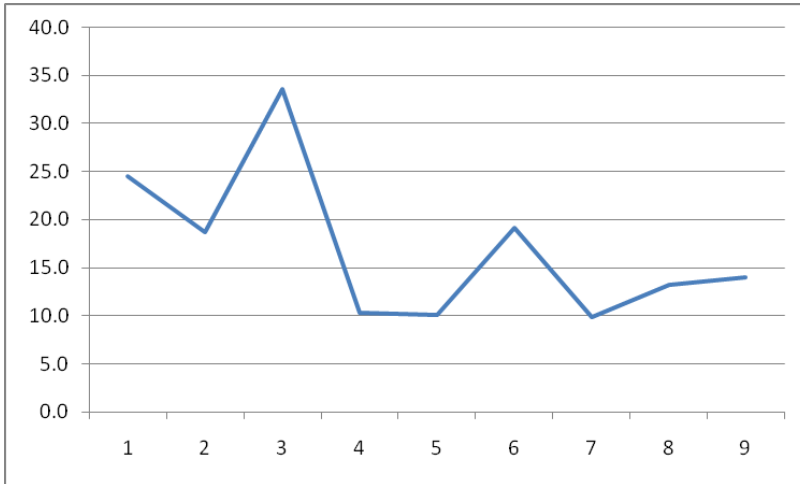


Figure 9 All tags (per hour ratio)

As can be seen from Figure 9, the number of tags (of all kinds) seems to reduce after the third meeting only to temporarily jump to an hourly average of 19.1 in the sixth meeting. It seems that something happens either in the third or fourth meeting – or between them. For understanding this, one needs to look at all the four first ones.

Looking at the meeting of November 28, 2007 (see Appendix 11), and the tagging therein, one can see that the tags are quite evenly distributed over a number of topics. While tagging drops for the second meeting (December 4, 2007, Appendix 12, it remains relatively evenly distributed still. As for topics in these meetings, topic number 13 (related to [ACR1]) in the December 4 meeting pops up again as topic number 12 in the December 10 meeting. Judging by the brief notes, this is clearly a topic a number of people (other than the actual meeting participants) feel interest for. This is not surprising as [ACR1] is one of the key indicators of success in a certain area and it has a direct effect on the success of the people in the organization, too. They want to see the requirement built right.

As regards the third (Dec. 10, 2007) meeting in the series, where the tagging peaks both absolutely and relatively, there is one feature that clearly sets this meeting apart from the rest in the series. This becomes obvious when one looks at the tagging (Appendix 13) that takes place in that meeting. A vast majority of tags are related to references to people or teams that are never present in these meetings. So while there are a number of people who have submitted requirements for the tool, the team also needs to verify and

clarify lots of items with the surrounding organization. It is as if the team is finding their bearings by first assessing the requirements on the tool itself (the first two meetings) and then by assessing those requirements vis-à-vis the rest of the organization who has a stake in the tool. So the discussion on the requirements goes back and forth from the rest of the organization to the team and vice versa. The high number of tags seems to indicate not only a need to clarify with the rest of the organization but also the fact that understandings as to how a particular item should be implemented in the tool are still rather dispersed and the team needs to work hard to mold those understandings into coherent enough entities to allow the work to continue.

Again, one of the topics (number 1 in Dec. 10 meeting) recurs in the next meeting. [TOT] seems to be a topic that raises a lot of interest as a number of people or teams are tagged in both (number 4 in Dec. 18 meeting). It also seems that this topic might be discussed in an upcoming core team meeting that is also mentioned in the December 10 meeting.

In addition to reducing tagging in the December 18 meeting, one can see that the distribution is no longer that even but the tags become more condensed over some topics. This same evolution is apparent in the rest of the meetings (Dec. 28, Jan. 3, Jan. 7, Jan. 16) with the exception of January 25, 2008, when the team is closing in on the milestone. However, the number of topics was fewer (see Table 3, page 114) and the time to discuss them was shorter as almost 25 minutes were spent on waiting for the key person ([A]) to arrive from another meeting.

We see another slight peak in the sixth meeting in the series (Jan. 3, 2008). A likely explanation is the number of temporal or other tags to occasions, discussions, meetings, or similar items that rises to nine. This is not surprising given that the meeting takes place right after New Year, and three out of those nine tags refer to the previous meeting; people seem to need to recapture the previous meeting's talk. In the January 3 meeting, the team also introduces four new tags (people or teams that do not attend these meetings) that had not appeared before. There is quite a bit of discussion related to requirements that come from a certain geographical area where character set differs from the Latin one that is used in many other parts of the world.

5.5.3 Tagging people and teams

Looking at the column listing all the tags to people and teams who are not participating in the meetings themselves, one can see that the need to refer to other meetings and occasions clearly diminishes dramatically, and references to ‘external’ people, teams or areas – while not reducing quite as dramatically – show a tendency of becoming less frequent.

The following graph illustrates how the tagging to people and teams reduces after the third meeting, once the team has assessed the requirements vis-à-vis the rest of the organization who has a stake in the tool.

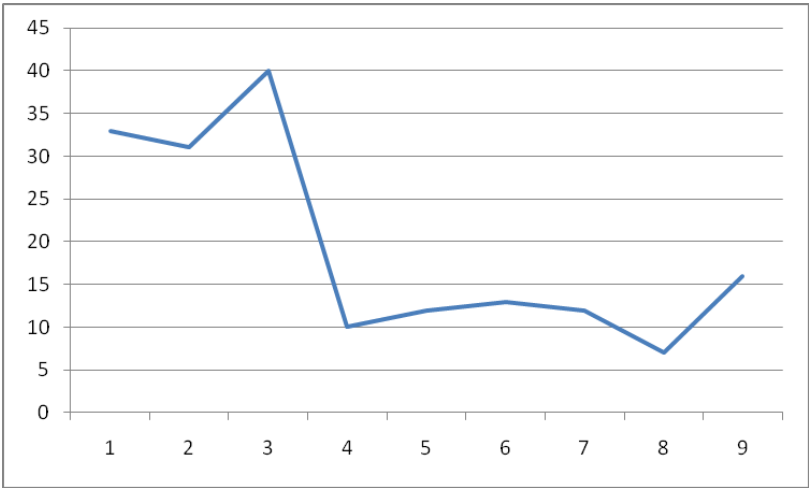


Figure 10 Tags to people and teams

As for tags to people or teams in the rest of the organization, the majority of them are laid out in the first meeting, where the participants introduce 17 unique references. New tags are, however, introduced all the way to the end of the series of meetings with the exception of three meetings where no new tags to people or teams are introduced (see below). The table below indicates the distribution of new, unique tags to people and teams over the nine meetings.

Table 6 New, unique tags to people or teams

2007					2008				Total
Nov. 28	Dec. 4	Dec. 10	Dec. 18	Dec. 28	Jan. 3	Jan. 7	Jan. 16	Jan. 25	
17	0	3	0	2	4	2	0	3	31

Looking at the table above, one can see that in total in the series of meetings there are 31 unique tags made into people and teams who never attend the meetings being studied here. Since some of those tags are teams, the actual number of people involved in the construction of not only the tool but the understandings in meetings is quite high – possibly even more than 50. No wonder then that at times air is rife with different understandings.

On the meeting held on November 28, 2007, the number of references to people or teams not present in the meeting was large, and as pointed out above, this meeting also had the biggest number of unique references. Although referring to people other than the ones present at the time of talking is a typical feature of talk (Linell talks about recontextualization, see page 69), in this particular context where the team goes through requirements for a software product, it gives indication of the multiple requirements (stemming from different needs) the team has to accommodate and either ratify or dismiss. So the references are not trivial, and often they are linked to a reference to another meeting, discussion, e-mail or other type of communication where understandings as to what is needed have been developed. While some of the people referred to are people who have needs as to the product functionality, for example, others might possess information that will be needed for developing the product. The following is a sketch of the unique tagging from the meeting:

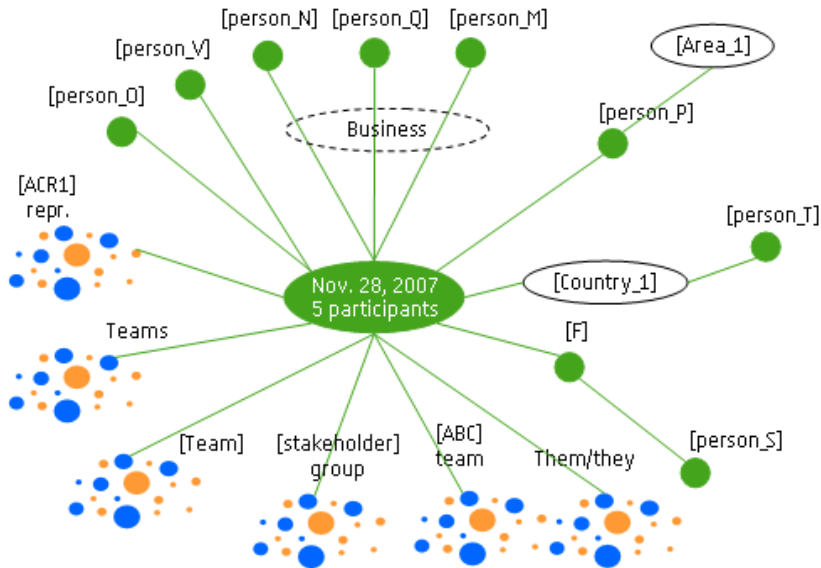


Figure 11 Tagging from the meeting of November 28, 2007

The people depicted at the top – marked [person_N], [person_Q], and [person_M] – are the ones to whom the meeting participants refer many times. This is not surprising as [person_N] is the business owner of the product, and [person_Q] and [person_M] are regional ([Area_3] and [Area_2]) representatives who use the product and have very specific needs as to the features and functionality of the product. References to people or teams from whom the development team might need information were fewer: in the meeting talk, references to “[person_O]”, “Teams”, the “[ABC] team”, and “[person_V]” are examples of these references. As said, often the reference was in relation of a reference to another meeting or other communication type based on which the people interacting had developed understandings. In what follows in the subsequent sections, the analysis shows how meetings serve as sites for sense-making and “substantial knowledge accomplishing” (Kuhn, Jackson 2008) by aligning these multiple understandings into coherent and congruent ones.

5.5.4 Reframing earlier occasions, discussions and meetings

Tags to other occasions, discussions, and meetings are numerous as well. From the following sketch, one is able to see how the references are distributed in time. Mostly, as is understandable, they refer to past, but there are references projecting the future, too.

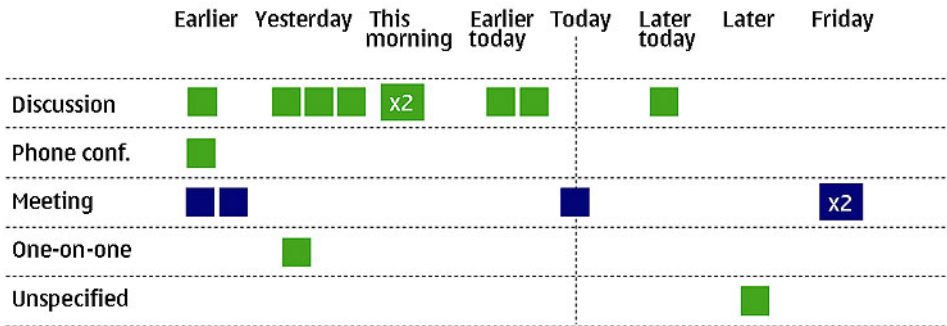


Figure 12 Tags to other occasions (Nov 28, 2007)

The meeting that took place on November 28, 2007, also contained references to tools or systems that are either used in the meeting (such as the current version of the product or the excel list) or referenced to as a source of information (e-mail). As can be seen from the figure above, the topics that are discussed in the actual meeting are widely discussed elsewhere, too. Here, parts of previous talks – whether they be informal discussions, meetings or one-on-ones – are always relocated through recontextualization. Clearly, this is a rich source for multiple understandings as recontextualization inevitably means transformations of meanings and meaning potentials. According to Linell (1998 p. 155), this is a process that, while ubiquitous, is not very well understood. He goes on to say that it is important to consider these recontextualizations themselves as sensemaking practices.

5.5.5 Tagging systems and tools

In comparison, there were a lot more references to talk (discussion, meeting, phone conference) than to systems/tools; the respective total numbers are 63 vs. 35. Looking at e-mail in particular, in the discussion that took place on November 28, 2007, there were only two references (out of six) to e-mails. Although e-mail is an important tool for communicating within large organizations, it would seem that talk is preferred when the subject is either urgent or complex. Out of all 35 references to systems and tools, only 10 were made to e-mail. Based on the materials analyzed for this research, e-mail would seem to be used more as a medium for carrying content rather than as a medium for carrying complex meanings. Next, I will explore the power achieved through tagging.

5.6 Power in meetings

In the preceding sections, I explained the identification of problematic situations and their division into determinate and indeterminate ones. I further investigated the problematic situations in terms of power to learn how the interactants used the resources for identification, legitimation, and accountability to shape the situation. Here, I divide the resource usage broadly in two categories: *strategic* or *tactical* as proposed by Lazega (see section 3.4.3). This is a necessarily simple division into two as I wanted to single out those problematic situations where the interactants had to make a *tactical* relationship to power work for them. In essence, they needed to resort to people, occasions, teams and other tags to validate their claim to know. So, those situations where I have identified a tactical relationship to power are the ones where there is an attempt to use tactical power (successfully or not) or where the kind of power that might be needed for action is missing completely. In the latter type of situation, none of the people participating in the meeting have the kind of *strategic* power that would allow them to use their own professional authority for solving the situation. Extract 4 in section 5.5.1 is an example of the kind of tactical relationship that fails – not because the relationship was not recognized as valid and legitimate, but because [H] had a distinctly differing understanding than [D] and [A].

By categorizing power relationship into two, I by no means wish to indicate that power is a simple matter, quite the contrary. Like Foucault (2000) points out, anything and everything we do along the lines of communication, such as talk in meetings as is the case in this study, implies goal-directed activities. And as we modify this ‘field of information’, we necessarily produce effects of power.

As can be seen from Figure 10 (p. 130), the team seems to ‘turn to itself’ after the first three meetings. When contrasting this with how indeterminate and determinate situations are distributed, one sees an interesting phenomenon: as the team concentrates on the task at hand, the need to tag the outside organization reduces. However, as one looks at the problematic situations and whether a tactical relationship is resorted to in determinate or indeterminate situations, one finds that tagging (a tactical resource) begins to veer to indeterminate situations towards the end of the series of meetings:

Table 7 Percentage of tagging (tactical resource) used in indeterminate situations

Meeting		Tactical tagging
1	Nov. 28, 2007	50%
2	Dec. 4, 2007	85.7%
3	Dec. 10, 2007	75%
4	Dec. 18, 2007	100%
5	Dec. 28, 2007	80%
6	Jan. 3, 2008	71.4%
7	Jan. 7, 2008	100%
8	Jan. 16, 2008	100%
9	Jan. 25, 2008	100%

So while the absolute numbers of tactical use of resources (tagging) in meetings remain lower (35 altogether over a period of nine weeks) than the use of strategic resources, it seems that when the team feels the need to tag an external party, it is because the situation is indeterminate to the point that no resolution can be found within the meeting. Conversely, this means that the team is capable of resolving most of determinate situations (especially towards the end of the series of meetings) using their own professional expertise and accumulated knowledge. Towards the end of the nine week period, as the team is approaching an important milestone, tagging (tactical resource) is used only in indeterminate situations, indicating that the team misses some key piece of information or does not have what is needed (in terms of knowledge or power) for resolving the situation.

5.7 Conclusion

As mentioned earlier in this study, if an organization were a brain, meetings are the synapses and neurons relaying the impulses of talk which serve as the vessels of ideas and thoughts. This is related to Boden's (1994 p. 15) idea of "mesh matrices" that people weave in their talk. So, when talking, meeting participants do a lot of organizing and meetings serve as the sites for this organizing. Simply by investigating how people in the meetings tag their surroundings we can, in our mind's eye, see how they align with the organization, set their course according to its demands, and tune this course to then focus more on the task at hand. Once the scene is set and the true focused work begins, we can also see how the problematic situations the team faces become increasingly complex and indeterminate. Given that indeterminate situations imply the development of knowledge as opposed to deploying existing knowledge, one can draw

two conclusions. First, a certain amount of ground work is needed for establishing the scene. This is work that involves using existing knowledge for establishing the scene – and it involves problematic situations that are determinate, and allow the deployment of existing knowledge. In these situations, the situational resources (identification, legitimacy, accountability) are clear and can be solved by using those resources. As can be seen from the distribution of determinate and indeterminate situations, this ground work is mostly done at the beginning of the project. This is also the period of time when the need to relate to the rest of the organization is at its highest. After that the project team turns more to itself – in a manner of speaking – and focuses on the tool development needs. This is when the work becomes more complex and the level of indeterminacy increases. The second important conclusion one can make from an eagle eye perspective is that as one looks at the sheer number of indeterminate and determinate situations (Table 4, page 122), the indeterminate ones clearly outnumber the determinate ones (73 vs. 46). Again, given that indeterminate situations involve developing knowledge, one can say that in preparing for the important milestone, the team develops more knowledge than merely deploys.

The meeting materials investigated in this study are rich in many ways and full of all kinds of understandings, ambiguity and confusions – all constituting problematic situations. As can be seen from the short extracts in section 5.4.1, the problematic situations identified in this study often contain many of the features (understandings, ambiguity, confusion, tagging, non-understanding) contributing to problematic situations. This means that no matter how one chooses to categorize these phenomena, one necessarily does violence to other features that coexist in the same situation. Thus, the following chapter discusses problematic situations that are determinate (deploying knowledge) and indeterminate (developing knowledge). While I have not chosen to categorize these situations further into info transmission or request (determinate), or instruction or improvisation (indeterminate), I have divided both types of situations according to the way the participants solved them in interaction. One must, however, bear in mind that even the categorization into determinate and indeterminate situations is only done for analytical purposes. As for why the situations are not further categorized into smaller entities based on their birth mechanism, the phenomena are not distinct and standalone but rather blurred and overlapping in many ways. In what follows, I present the determinate and indeterminate situations chronologically, in the

order they have appeared. The only additional division is done according to interactive 'category.' Different kinds of phenomena giving cause to problems are then discussed in conjunction of each problematic situation.

6. ANALYSIS OF PROBLEMATIC TALK IN MEETINGS

In this chapter, I discuss problematic situations that are either determinate (deploying knowledge) or indeterminate (developing knowledge). Furthermore, I categorize them according to how the meeting participants seem to solve the situation by interactive means (cooperative alignment or tagging). While I have not labeled all the problematic situations in the materials according to phenomena (such as confusion, ambiguity and multiple understandings) present in them, the examples in this chapter reflect this variety. As pointed out, any and all categorization is done for the purposes of analysis, and I have not done it to indicate any ontological separation in them, as none exists. I finally move to discussing individual features I have found in the cases I have chosen for analysis in this study. This is done because I think the features observed could be symptomatic of more common phenomena (although not proven by the limited scope of this research except through individual cases) than might be acknowledged today. The extracts in this chapter have been modified so that, for example, transcription indicating pauses or overlapping speech have been removed to facilitate reading. The original transcriptions remain in the appendices. The reason for this is the fact that when beginning this research, I was not sure if detailed transcription will be needed or not, and decided to include all the details. They might come in handy in later studies.

In the analysis of problematic situations, I study those episodes and those moments wherein I detect understandings, confusion, ambiguity, or non-understanding that upset the fluency of interaction. As compared with Kuhn and Jackson, the confusion (again, as an umbrella term) I investigate comprises problematic situations in interaction and detail them out from discussion that is very close to naturally occurring talk. Taking this avenue allows for the analysis of understandings and confusion (and the related phenomena) which are necessarily manifest on the level of talk, and usually have little bearing on the analyses of knowing well as a practice-based accomplishment. With this approach, we can see how something that has not thus far been recognized as problematic in the subject matter (in this case, various features and functionalities of a software product), is brought to the surface and how reflexive understanding arises and brings the tacit knowledge as an object of reflection (Gherardi 2006). In these incidents, we can see how claims and counterclaims are made, how the meeting participants work out mutually aligned understandings, and how these understandings, for their part

enable action or steer it to various directions. It is also important to consider how these situations might hamper action as understandings cannot be aligned.

The episodes analyzed in the following also include examples of both *strategic* and *tactical* power, and I discuss them alongside the examples as they become pertinent. When someone has a strategic relationship to power or possess strategic power, they can use their professional authority for validating their claims for having the best understanding (for details, see section 3.4.3). In a sense, strategic power can be understood as authority or experience (also recognized as such by others) that is readily available in the meeting – as the professional knowledge of one or many of the participants. The tactical relationships, for their part, comprise problematic situations where one of the interactants has to resort to *tactical* power. This means that their professional authority fails – or is lacking for some reason – and they need to use different tactics for validating and legitimating their knowing and understanding.

Participants' differing backgrounds can also turn discussion into a problematic situation quite unwittingly. These situations might be related to the ways in which interactants *frame* a situation. *Frame* is a concept that is used in various fields of research (such as linguistics, anthropology, sociology, interactional sociolinguistics) and which refers to a shared sense of the way in which discourse participants fix, or indeed frame, their discourse in time and space (Ensink, Sauer 2003). This means setting the discourse in relation to something else, such as other discourses. According to Ensink and Sauer (2003 p. 5), the concept of 'frame' in discourse analysis is used in very much the same way as in cognitive psychology, where it has been used to explain aspects of knowledge storage and retrieval, and the use of knowledge in processes of perception and comprehension.

6.1 Deploying knowledge by cooperative alignment

In this section, I discuss those problematic situations that are *determinate* in that resources of accountability, identification, and legitimacy are unproblematic, and the people in interaction can resolve the situation quite easily. The examples categorized under this heading also share another commonality: they are all solved by cooperative alignment in interaction. The fact that the problematic situation is relatively unambiguous and a resolution is readily available often renders it easy to solve in cooperation – as we learn by examining the examples in this section. Someone in the

meeting knows the answer to the problem, renders this knowledge into information, and shares the required piece of information with others. Once knowledge in the form of information enters the scene, it is unambiguous to the point that the meeting participants can be relatively confident that the others perceive it that same way, and work can continue. Labeling a problematic situation as determinate is – of course – not always straightforward, as this is not an exact science. For examples of how situations are identified as determinate or indeterminate, see section 5.4.1.

While Kuhn and Jackson divide determinate situations into two moves: *information transmission* or *information request*, I have not seen the need to go to this level of granularity, given the richness of situations in my data. However, the two moves have served as valuable guidelines in determining whether the episode constitutes knowledge deployment or knowledge development. Sometimes, a problematic situation challenges shared understandings, but what helps in labeling these situations is looking at whether the resolution is *information transmission* (determinate) or *instruction* (indeterminate), for example. In what follows, however, the determinate situations are categorized according to the solution the participants find in terms of interaction and tactics used there (cooperative alignment or tagging). Otherwise, they are presented in a chronological order to maintain possible sequences of aligning understandings over a longer period of time, and not necessarily in one meeting.

Kuhn and Jackson augment their definition with an example from a simulated airline cockpit where the pilots were able to perform properly because of their shared expectations and understandings. So when an event does not challenge shared understandings, it can be considered determinate. In the live meeting materials that are studied here, identifying determinate situations is a bit of a challenge, as the talk does not follow a script or schema that could be compared to those related to procedures and discussion taking place in a much more controlled environment, such as an airline cockpit. In the extracts and examples that follow, the determinate situations often occur in between a longer sequence of sense-making and relate to understanding.

6.1.1 Example 1 (Meeting #1, Nov. 28, 2007)

The kinds of understandings and interpretations people make in various discussions around the organization often are not made explicit until later. This happens in everyday conversation, too, and many a times we realize later that we may have ‘gotten

something wrong.’ In the case of an R&D project, however, the possible variation in understandings is more limited as too much variation in understandings may lead to some basic assumptions regarding the design being something other than what was intended – depending on, of course, who has the divergent understanding.

This extract – while being an example of an *attempt* to use tactical power – is also a good example of the kind of multiple understandings that abound in meetings (and elsewhere in organizational life, too). Here, the team is discussing visibility rules to certain dashboards and who are eligible for seeing them in the tool. Once [A] indicates that country managers should be able to see the dashboards (line 6), [H] brings in [person_M] (line 7 onwards), who is clearly an influential figure – a user of the tool, based in another country and submitting requirements for the functionality and features of the new version of the tool. [H] is careful to mention that he was not alone in that call, but [D] was present, too, and heard [person_M]’s opinion. However, it soon becomes clear that [H] has a different understanding of what [person_M] has actually meant than [D] as [D] (line 8) points out that [person_M]’s remark was limited to one area only.

Extract 6 Visibility to dashboards (topic #5)

1. [C]: Next one was indicative gross margin
I think ee this was a discussion where ee
[Area_1] doesn't want to see the sensitive information
2. [D]: yea
3. [C]: for some of the dashboards
4. [A]: and and the other areas are not going to see it as well
5. [C]: o:kay
6. [A]: except country managers and (like that)
so there's gonna be
going to be this visibility rule which is restr- restricting the access to
those
that information in account manager level
7. [H]: → actually we-e that **in that call we had one call**
with [person_M] myself and [D]
and what [person_M] was saying that was he was not very sure
whether even country managers also can see ()
8. [D]: → yea in [Area_1]
9. [A]: → in [Ar] in [Area_1] yea but in all the other areas it's gonna be
10. [H]: mhm
11. [C]: mm

In the sequence above, [H] recontextualizes a phone call between [Person_M], [D], and himself. In relaying what went on in the call, he voices his understanding of the topic. Both [A] and [D] indicate to [H] that [person_M] had only referred to [Area_1] (lines 8 & 9) which seems to be a special case in many of the discussions. Clearly, this is not evident to [H] at this stage of development (this being the first meeting in the series).

[H] has understood that country managers should not be allowed to see this particular information but he has drawn a too far-reaching conclusion from what [person_M] has said.

In this short sequence, we can see how, although understandings are locally developed and situated, they nevertheless are “doubly ‘situated,’ first within the flow of talk, and, second, within the reflexive rhythm of the organization” (Boden 1994 p. 89). These are the layering effects operating in exchanges that take place between people in meetings and working to frame succeeding interactions in the same meeting and in other meetings and discussions that follow. In terms of determinacy, this is a highly determinate situation although [H] is identifying with [person_M] (a business representative from another geographic area and never physically present in meetings), who clearly represents a source of legitimization for him. [D] and [A], for their part, do not attempt to undermine these allegiances, but note that [H]’s *understanding* – that no country manager, regardless of area, should see certain dashboards – is not concurring with theirs (lines 8 &9). This amounts to an information transmission as to how the requirement should be understood. So while [H]’s identification with [Person_M] might work as tactical use of power, it fails because [H] has not understood [Person_M]’s talk in the phone call in the same way as [D] and [A].

6.1.2 Example 2 (Meeting #1, Nov. 28, 2007)

The following example is from the same meeting as the previous one, and although it is not explicitly evident from the discussion, it is possible that [D] is referring to the same phone call with [person_M] as [H] in the previous one.

Extract 7 Market overview (topic #19)

1. [C]: market profile would go because
headcount is not required
2. [D]: (yea) mm
3. [C]: so if headcount is not required in: report also
4. [H]: ()
5. [D]: yea
6. [C]: country monthly scorecard report has headcount
7. [H]: ()
8. [C]: yea
9. [D]: → **but didn't eh [person_M] say that country monthly scorecard is basically not needed**
10. [H]: → **no**
11. [C]: → **no no no country monthly scorecard is needed**
12. [H]: → **country monthly scorecard is needed**
13. [D]: yea well
14. [H]: country overview he was saying

15. [D]: → no but also country monthly scorecard he () but yea let's not go to that
now but (I-I understood him correctly) ()
16. [H]: ()
17. [A]: **no we are not taking that away**

Here, the roles are reversed: [D] has formed an understanding from what [person_M] has said (line 9), but [H] and [C] are strongly opposing his understanding (lines 10-12). Given that [Person_M] is an influential figure, his words carry weight. He is also clearly an experienced user. However, as in the previous example, this time [D] fails to make this relationship work for him because of his own differing understanding. It seems that [D] finds it hard to believe as he mutters (line 15) that he thinks he has understood [person_M] correctly. Finally, [A], who clearly has not participated in the call with [person_M] steps in and says that the scorecard will not be taken away. While shared understanding is challenged in this example, there is no instruction involved and resolving the situation is a matter of simple information transmission ([A], on line 17).

6.1.3 Example 3 (Meeting #4, Dec. 18, 2007)

The following is a simple example from a meeting that took place on December 18, 2007. The team is discussing the topic of homepage and what needs to change in terms of columns for the next version of the product. One column is clearly obsolete, and [B] while clearly noting that the business group ‘goes off’, he begins to wonder if it should be there after all.

Extract 8 Homepage column (topic #10)

1. [B]: the next item, [A], maybe need a discussion ehm () item we parked it for this clarification session eh e related to homepage eh what columns of account to who on homepage.
((in the above, [B] foreshadows a topic that may take some time; discussion has continued for 4 minutes, 23 seconds; revolving around what columns to keep and what to hide or remove))
2. [B]: this eh business group will anyway go off
3. [A]: yeah
4. [B]: erm aah just is it then going to be: country () yea yea having discussed it that's what I'm (wondering so) because this business group is: not coming out of the fact that I've created a issue or
((during the short pauses above, [B] is looking around for the column in his computer, one can hear the mouse clicks on the background.))
5. [D]: no it's coming from the product
6. [B]: coming from the product then maybe we have a choice to either hide it or replace it with operational unit mmhm this can be operational unit eh doesn't help too much in the user scenario because how many ()
7. [A]: → **We don't need to have that operational unit over there**
8. [B]: *((laughter))*
9. [B]: → yes eh **would we need category in place of this?**
are account managers responsible for selling products belonging to ()
10. [A]: no but I I believe that we have issues then if if he needs to see that category
11. [J]: yes
12. [A]: he can actually follow up that

13. [J]: drill down yes
 14. [A]: issue by following the hyperlink
 15. [J]: right
 16. [J]: () description is okay
 17. [B]: (so) issues
 18. [A]: I believe that we just need to make this homepage as simple as possible because then they can actually drill down
 19. [J]: yes
 20. [A]: from the homepage to the account (so) the issues so
 21. [B]: yes
 22. [B]: → so **let me understand you correctly** did you say that it's good to replace-eh () anyway to replace but it is to replace with category did you say it's better or you say
 23. [K]: °no°
 24. [A]: no
 25. [B]: it's not required
 26. [A]: no it's not required
 27. [B]: so keep it simple basically as less information on homepage as possible .hh I think status and priority is fine

This problematic situation, while seemingly straightforward, is interesting because of the fact that [B], who requests for information in a rather rambling way (lines 1-6), seems to miss [A]'s response (line 7). At the beginning, on lines 1-6, [B] himself acknowledges that business groups 'go off' (as a result of the organizational change), and yet, he wonders if it should be replaced with other words or even with something totally different (category). [A]'s response on line 7, "We don't need to have that operational unit over there", while quite unambiguous in one way, does not give exact guidance on what should be done with the column. It is also not cushioned in any way and elicits a sort of embarrassed laughter in [B], and it is not clear if [B]'s laughter is because of the bluntness of [A]'s comment. However, it seems that [B] is letting his own thoughts and ideas as to what could replace the column distract him to the point where he has quite missed what [A] has said. [B]'s local recontextualization of [A]'s message (line 22) implies that [B] is having problems with sense-making. Now, it seems that [A] and [B] – while talking about the same issue – are on slightly separate *topical trajectories*. Where [A] is rather explicit about the fact that there is no need for operational units or categories, [B] (line 22) seems to linger around the idea of having the categories in, but decides to verify his understanding still.

This is in many ways a harmless occurrence and one that is remedied by [B] himself verifying his understanding (line 22). [B]'s own clarification also gives us a glimpse to his inner cognitive process that he voices by saying "so let me understand you correctly" (line 22 above). The resources for identification, accountability, and legitimation, for their part, are straightforward and unambiguous: [A] can provide [B] with the right information, and thus allows the team to act; the only disruption in the

episode seems to be brought on by [B] himself; it is as if he misses some critical stride or then, does not vocalize the thoughts that preoccupy him, thus making him miss part of the conversation. What cannot be really seen from the transcript above is the fact that at the beginning of the sequence, [B] focuses on his laptop in search of the column (one can hear him click the mouse). As [B] is thus occupied, this could be a likely reason for [B] to miss [A]’s response.

6.1.4 Example 4 (Meeting #6, Jan. 3, 2008)

From the meeting materials, it is evident that the team has worked quite a bit on the requirements so that they base their understandings on interpretations they make and work on conjectures that take them to directions that might at times be too complicated or varied. Even when they are not sure of what is wanted, they develop multiple scenarios for figuring out how the requirement might play out.

Extract 9 Net sales (topic #9, part 2)

1. [B]: uuh yeah so uh **one question I would have** is u:h
 is this report uh required for many measures or one measure or a few
 measures
 because that decides the number of items you have in this drop-down
 u::h
2. [A]: **I think it's**
 it's the net sales that they want to
3. [C]: okay (so we don't need to)
4. [A]: follow
5. [C]: (add all those) ()
6. [A]: yea because then we are hav- having this problem that
 someone u:h can see that someone not
7. [C]: yes yes
8. [B]: yes exactly
9. [C]: then (again you have to apply all the securities separately)
10. [A]: yeah
11. [B]: **so this is basically net sales year-on-year performance**
12. [A]: **yes**
13. [C]: okay (then) ()

Although [A] seems certain of what the report needs to be towards the end of this exchange, he did resort to hedging (‘I think’, line 2) in indicating what ‘they’ want to follow as if he was not quite sure of what the actual need is. This is also another evidence of [A] having actually “engaged his brain before putting his mouth in gear” – i.e. he is giving his words a thought by saying “I think it’s (2) it’s the net sales that they want to follow” (line 2). An alternative interpretation of the above might be a face saving act on [A]’s part, but having listened to the recording, this does not seem a plausible explanation. [A] seems to genuinely give the question a thought and then confirms his thinking at the end (line 12).

6.2 Deploying knowledge by tagging

This section contains further examples of determinate situations. However, instead of cooperative alignment, the solution seems to be tagging. In these problematic situations, one can observe both tagging business (another team) and tagging another occasion.

6.2.1 Example 5 (Meeting #2, Dec. 4, 2007)

The meeting materials contain numerous examples of how the rest of the organization affects the work of the team. There are requirements and requests coming from the users, but then – as the changes they request would be in conflict with what the rest of the organization does – the team needs to comply with the rules laid out by them.

Extract 10 [ACR] (topic #16)

1. [B]: I guess I was expecting for some kind of collective objection from this () and as [D] knows and [C] knows () of this particular data item so it started as [company] [ACR]
2. [A]: mm
3. [B]: somewhere down the line objected and rephrased as [company] [indicator] ()
4. [E]: yea that's what we are calculating that one
5. [A]: mm
6. [B]: → yes and now we are going back to [company] [ACR] ()
7. [A]: → **no no we are we are not going if [team] is saying** that we are not allowed to go so
8. [E]: () I think we cannot
9. [A]: so this is just they are stating from the business side that we should

The discussion in this extract involves an indicator that is calculated in a certain way, and there is one team ([team]) that decides how it is calculated and how it is reported. And even when users (the business side) wish to see something different in the report, the software team cannot change the name. [B] is a bit perplexed with the multiple and conflicting demands (line 6) and from his point of view, the understandings as to what the indicator should be, are varying. For [B], the request from the business side seems to be quite valid and it forces [A] to not only 'pull rank' but also to legitimize his decision by referring to the [team] that is calling the shots (line 7). Clearly – as regards this particular item – no one in the project team has that power and hence, [A] resorts to a tactical relationship to power (by tagging the [team] that holds the decision power).

6.2.2 Example 6 (Meeting #6, Jan. 3, 2008)

During the meeting on January 3, 2008, the team is discussing a recurring topic, year-on-year reporting. On this date, discussion of this topic lasted for more than twenty minutes and there were several problematic situations within that same discussion.

These will be discussed later in the ensuing sections (see Appendix 7 for transcripts of problematic situations during the discussion of this topic). The following is a determinate one where one team member is immediately able to respond to [A]’s need to verify his understanding after he has hear [B] and [K] mention that period (as opposed to comma) will be used as default:

Extract 11 Was it period? (topic #9, part 3)

1. [A]: wh-wh- hey sorry just
2. [B]: hmm
3. [A]: → period was default in financials page
4. [K]: yes
5. [A]: was it like that?
6. [B]: yes (that’s the)
7. [K]: in the reporting guidelines meeting we had (decided)
8. [A]: oh yeah okay

Here, [K] has the best understanding as the one who has been to the meeting where the reporting guidelines have been discussed. However, although [K]’s ‘yes’ (line 4) is prompt and he evinces confidence in his response, [A] is not convinced (this is interesting because of his own intertextual reference to financials page, line 3). It is not until [K] tags the reporting guidelines meeting to legitimate his understanding that [A] accepts his understanding as knowledge.

6.3 Conclusion – knowledge deployment

Some of the determinate situations analyzed in the materials of this study veer close to indeterminate ones (like in section 6.1.4 where the situation at least from [B]’s point of view looks highly indeterminate). Mostly, however, they are rather straightforward as can be seen from Extract 5 in section 5.4.1. They are simple, and relate to issues such as confirming an understanding, determining a choice of action, confirming the validity of information of some sort, or correcting someone’s understanding on some aspect of the product. The one common feature all of the determinate situations have is that they can be overcome by sharing a piece of information. By saying that these situations are straightforward, I do not intend to say that these situations do not serve an important purpose. If one were to compare them to navigation, these situations offer landmarks of sorts that help the team to keep their course as they sail the waters that might at times be treacherous, muddy, or even stormy. The landmarks are stocks of knowledge the team can tap into at times of confusion or multiple and even conflicting understandings. As such they are crucial for the team to maintain their course and without them, progress might be much slower.

The examples investigated in the two preceding sections reflect the findings described in chapter 5 well in that the determinate situations identified in the data of this research were mostly found in the early part of the series. As the project team progressed with their work, the problematic situations became increasingly indeterminate. As one can determine from the examples, too, cooperative alignment (strategic resources) was used more often than tagging (tactical resources).

The following sections explore indeterminate situations that are in many ways more complex and ambiguous than determinate ones. Given that indeterminate situations dominate the discussion in the materials and are likely to develop the knowing they are given more focus than determinate ones.

6.4 Developing knowledge by cooperative alignment

Indeterminate situations, in Kuhn and Jackson's words, are situations where "interpretations of and responses to a problematic situation are less clear when there are multiple and conflicting identities, when the validation of action is uncertain, and when ambiguity marks both role requirements and action scripts" (2008 p. 459). Kuhn and Jackson continue that information transmission will never be adequate "because what counts as relevant or useful is not held in common by the actors". This could be due to a number of reasons of which Kuhn and Jackson mention "incommensurate technological frames", cynicism towards organizational action and fluid participation over time. As Kuhn and Jackson say, these types of situations require that actors resolve ambiguity and invent responses, or seek for answers from people who can manage the complexity. And, although discursive moves might render a situation more determinate, they can make the situation even more complicated and indeterminate (2008 p. 460).

This section will focus on indeterminate situations, as – as can be seen from Table 4, page 122 and Figure 8 on page 124 – they are much more numerous in the meeting data and dominate the discussions from the fifth meeting onwards.

The following examples comprise indeterminate problematic situations that are interactively solved via cooperative alignment in the meeting itself. This does not, however, mean that the actual issue might be solved altogether, but the team accomplishes some kind of a resolution that allows them to move on in handling the items in the clarification log.

6.4.1 Example 7 (Meeting #1, Nov. 28, 2007)

The first example of an indeterminate situation where the problematic situation is resolved within the meeting is an especially rich one as it offers many facets for analysis. Although it is a prime example of an indeterminate situation that quite quickly develops to improvisation, it is also an example of expression and content produced *in situ*, in social interaction. To me, this example epitomizes the nature of dialogic sense-making where cognition and social interaction penetrate each other. The team is discussing the [ACRONYM] process and how it should reflect the new organization.

Extract 12 Replacing business groups (topic #2, Appendix 2)

1. [D]: I think eh can you decide [A] that .h do we want this mmm category share shares or not so if they have business groups now or who can make that call
2. [A]: mm
3. [D]: that's the biggest (in here)
4. [A]: yea
5. [C]: mhm ((*mumbles in the background*))
6. [D]: if you go up to those [Info1] and ehm was it [Info0]
7. [D]: so under sellout there is [Info1] and [Info0]
((*typing in the background – 3 seconds*))
8. [A]: no no category is **working assumption here is that categories are not going to replace**
9. [C]: business
10. [A]: **business groups in here** in the [ACRONYM] metrics so the but so we can continue by eh having only that [Info1] and [Info0] for ()
11. [D]: okay
12. [C]: so should we call it at least [Unit_1]
13. [A]: **yea (.) but er or I don't know actually (4) because then we should have there (.) [Unit_2] as well but why not to have it actually in the [ACRONYM] metric side**
14. [D]: mm
15. [A]: but then we can't compare actually af as we're not getting those figures from the [ABC]
16. (5)
17. [D]: so it would be only two lines
18. [A]: **oh yeah hey it's going to in the incentive yeah that's that's that's right we we'll replace business groups by [Unit_1] and and [Unit_2] yea**
19. [C]: [Unit_2] and it's coming from [System_2]

What makes this an example of a mixture of cognition and social interaction is [A]'s thinking out loud (line 13). We can see how [A], on line 8, begins his communicative project by rationalizing that categories will certainly not be used in lieu of business groups. [C], who wonders if there should be something to replace business groups, offers [Unit_1] to take their place (line 12). As the background to this change is related to the organizational change – effectively making business groups obsolete – [A] sees that both new units should then be used (line 13). [A]'s talk here is the commonplace phenomenon of 'thinking out loud' which in essence allows [A] to talk to understand what they all should understand and think. Here, [A] himself is a recipient of his own

utterance: as of line 8, he (while clearly thinking) is also thinking out loud (line 13). On line 18, he seems to make an association with ‘incentive’ (the whole context and meaning of which lies outside of the grasp of the listeners, unless, of course, they know what he is thinking about with that rather equivocal reference) and sees how replacing the business groups with [Unit_1] and [Unit_2] would work here. In Weick’s terms, [A] is picking “stimulus” from his own words that help him in his sensemaking and in resolving the problem for the team.

[A] is the only person participating in the meeting who is actually employed by the company for which the tool is being developed. This means that he is the only one with enough understanding of the other processes in use within the company; he should know best. So it is clear that what counts as relevant is not held common by the participants of the meeting. The situation, however, is clearly ambiguous for [A], too: he himself disrupts the legitimacy of action by saying “but er or I don’ know actually” (line 13). The glimpse to the other organizational process (incentive, line 18) is an indication of [A]’s accountability to the organization.

6.4.2 Example 8 (Meeting #1, Nov. 28, 2007)

The second example of an indeterminate situation is a clear one in that there is marked ambiguity in the episode as it takes a while for [C] to realize what [D] is trying to point out. [D] is not the most articulate of persons and often one can hear him grunting and muttering almost as if to himself.

Extract 13 Wrapping of columns (topic #23, Appendix 2)

1. [C]: it’s not data problem it’s like if you have too many columns in a page then what happens is it tries to fit it in the same page it prevents you from scrolling too much on the right that’s where it does that autoformatting like
2. [D]: (what)
3. [C]: it’s like in word or excel when you compress at it
4. [D]: ()
5. [A]: ()
6. [C]: kind of wrap text functionality
7. [D]: → but **why does it compress only for some**
8. [H]: **>no no< it will compress for all** because while we observe those only those reports which have thirteen months
9. [D]: yea
10. [H]: like eh and and you can if we change the year it’s like say () two years span you’ll have twenty-four months something like that
11. [D]: mm
12. [H]: so there (we observe) if you check in () observation on some of those reports which has those thirteen months or fourteen months and **if you don’t have those many columns then you don’t have this problem it’s only about**

13. [D]: I I think it's now if it's consistent so that if it has to like compress or what(ever) you say then it can be in two lines but if if it doesn't then it should all all all always be on one line or something
14. [C]: → **that automatically is taken care of**
15. [D]: ()
16. [C]: if if in that same selection you make it for like one year then there will be no wrap text it'll spread but if you make it two years then the report would
17. [D]: yea
18. [C]: bring it closer
19. [D]: → but (all them) because **because we saw some some** that that
20. [C]: o:kay okay okay
21. [C]: (so was it for all)
22. [H]: () because it depends on the data month () also ()
23. [D]: → yea cos **it doesn't look good** if some are and some are not
24. [C]: "okay"
25. [H]: we will look into this and eh whatever we can do we try to do
26. [D]: yea

On the level of interaction, we can follow how [D] launches himself (line 7) on a laborious communicative project for creating what Linell calls an *island of temporarily shared understanding*. As communicative projects are typically nested, so is this one: it is part of the wider discussion of auto-arranging views (which again, is part of reports in certain functionality of the tool and so on). The extract also indicates the asymmetry involved in communicative projects although here, [D], who initiates the discussion, says much less than [H] and [C].

The question is about whether the data in the columns will wrap or not depending on the selection; [D] maintains that if the selection is long and covers, for example, the two years that [H] mentions in his example (line 10), all the data in the selection should be compressed – and not just some as [D] indicates they have seen (line 19). [C], who holds more of a project manager role, seems to have problems in accepting [D]'s protests as legitimized ones and he insists that “that automatically is taken care of” (line 14) although the tool functionality being displayed proves something contrary. Although [C] eventually does realize what [D] is driving at, [D] still seems to identify with the users and evokes an image of them inevitably thinking that the data looks odd if some of it is compressed and some are not (line 23); This way, [D] also forces [C] to see the users' point of view. After all, they are the ones the tool is being developed for and in that sense they are accountable to the users.

We can also see a number of attempts to end the discussion with [H] (line 8) first saying that the view will compress for all. His second attempt begins from line 12 where he says that the compression issue is only a problem for reports that cover a longer period. With [D] persisting (based on, like we learn from line 19, what he has seen happen in

the tool), [C] (line 14) tries to cut him off by saying that the problem [D] describes has automatically been taken care of. It is not until [D] implies that there is visible evidence for what he is trying to say that [C] agrees to acknowledge what [D] is saying.

While [C] and [D] partially occupy the same topic space, they clearly have at least partially discrepant understandings of the functionality. Even when the context (the columns that either wrap/compress or not) is clear, [D] and [C] seem to entertain somewhat different ideas as to what part of the context or its functionality is being talked about. [D] needs to push persistently to make [C] understand the point he is trying to make.

6.4.3 Example 9 (Meeting #1, Nov. 28, 2007)

The difference between the participants' backgrounds pops up every now and then: The participants with technical background are clearly much more intimate with the details of different functionalities, but often fail to recognize that the other participant(s) – and especially [A] – might be less familiar with all the restrictions. This inevitably leads to indeterminate situations where (at least) one participant has not realized what the restriction is. Judging by the extract below, it seems there is more than one person who has not actually understood what the problem is and why is it that it is a problem in the first place.

Extract 14 Markets snapshot (topic #26, Appendix 2)

1. [C]: → **the whole confusion is because** of that cos what happens is that
when you come below country level
2. [A]: mm
3. [C]: like this will be in [country_1] and [country_2]
4. [A]: mm yea
5. [C]: so now there are some measures that you get from [ABC] are at the
[country_1] level
6. [A]: mm
7. [C]: and the user can actually in the dropdown select regions as well
8. [A]: mm
9. [C]: so that is where all this this entire cee-ar revolves around
10. [H]: (yea) ()
11. [A]: so it's not show-showing a real figures then on
12. [H]: → **no actually what happen is** that if selected [country_1] east and now
you are calculating average net price
(see Appendix 2 for a full transcript; some moves removed from here)
13. [A]: yea but ee
I believe that we should have it like this ee at least we should not like
hide these figures if we are having those at the moment instead we
should like explain then that why we are not getting figures
14. [H]: yea
15. [A]: in here when we are looking at the region level but maybe it should
read like see the lowest level is the country level or or I don't know
16. [H]: some
17. [D]: yea

18. [A]: how to explain them there is already now this information screen we can add it in here saying that you can't you're not able to see figures in the region
19. [J]: → no
20. [A]: or below country level or (something)
21. [J]: → **no actually the problem was** you will not be able to see () per country because that is total market figures from [ABC] and [ABC] **will never give the market value**
22. [A]: yea
23. [J]: so **they will always give [Info0]** so that figure that graph will always remain nil
24. [A]: mm
25. [H]: (nil) yea because that is value graph so value we're not getting from [ABC] we're only getting [Info0]
26. [A]: oh yea
(([H] and [J] talking simultaneously 3 secs))
27. [J]: so for () countries that figure will always remain blank
28. [A]: but how
29. [J]: () so this will be there
30. [A]: are we getting this value in is it some [SYSTEM_2] side
31. [J]: no [ABC] data
32. [H]: (no nothing) it's just there we're not getting anything
33. [D]: so should we remove it or
34. [A]: → **so we we never get any figures**
35. [J]: no
36. [C]: we should recheck with [ABC] if they could give us a value
37. [A]: u::hhh
38. [C]: because what happened when we
39. [A]: market value
40. [C]: (originally I think) [person_O] got this information that we would get it

The extract above reflects a situation where we clearly see three different islands of understanding (that of [C], [H], and [A]). When [C] begins to explain what the problem is, he is already partially in the wrong tracks as according to him, the confusion relates to the *level* where information is wanted. [H] tries (line 12 onwards) to remedy the situation by explaining how regional data is not available, because the data is on country level. By their elaborate guesswork [C] and [H] only manage to confuse the situation more and make it even more indeterminate. It is not until [J] steps in and starts to build a bridge between these different islands by asking to have the attachment shown (see full transcript in Appendix 2 for full details) when the actual problem (required data not available) starts to unravel (line 21 onwards). This allows [A] to assess the limits of his own knowledge when he asks: “so we never get any figures” (line 34). Clearly, his assumption has been that this type of data is available for calculation.

In the extract above, the attachment mentioned (and eventually opened) is the *boundary object*, a product of reification that helps the team – and especially [A] – to grasp and learn what the real problem is. This, however, is only possible after [J] – using his own professional expertise – clarifies the meaning of its contents to the team.

6.4.4 Example 10 (Meeting #2, Dec. 4, 2007)

The meeting materials clearly indicate multiple occasions where the levels of knowledge pertaining to certain issues are not the same. These comprise the problematic situations that often enough lead to knowledge deployment; the degree of determinacy is high, people know who to turn to and basically know what to do. Other participants, for their part, can help out and transmit information that they happen to know because of their professional experience and technological knowledge. However, for a situation to remain determinate – something that can be resolved by providing information in some form – the interactants need to have faith in others sharing the same understandings of the knowledge, and “sometimes the very actions designed to address ambiguity can make a situation more complicated and indeterminate” (Kuhn, Jackson 2008 p. 461).

So, determinate situations can go awry should the understandings of the knowledge differ – sometimes even without the interactants themselves realizing it. There are times when meeting participants spot these discrepancies in each others’ understandings and knowing, and repair is immediate, whereas there are other occasions, where discussion goes on for quite a long time before the interactants realize that there has been a gap in either interactants’ respective knowledge or understanding – leading the situation into an indeterminate one. In Figure 4 (page 102), this development is indicated by the vertical (hyphenated) arrow coming down from knowledge deployment to knowledge development.

An interesting example comes from a meeting on December 4th, 2007, when the participants are discussing whether to keep certain columns in the system – on the side ([System_2]) that allows users to modify fields. As it turns out, it is evident that [A] has a differing understanding as to how data is used in the tool, and he voices his understanding right at the beginning of the discussion topic (line 2). This is in stark contrast with what [J] has said in the previous move (in bold, turn beginning from line 1). However, no one seems to notice his faulty premise at this point, and this is crucial for how the discussion develops. The point is that the [ABC] data, which is acquired automatically from other systems (and used consequently in reporting, for example), never comes automatically to the columns and fields in the [System_2] side, which is

accessible for the user. [A], however, has a different understanding (in bold, as of line 2):

Extract 15 Removing or hiding fields (1) (topic #4, Appendix 3)

1. [J]: There's some requirements which were there
in the requirement excel
we did not have () information
and so we did not
(we need you to say) what to do with these like
this requirement is about **remove manually (filled) fields**
from [view] such as [info] and all
so, what do we do with these
2. [A]: Ee:hm (1.5) well the question actually is that should we **hide**
those columns which are automatically filled
3. [D]: mhm
4. [A]: in [System_2] side because the the main reason to have those
is to be able to see the reports
actually so we're not using those for for for kind of reporting
5. [D]: mm
6. [A]: purposes in the [System_2] side.

In the extract above, we have two framings of a problematic situation: first, [J] – identifying himself (and the development team – in saying ‘we’) as someone who needs instructions and the need is legitimated by the requirements in the excel he mentions. The source of accountability – a person to whom he looks for validation – is [A], an obvious choice as the representative of the business owner of the product. This is a seemingly determinate situation, where a simple instruction might suffice as a resolution. However, when looking at [A]s’ rejoinder (beginning on line 2), he frames the situation somewhat differently; it is still the same determinate situation when considering the resources, but it is a *different problem*. In fact the beginning of this topic constitutes a discussion sequence (lasting for more than 11 minutes) that launches to two parallel trajectories of which the interactants themselves do not seem to be aware of at all initially; so, [J] and [A] are building two separate topic spaces right from the start. The discussion continues for one minute after [A]s’ first voicing of his understanding, and once he expresses it for the second time, [C] corrects his understanding (line 8 below):

Extract 16 Removing or hiding fields (2)

1. [A]: actually those fields that are automatically filled
but but then there are for example so-some [ACRONYM]
2. [D]: mm
3. [A]: metrics that are automatically filled by [ABC] data so so

4. [D]: yea
5. [A]: those those we don't need to hide
6. [C]: we don't need to
7. [D]: but
8. [C]: → **we don't fill that as an actual on the [System_2] side it's always (blank) it (does) only appears in reports** (directly)
9. [D]: mm
10. [C]: so that already is there
11. [A]: mm

The ramifications of [C]'s comment (line 8) do not seem to register with [A] which is not that surprising as [C] does not seem to realize that [A] is talking from totally different premises, and that he is travelling along his own trajectory. Also, [C]'s comment (line 8) is not very explicit and they are talking about [ACRONYM] metrics, which, to be exact, is not the same [info] [J] refers to (sequence beginning from line 1) when talking about the manually filled fields in the [view] in the first extract.

The discussion continues, and [A]'s gaining of a more accurate understanding is not made any easier by the following sequence where the (mis)understanding is reproduced multiple times without any of the participants realizing it.

Extract 17 Removing or hiding fields (3)

1. [C]: what were the examples there?
 2. [J]: examples were not given there.
 3. [D]: market
 4. [J]: () just says (.) market, [info0], [info1] and [ACR] (1)
 5. [E]: () need to (open) in the [System_2] those fields ()
 6. [J]: market [Info0] is what we enter and ([System_2]) [Info1] we don't enter and [ACR] so
 7. [E]: ()
 8. [J]: ()
 9. [A]: so **which fields fields we actually manually enter** and
 10. [C]: **all these are manually entered** so
 11. [J]: [info0] and [ACR] are entered
[info1] we don't enter
 12. [A]: **so [info1] is coming from [ABC]**
 13. [J]: [info1] (also) **we do not get** from [ABC] (2)
so only one field is coming that is [info2] [info0]
which we enter here yearly
and **we get from [ABC] quarterly**
that is only (measure) which is coming.
 14. [C]: but what [ABC]
 15. [A]: oh so **so we get get the [info2] [info0] even from [ABC]**
 16. [J]: **yes we get it quarterly** from there yes.
 17. [A]: so so should we actually
automatically fill that that one as well
- ((12 seconds omitted))

18. [C]: okay so so we can hide this from [System_2] here
and just show it on the report in the [System_1] side (2)
that can be done
19. [A]: yea we should like do
as much as possible automatically and then
like hide all those columns that are not supposed to be filled
20. [E]: needed
21. [A]: by user so then that that's kind of usability issue as well
- ((some seconds omitted – [J]'s and [B]'s overlapping speech,
which is indecipherable))*
22. [A]: but I also kind of understand your
your point in here because when **it might be useful to see it**
23. [J]: ()
24. [A]: here with the rest of the figures
25. [J]: yes
26. [A]: in some level so
27. [E]: ()
28. [C]: and **then it is entered once in year** for a country
29. [A]: mm

It is not apparent what [J] means by saying that they 'get the data from [ABC]' (rejoinders 13. and 16. above) in terms of how is it 'gotten', and how it is used once it is 'gotten', because it is evident – towards the end of the sequence that lasts more than eleven minutes that no data comes from [ABC] to [System_2] side. Clearly, the 'getting the data from [ABC]' is crucial for the (mis)understanding: it obviously speaks different things for the interactants. To 'get' is a very non-specific and inaccurate verb which clearly allows too much room for interpretation in this sequence.

In what follows, it is evident that [A] knows that data comes automatically to the reports, but he also seems to think (see line 17 above) that it also comes automatically to [System_2] (user side), and since the user is not allowed to enter any info nor modify the automatically retrieved data, it might be better to 'hide' the field from the user. However, in [A]'s opinion, it might be interesting for the user to see the figures should s/he feel like it (line 22). Although [A], once again, voices his understanding of the data that automatically comes to [System_2] (line 17), none of the other participants catch it, and the discussion continues on two separate trajectories.

After this, discussion veers into removing columns and fields from other views for a while until [B] steers the discussion back to hiding information from the user. As we can see from Extract 17 (line 28) above, [C] understands that the data needs to be manually *entered* (after it has been *gotten* from [ABC]). [A]'s understanding as to

getting the data (line 3 below) from [ABC] is not the same as [C]'s, but it is not evident for any of the interactants.

Extract 18 Removing or hiding fields (4)

1. [B]: coming back to the the point h-hi-hiding market [info0]
it's it's not just (there's no) hiding because then there's this
report in country monthly scorecard
eh so hiding means we are
sort of letting users not enter it and which means that in this ()
because there is no [info2]
2. [C]: **w-we get it from [ABC]**
3. [A]: **we are getting it from [ABC]**
4. [D]: mmh
5. [B]: then we ought to do that change
6. [J]: then this report ()
7. [B]: (all I'm trying to say) ((*overlapping with previous, indecipherable*))
8. [C]: yes, yes yes yes it is
9. [B]: () ((*overlapping, [B] sitting further away from the microphone than [C] so his voice drowns*))
10. [C]: so (primary) what happens, [A], is currently we're getting this
data from [System_2]
11. [A]: mm
12. [D]: mm
13. [C]: as a source
if we now change it, then we will have to get this data from
[System_1]
and not only get it but
cumulate it like for four quarters and total it up to a country
14. [A]: but is it is it
15. [C]: so it will be like it'll be a change because you're
16. [A]: mhm
17. [C]: we have to define new mappings on () and get it and some
logic to aggregate it
18. [A]: but I believe that it's eh
19. [C]: it can be done
20. [A]: yeah
21. [C]: so it's not that it cannot be done just that eh,
22. [A]: I-I guess that figures from [ABC] are more accurate than the
figures that we are keying in in the [System_2] side so

[A] is still under the impression that the data can be 'gotten' from [ABC] (via [System_1] to [System_2] instead of the data being entered manually in [System_2] as it had been configured earlier). This becomes evident in lines 3 and 22 above. The differing understandings are not becoming obvious until it is time to sum up the decision and record it.

Extract 19 Removing or hiding fields (5)

1. [C]: so this is as of now just the market [info0]
which needs to: come up from
so we will keep the [System_2] field however,

- what we've decided is on the reports we would get it from,
[ABC]
2. [A]: from [ABC] yea
 3. [J]: → **so that's then conflicting ()** we should not keep
[System_2] field if we want to use the [ABC] data
 4. [D]: mm-yea I agree .hhh
 5. [J]: → because if we keep the [ABC] [System_2] field and people
enter the [System_2] data here and what we see in
[System_2] will be different from what we show in
[System_1]
 6. [C]: yes
 7. [J]: we need to stick to one either this or that
 8. [A]: → **so the [System_2] field actually is not
th-that column is not filled by [ABC] numbers**
 9. [C]: no
 10. [D]: (no no)
 11. [C]: → no no [ABC] data comes to [System_2] **that's a thumb
rule which we've had**
 12. [A]: → oka:y, yea
 13. [D]: yea
 14. [A]: → **even in case of some [ACRONYM] metrics**
 15. [C]: nothing comes nothing comes because
 16. [E]: no no no yea no
 17. [A]: **everything is manually keyed**

[J], who did not notice [A]'s differing premise at the beginning, has stayed attentive to how the topic handling has proceeded. He sees that the result is a mismatch that defies logic (line 3). [J] sees that there cannot be a field in the tool that is both automatically filled with data from [ABC] and with what the user can key in. It is not until [A] again voices his understanding (of data coming from [ABC] to [System_2] automatically, line 8) that the parallel understandings become obvious. [C]'s utterance on line 11 is telling as well: the R&D community and this team in particular know the limitations and the functionality of the overall system whereas [A], who belongs to the business community, does not have a clue about it.

What went on in the sequence described was not only a problematic situation that turned from a determinate to indeterminate one; we can also identify micro-level sense-making that arises from the fact that there seemingly are many interpretations: one moment you 'get' the data from [ABC] whereas the next moment you do not – all is manually entered. However, it is not until [A] puts his finger on the spot and asks a direct question (line 8 – followed by a clarifying question on line 14) that the interpretations converge close enough. So here, despite [A]'s voicing of his understanding twice (Extract 15 and Extract 17 above) so that others could 'see what he said', the lines of thinking apparent in the meeting data stay parallel on two different trajectories without converging. By the time [A] comes to realize that no data comes

automatically from [System_1] to [System_2], the two topic spaces that have been built are way too large for easy convergence; after all, the discussion on the topic continues for more than 11 minutes.

While [A] has now learnt a rather crucial piece of information that also affects the software design of the tool, the matter is not resolved, yet. As to how the issue was decided, the team left the issue still open – to be rethought as the premises for decision-making had changed. Although it was not voiced in the meeting itself, it seemed that the team, and especially [A], needed more time for making sense of the functionality and of the requirement.

The sequence described above is a good example of discussion that benefits from an analysis that takes a slightly different avenue than the straightforward knowledge development as a practical accomplishment, i.e. from looking at how the interactants build their islands of understanding. It is interesting, however, how the interactants fail to see the implications of what is being said (*automatically* vs. *manually*). I am especially intrigued by this because – given that both the manual and automatic data filling is voiced right at the beginning – we can already *see* the two horizons that open up. According to Linell (1998 p. 200), each new utterance, with its semantic potentials, opens up for new associations or implications for possible continuations. Clearly, what happens here is that the interactants lose their opportunities and the potential of an utterance is not realized – until only after some 11 minutes.

6.4.5 Example 11 (Meeting #2, Dec. 4, 2007)

The following example is interesting in that the same topic, channel landscape, contained multiple problematic situations. In these situations, participants engage in a communicative project, the performance of which often provides the initiative for another one. As a result, we witness a sequence of problematic situations and communicative projects that are engaged in for resolution. It also seems that the problematic situations are oscillating between determinate and indeterminate. The beginning of the topic is interesting in that at first, when it appears that the requirement has been submitted by [person_N], [A] seems ready to dismiss it without discussion, but as it turns out that it is from [person_M], [A] perks up (lines 12 & 14).

Extract 20 Channel landscape – 1 (topic #11, Appendix 3)

1. [B]: Alright eh let's move on to next item eh
channel landscape eh removing a number of retailers, wholesalers,
comma number of em-dees (2) so eh question is is that in scope or not
()
2. [J]: mhm
3. [B]: () item six seventy ()
4. [A]: i-it's the same kind of thing [than than the previous one
5. [C]: mhm
yes
6. [B]: eh ()
7. [D]: from who
eh was this this from [person_M] directly or is it
8. [C]: **no it's again from [person_N]**
9. [J]: it's from ()
10. [B]: **I think it is [person_M] ()**
11. [J]: ()
((lots of overlapping talk for ~2 seconds))
12. [A]: **okay ()**
13. [D]: yea
14. [A]: **can you can you show that applet
then again
yea I thought that that was [person_N]'s**

In terms of the framework for analyzing understandings (Figure 5 on page 103), the extracts relating to topic #11 in the meeting of December 4, 2007, allow for analysis of communication on both the level of knowing and organizing as well on the level of understandings. These elements are present in other extracts as well, but here they present themselves in a rich variety. First, the level of 'knowing well' reveals the political dimensions of knowing related to power resulting from not only the formal hierarchy but also the control of the source of authority (Lazega 1992).

The above is an example of a kind of inadvertent power; [person_M] probably is quite unaware of the kind of deference bringing up his name clearly evokes. So [person_M] serves as a resource for identification and legitimacy for bringing the topic to discussion in the first place. [person_M] represents users and has firsthand knowledge as to what the requirements should be, and thus, in the matter of evaluating the legitimacy of a requirement, [person_M]'s word carries a lot of weight in convincing others. This becomes evident in other examples as well. However, as the discussion of topic #11 contains many indeterminate elements, such as uncertainty as to how to interpret the requirement, additional sensemaking and aligning understandings is needed. On line 14 above, [A] asks [B] to display the applet the requirement refers to in order to understand the requirement better. This is the first attempt at recontextualization. As the discussion moves on, the team immediately hits the next 'snag' in trying to interpret what it is that [person_M] wants. On some topics, there are not only multiple understandings but they can be heavily entangled in the sense that some understandings are brought to the

meeting from other people (tagged) and these understandings are then understood in the meeting in multiple ways.

Extract 21 Channel landscape – 2

15. [B]: so aa once we have this
so once we have second tier accounts () we can drop number of em-dees ()
16. [D]: yea ()
17. [B]: () second tier accounts
eh that's **what I think this comment is**
eh removing number of retailers slash wholesalers and e number of em-dees which are like second tier accounts ()
so this particular column number of retailers wholesalers ()
18. [C]: **I think ee**
there is input here that this field can be removed as we eh () have channel landscape as a separate applet
19. [D]: yes
20. [D]: m thi-this was we talked about this in you-ai-tee yes
21. [A]: then again these columns are something that can be hh-hidden
but we are not using that information in in the reporting side in the [SYSTEM_1] side at all
22. [B]: mhmhh
23. [D]: not if it's double
24. [E]: double ()
25. [A]: this is only used in [SYSTEM_2] I-I believe I don't recall that there is a report showing these numbers
26. [D]: aa
27. [B]: yea ee could we s-some of the e one point zero reports I'm not full sure I can than () but
if if this is [person_M]'s suggestion we can safely remove it because then those would be [AREA_1] reports
28. UI: mmm
29. [B]: **so understanding is that ehm**
my understanding not to capture second tier accounts multiple times
so just say that what are the number of second tier accounts which are em-dees, retailers, wholesalers
30. [D]: mm
31. [B]: **this is what I remember ()**
32. [A]: **yea what?**
what do you mean? Are we
33. [B]: **what what [person_M] e has has for my understanding what he said** that when you are asking users to capture this retailer wholeseller coverage,
34. [A]: mhm
35. [B]: you are saying that okay eh provide eh number of retailers wholesalers,
then you are again asking that provide eh numb eh second tier accounts
and eh
then em-dees now these em-dees (distributors wholesalers) these are in a way second tier accounts
so in that sense it's confusing information for users what is it what is it that you're aiming to capture
and **harmonization was what [person_M] suggested** that all these fields mean same
they are ()
36. [A]: yea, let's remove them
or at least hide them
37. [B]: I'm sure th
38. [A]: yea and I now I recall also () discussing with [person_M] about this

At the beginning of the sequence above, both [B] (line 17) and [C] (line 18) begin their interpretation hesitantly, adding hedging ('I think') to their thinking which they vocalize. As [B] rephrases (line 17, above) "removing number of retailers slash wholesalers and e number of MDs *which are like second tier accounts*", he also offers the reasoning as to why these columns could be removed (in italics). Although [B] clearly becomes more confident in his interpretation, he nevertheless makes sure he uses his tactical relationship with [Person_M] as he says (line 27) "if this is [person_M]'s suggestion we can safely remove it." When he further elaborates on this, while still identifying [Person_M] (line 28 onwards), he becomes less clear and obviously loses [A] (line 32) who resorts to a direct question "what do you mean?" After [B] has explained what is meant (overlapping information on two places, and information needs to be removed or hidden in one place), [A] agrees that the information should be removed or hidden. Their understandings are aligned.

[B]'s account on how to interpret [person_M]'s request is not the easiest to understand and with his wordy explanation, he manages to confuse [A] completely (line 30 onwards). There is considerable amount of hedging in [B]'s account and it only seems to serve in blurring the message that is already complex enough. This type of confusion has less to do with legitimization, identification, or accountability although the legitimacy of action remains hazy up until the point where [A] recontextualizes his discussion on the item with [person_M]. Here, the confusion is brought on by the linguistic moves and excessive hedging that [B] uses when detailing his understanding of the requirement.

Finally, the team seems to have come to a conclusion and discusses removing some columns from a view where they seem to have become redundant. It is related to a request that has come from the users (and testers) of the tool elsewhere in the organization. In their discussion, the team has already decided that the lines are 'removed or at least hidden'. Hence, the team (as voiced by [A] on line 48) is stunned as [C] sums the decision that the whole applet needs to be removed (line 46).

Extract 22 Channel landscape - 3

- 39. [J]: it's mentioned ()
- 40. [A]: yea it's a bit (confusing)
- 41. [J]: () ((keeps on talking, but cannot tell what he's saying))
- 42. [D]: yea
- 43. [A]: number of second accounts that we're having on the reporting side as well
- 44. [J]: the internal number ()
- 45. [B]: so eh

46. [C]:→ **this full applet needs to be removed**
 ((([B] and [J] continue talking on the background but it is indecipherable))
47. [A]: → **how come? How come full applet needs to be removed?**
48. [E]: → **no no** not full
49. [A]: We only can remove those columns
50. [D]: two columns yea
51. [C]: number of retailers wholesalers () we need need to remove
52. [D]: and then the number of MDs
53. [A]: yea, and the number of MDs
54. [J]: MDs yes
55. [C]: eeh (.) go further down?
 Number of MDs
56. [J]: ()
57. [C]: only thing which should be left is number of towns covered
58. [B]: three columns
59. [A]: and then
60. [B]: second tier accounts
61. [A]: yea
62. [B]: retail outlets and towns
63. [C]: okay

This is a very simple example of a discussion where one of the participants clearly has come to a different conclusion than the rest of the team and thinks that the applet (a software component that runs in the context of another program performing some narrow function) needs to be removed. He has not only taken another route (or, so it seems) but he has ended up in a different island from others, who promptly correct him. By this time, the resource for identification, legitimacy and accountability ([person_M]) has become clear, and it is just [C] who has not been able to follow the sequence of events as he clearly has a different understanding of what needs to be done. [A] and [B] have been able to align their understandings already (see previous extract). As said, [C] seems to have come to a different conclusion (line 8) and says that the entire applet needs to be removed – causing [A] to counter this conclusion with a question – “how come full applet needs to be removed?” As is evident from what follows, [C]’s understanding of there being only one column left if two were removed was based on his limited knowledge of the product view (lines 58-63).

The whole *Channel landscape* topic entails sensemaking in situations that are problematic in many ways; the requirement formulation causes uncertainty as to how it should be interpreted, and, once interpretation is done, it turns out that one meeting participant sees a need for much more radical action (removing the applet) than the others. In the end, understandings are aligned collaboratively and cooperatively in interaction, and the team can make an “informed decision” based on knowing well. *Channel landscape*, thus, is a good example of a real life conversation that benefits from an analysis on the level of interaction. If *Channel landscape* were understood as

one problematic situation in itself, the ‘snags’ embedded in the topic discussion would risk being left without due attention. Given that the topic discussions can run for quite a number of minutes (although Channel landscape discussion lasted for only 4 minutes, 24 seconds), it makes sense to break the topics down to problematic situations as very often, even a small topic (in terms of length) can contain multiple problematic situations that oscillate between determinate and indeterminate ones. This particular section is a case in point. The first snag constitutes a determinate situation that is resolved by informing [A] that the requirement comes from [Person_M] instead of from [Person_N]. This is followed by a sequence where [B] manages to confuse [A] to the point of non-understanding (Extract 21) with his attempts to instruct [A] – in effect making the situation highly indeterminate and seriously challenging shared understanding. Finally, in the resolution part (line 49 onwards), [C] is simply given information as to what are the columns to be removed and which ones should stay; a determinate situation that is remedied by informing [C].

6.4.6 Example 12 (Meeting #4, Dec. 18, 2007)

In the following extract, the team discusses information that should be displayed in a page called ‘top ten products’. The company has expanded its portfolio to cover other sellable items besides what traditionally has been understood as products. Presenting the sales of that unit in the list of top ten products would be an issue as the item would not be comparable with other products. [A] does admit that this unit’s sales need to be reported on an aggregated level, but not in this list.

So, here the interactants share a similar understanding as to what the problem is, but then end up in opposite conclusions – until the understandings are aligned at the end. Here, the participants are talking about whether to include an aggregate figure among figures that otherwise consist of individual and independent items.

Extract 23 Top ten products (topic #17, Appendix 5)

1. [B]: top ten products ehbbb
2. [A]: that's not that's not (pro- the) problem
3. [B]: aa okay hh only question I would have is that if-ehh
some for for a period for some account if-e
value figure for [unit] (again) a hypothetical situation is highest
(laughs) .hhh I don't (know) if it will happen so soon if if .hh some
account buys [Unit_2] higher than any other product, then
4. [A]: then it's not so e we need to have dummy model [Unit_2]
5. [B]: should it
6. [B]: yes yes so that'll be quite okay to have it I mean I think
7. [A]: in the first phase

8. [D]: mm
9. [B]: a useful information to know that this account is buying more of [Unit_2]
so no problem about this
10. [A]: but then would it be like aggregated [Unit_2]
11. [B]: yes that's that's wh-
12. [D]: ()
13. [B]: → that's how we are err that's **our assumption that it's actually a product**
14. [D]: mm
15. [B]: in reality it's not but how it is handled in system it's a product
16. [A]: yea but then it it's (aggregating all [Unit_2] products)
17. [D]: → yea (**it's not () not correct**)
18. [K]: ()
19. [A]: → yea it **it doesn't doesn't belong here** so we need to have rule that it can't be [unit]
20. [B]: → **it should not be**
21. [A]: yea
22. [B]: **yea that's what I'm questioning I mean it's actually in my opinion**
23. [A]: it shouldn't be
24. [B]: **it's a useful information () when it's aggregated**
25. [A]: → yea **it should really not be** because we're using the aggregated [Unit_2]
26. [B]: yes yes user should be aware that [Unit_2] means anything and everything you sold not some unique family code
27. [A]: yes
28. [B]: → okay so I'll **assume it's okay** for top ten products nowhh
29. [A]: ()
30. [D]: → **so it's not there**
31. [B]: → **yeah?**
32. [D]: so eh
33. [B]: → **it is there yeah** (what I'm saying) it is there
34. [A]: → **it's not there**
35. [B]: → it is not there
36. [A]: it's not
37. [B]: (you've filtered that out)
38. [D]: yes
39. [A]: yea it it can't be in top ten products because it's it's in aggregated level and we are showing here individual products
40. [B]: yehehss .hh

Interestingly, again, [B] has gone off on a trajectory of his own; he has developed an assumption and does not seem to be able to let go of this assumption even when [A] indicates with numerous moves (line 19, line 21, echoing [B]'s own assertion, and line 25) that the aggregated unit info does not belong to this list. [B] evokes the idea of users (line 26) and how he thinks that the aggregated info might be useful for them. [A], however, is clearly indicating that the tool and the solutions therein need to be accountable to logic (and as a consequence, to rational users). [D] has clearly been attentive to the understandings unfolding in front of him, and makes sure that the aggregated unit info is not in the list. This is somewhat of a surprise to [B] (yeah?).

The above is a good example of discussion that – while seemingly occupying the same topic space – progresses on two different trajectories. Despite the fact that both interactants are certainly informed by prior utterances, they seem to hold fast to their respective trajectories, and do not seem to notice the different levels. With expressions,

or bridges, such as “it should not be” (line 20) and “yea it should really not be” (line 25) [A] and [B] are trying to steer [B] to harbor the same understanding as they themselves, but obviously fail. [B] does not seem to express ‘responsive understanding’ (a term Linell borrows from Bakhtin), and it takes [D] to reel in [B]’s understanding to a temporarily shared island of understanding.

Here, the situation is indeterminate in that there is a serious threat to shared understanding. Luckily, [B] says out loud his summary (line 28) and [D] is able to correct him. Had [B]’s understanding not been caught, the information that should not appear in this particular view (aggregated numeric information) would appear in the tool. The mistake would possibly have been caught in testing, but then fixing the problem in a product that has already been coded would require a lot of additional work and re-testing. From the extract above we can see *how* [B] comes to his conclusion (and how his conclusion is corrected in talk in interaction): he first validates this understanding the figure should be in the product (line 13), he tells himself that the system treats this information as a product (line 15), he thinks it’s a useful piece of information (line 24), and as long as one tells the user it’s an aggregate number (line 26), it should be okay (line 28). As to *why* [B] comes to a completely opposite conclusion is not possible to say based on the extract above; he may have misheard [A] or possibly he himself thought the piece of information so useful (this is evident from the extract) that he heard [A] and [D] say something that supported his opinion. Anyhow, from the recording one can hear that [B] is completely nonplussed for a moment (line 31 onwards in Extract 23).

6.4.7 Example 13 (Meeting #5, Dec. 28, 2007)

This extract is one example where two people who had attended a caption harmonization session together seemingly have a differing opinion of what was decided – until they realize they are talking about different systems..

Extract 24 Number of decimals (topic #6, Appendix 6)

1. [B]: yes, eh so, [A], we need eh help in deciding eh usage of decimals for [ABC] measures
eh when we have been discussing this e caption harmonization ee we couldn’t really close on items which are from [ABC]
ah taking one at a time from [company]
((*[A] asks to see an example, [B] digs one up.*))
2. [B]: s this is eh [company] h average price eh
chart and and a table
so we have used two decimals with average p-price that is what we

- have practiced
ah we can continue with that
we just need a decision on that
(6)
3. [A]: → how did you
w-what did you decide when you were having this caption harmonization session
[F]
4. [F]: well
5. [A]: what was
6. [F]: in general I I say that the the line was to take (already)
when you have money
sort of like euros and dollars
7. [A]: yea
8. [F]: you have two decimals in general
when you have absolute volumes you have zero decimals aah when
you have like eh percentages (in general) one, decimal, and then when
you have ratios then depending on the ratio you have either one or two
yea
9. [A]: yea
10. [H]: () when you say that about money, euro and dollars
11. [F]: yea
12. [H]: () like reporting [Info1]s
13. [F]: yea
14. [H]: → then eh () **for [Info1] and volume (let's show) absolute figures ()**
now we change the [Info1] also () to two decimals
I understood that the the absolute figures was for was for volume
() volume
15. [F]: →
16. [H]: () volume
17. [F]: that's what I understood **but ah I mean I' not**
18. [H]: [B] is it that eh when we have volume we have absolute figures
19. [F]: because because most of where we have money here
20. [K]: ()
21. [F]: we have we have like two decimals
22. [B]: yea
23. [F]: ah in [SYSTEM_2] side now we're talking about [SYS
24. [C]: [SYSTEM_1] I think eh the total value figures was::
for financials also was no decimals
25. All: yes
26. [F]: yea yea

Since there has been a specific caption harmonization session, [A] points to that meeting and asks the people ([F], specifically) what the decision of that meeting had been. This meeting is clearly a legitimate choice for identification in this case, but [F] and [H] both are accountable to [A] as he is the one who is asked for guidance and a decision. This piece of discussion also shows the complexity of issues that are being discussed as the systems involved – such as [System_1] and [System_2] mentioned – behave differently, and the behavior of the tool varies depending on which system is being referred to. Here, the interactants do not at first realize that when talking, they took off from two separate islands of understandings and are thus talking about different contexts; hence, resolution is somewhat delayed.

Despite the guidance from the caption harmonization session, the team has felt unsure about how to report monetary figures in the tool, and the discussion continues after a couple of exchanges. It turns out that the caption harmonization session has possibly felt itself powerless to decide (in the absence of [A]?) and has made no definite decision:

Extract 25 Number of decimals, part 2

1. [B]: yes e so the whole point is that these items which are
like sort of eh
requiring [team] inputs because we have some (y'know) idea how
to use them but still need to eh it's more of a double check
 eh so [A], ah
 for [ACR] eh meaning () [company] [price] either customer or market
 it's it's [SYSTEM_2]
 the decimal eh usage is eh use two decimals eh
our thinking was then eh it also becomes consistensive consistent if
 we eh use eh [price] [company] [price]
 with two decimals that's that's **that's what we think**
2. [A]: → yeah, but was it like that **what was decided** in the caption
 harmonization session I really didn't like hear
 so like in this case should it be two decimals
3. [B]: eh s can you repeat your question I didn't get your question, sorry
4. [F]: ()
5. [A]: → so was it already before or earlier decided that it it's going to be two
 decimals
6. [B]: no, eh
7. [F]: → I don't think we decided
8. [B]: → we just parked it here and then eh we we **we knew that this is**
something we need to eh get eh input from [team] we cannot
decide it so that's that's
9. [A]: → why not, why not
 why can't we decide it?
10. [B]: ((laughs)) good question, good question eh-heh.hh
11. [A]: so let's let's do it in a consistent way if we are using two decimals in
 every other place where we are dealing with the
12. [B]: yea
13. [A]: values

[B] begins to explain the gist of the matter and dresses his explanation with considerable hedging (line 1 onwards). We also catch the cognitive side of deliberation as the team clearly has done quite a bit of thinking ('our thinking' and 'that's what we think' above in the sequence beginning from line 1). [B] seems very unsure about the issue when presenting it (line 1 onwards) to [A], who keeps asking about the decision from the caption harmonization session; it turns out that the team has not decided anything, but rather discussed it among themselves. Their feeling was that they first need input from the [team] that deals with the financials of the company before proceeding. [A] certainly does not feel that way (line 9) and thinks that they should settle the issue there and then. Thus, the team seems to have a differing idea of with whom they should identify with; the people who participated in the caption harmonization session feels it's the [team], but [A] does not recognize the legitimacy of this choice. While they are accountable to the [team] eventually, [A] clearly feels that the team should identify with the caption harmonization session. These sources for identification and legitimacy are competing and adding to the indeterminacy of the situation. [A] uses the strategic power he has as the business representative and it is evident that the team recognizes him as a legitimate source of authority.

6.4.8 Example 14 (Meeting #5, Dec. 28, 2007)

The tool the team is working with will introduce some new functionality that will be partially overlapping with the functionality of the previous version of the tool. The team is considering what to do with the old functionality, the options seem to be either to replace the old business issues with another functionality or introduce only completely new functionality (issues and opportunities) – which is to be implemented anyhow. The discussion on this topic lasts for more than twenty minutes and includes altogether five problematic situations that handle different sub-items within the topic. The following is an extract where we first see how [A] – while discussing the options – decides that the best way to move forward is to replace the old functionality completely with the new one.

Extract 26 Business issues – part 1 (topic #13, Appendix 6)

1. [B]: ...other was as you were suggesting get rid of this and bring in the new eh bee-em-ar issues and opportunities functionality so these two are eh
2. [A]: yea maybe maybe doing like that so bring this [company] opportunities and [company] risks as separate columns in that issues and opportunities applet (1) so that like confirms like that we are like having still this opportunities and risks (.) so you can actually like input that text over there
3. [B]: okay so again can you come again did you suggest that that this remains part of the new issues and opportunities?
4. [A]: no
5. [B]: or that
6. [A]: **yea so that we're gonna completely replace that business issues this is not required anymore because we're gonna have this issues and opportunities tab**
7. [B]: okay okay

[A] (line 6) is quite clear on what the decided course of action is. His words are in many ways unambiguous, too. Despite this, the team seems to be caught in the idea of retaining the old functionality, including the historic data involved. They also seem to have the idea that the change affects other parts of the tool.

Extract 27 Business issues - part 2

8. [C]: yea but I think if we are removing it from there in [System_2] it would have an impact (all) this business here
9. [B]: an impact that that actually opens up a whole new topic of: we are removing now something and ((lots of overlapping talk))
10. [B]: yes
11. [C]: and what also we do with the historic data because I'm definitely sure [Area_1] has been using this
12. [K]: yes already ()
13. [A]: → **so that that's not a problem we're gonna replace that anyhow we're not gonna have this anymore so that's like the decision**
14. [B]: okay we need ah:
15. [A]: → hey come on think about it should we have ca two different kind of issues place under that market overview applet

- 16. [C]: no
- 17. [A]: so business issues and
- 18. [C]: eh definitely no, [A] but

Again, [A] steps in and re-announces his decision: on line 13, [A] displays the kind of overt, blatant power that is seldom seen in the series of meetings on this topic. The team's silence prompts [A] to further justify his decision by evoking an idea of a tool that has redundant functionality. After this, [C] seems intent on pushing his idea for [A] to comment; [C] launches into a long and vivid explanation with the intent of finding out whether [A] thinks the kind of functionality they have envisioned would constitute a valid business scenario. It turns out that [C]'s explanation is too complex for [A] to be able to understand it without any visual aid as [C] then says that they may need to mock it up for [A]. Again, despite an apparent failure in communicating his idea, [C] continues:

Extract 28 Business issues - part 3

- 19. [A]: → **eh I really didn't understand actually what you're looking after**
- 20. [C]: okay I think we might need to mock it (and make it) so so what we were suggesting is [B] if you can go up mouse-over thing what we were suggesting can you see [B]'s mouse so primarily the next to the country on top
- 21. [A]: yea
- 22. [C]: we can provide to the existing boxes from business issues which is like opportunities like that will be market overall objective and market overall risk so something on those lines on the top applet which is the where you see country name that applet would become bigger and underneath that you will have issues and opportunities directly
- 23. [A]: → **I don't see that we have that kind of requirement**
- 24. [C]: okay okay so let's let's forget that
- 25. [A]: yea
- 26. [C]: okay

Turns out that [A]'s difficulty in understanding what [C] is trying to describe is related to the fact that there is no requirement for the type of functionality that [C] describes. So, the social control and the resource for identification, here, is the requirement and by way of transference, the business users (who have submitted the requirements in the first place). The requirement does not legitimize [C]'s proposal for action as it does not exist at all. It remains unclear as to why [C] thinks that this type of functionality might be needed.

The team continues to discuss the functionality, and hit on the next 'snag' – a feature related to objectives and strategy, and the long text fields that are required. The tool's design proposes certain limitations to the number of overlapping functionalities (implemented using applets), and this renders the requirement tricky to create. [J] is the

technical expert who has the responsibility of this part of the design, and since the functionality has not really been used before in the tool, there is not much guidance with which to work – for example, the length of the text fields remains an open issue as there is no previous experience. [B] and [C] try to interview [A] for more details, but [A] does not have any – simply because this has not been used anywhere else besides [country_1] where they have their own (non-Latin) character set. However, while the team discusses the requirement, [J] comes up with a suggestion. [J] has a somewhat heavy accent and he is sitting far away from the microphone so transcription is not available. As it happens, [A] was participating over a conference line, and could not hear well either so [B] repeats the solution (similarly as he described the problem itself).

Extract 29 Business issues - part 4

27. [B]: yea, so **[J] has eh sort of eh offered a solution here a creative solution** that you can have eh sort of a type to say that whatever item you're creating record you're creating does it belong to an issue or is it an opportunity
 eh that kind of scenario
28. [A]: mmmh yea that's pretty good eh
29. [J]: () ((5 secs))
30. [B]: mm, yeah I think maybe what we need to do is cr-
31. [C]: give options
32. [B]: give options yeah an' mock it up and give options that's that's
33. [C]: because what that [J]'s option would do is that it would reduce a number of text columns in one list applet
34. [A]: **yea yes thi that's really good actually what he yeah I agree** that would be actually good then we would have like the topic and then we would have one column which is like list of value column
35. [C]: yes
36. [A]: and that there you can actually define if this is an issue or an opportunity or what
 (for this) score

In the sequence preceding the description of the solution, [J] demonstrates not only creativity but also professional skill. He knows the design functionality from A to Z and can suggest a workaround for an issue that threatens the required functionality from being created. Although [A] formally sanctions the solution, [J] holds the reigns with his technical prowess, and the rest of the team (including [A]) recognize his identity as the person with the social control.

6.4.9 Example 15 (Meeting #7, Jan. 7, 2008)

As the team is designing a tool for a company that has global operations, the tool needs to accommodate very differing needs. This might feel self-evident and simple, but when the actual functionalities are designed, explaining the intricacies seems to be a challenge even among software engineers.

Extract 30 Geographical levels – part 1 (topic #7, Appendix 8)

1. [J]: another () which we have been
(application) we had agreed () in our system
we would create accounts at the lowest level of that country.
If it's [country_1], accounts will always be created at the district level
if it's [country_2], accounts will always be created at the (region) level,
in all other countries () (can be created at the country) level.
2. [A]: mm
3. [J]: because what we are doing is
in the lookups table we'll have immediate parent for that column
(so suppose it's coming) at a city level then we'll have (district)
mapping for that we'll we cannot map a city to a country
4. [A]: mm
5. [J]: in [country_1] (.) so those restrictions which we had in (the) system
6. [B]: **so, [J], let's maybe understand this correctly**
I I c- wha what if
7. [J]: mm
8. [B]: I create a account in [country_1] which is at country level
9. [J]: → **then figure should come at country level**
10. [B]: yes so
11. [J]: → **or should come at (region) level**
12. [B]: okay okay
13. [J]: so what we can (if the figure had come in) we can map it only to one
immediate parent
14. [B]: mmh
15. [J]: so if figure had come in at city level I cannot map it to a country level
16. [B]: m-okay okay

In the sequence above, we see how [J] (beginning from line 1) quite clearly lists the limitations in [Country_1] and [Country_2], and then continues to explain what can be done in all the rest of the countries. [B], however, already occupies a different topic space, i.e. his own island of understanding, where he creates an account in [Country_1] which according to him is on country level (in utterance beginning on line 1, [J] has explained that [Country_1] accounts are created at the district level). [B] dresses his question up as a hypothetical one ('what if...', lines 6 & 8). [J], following suit, answers on the same level (line 9, above), saying that the figure in that hypothetical case should also come at country level. [J] does not refer to reality where you do not have country level data for that particular country (where data only comes on regional or district level). [J] seems to try to fix his error on line 11 above but it is partially hidden under [B]'s previous utterance so it is possible that [B] does not hear it properly.

[B] continues questioning and probing [J] for answers in order to understand the functionality. [B] then tries to sum up his (and others') understanding by rephrasing (below, line 19) – only to find out that he has not hit the nail on the head (line 20, below).

Extract 31 Geographical levels - part 2

17. [B]: **so you're actually addressing the: uh lo:wer level requirements**
18. [J]: mmh

19. [B]: I mean you're not saying that you cannot have account in [country_1] at country level
you're saying (you'll not) have account below district level in [country_1] that's what you're saying
20. [J]: → nn:o we I'm saying we do (not actually have)
21. [K]: ()
22. [J]: account (above region) above district level in [country_1]
23. [B]: because (there are)
24. [J]: → again this is again uh understanding based on a sample data
25. [B]: okay let's see maybe
26. [J]: (there only da- data coming at) (region and district level)
27. [H]: (an-and) if we have them they will not have any [ABC] data tagged to (it)
28. [J]: mm
29. [H]: the data will be (tagged) ()

The source with which [J] identifies is 'sample data' (which legitimizes his understanding) as it sets the limitations on how the tool needs to be designed. In a sense, this situation is determinate but as [J] does not mention the sample data until closer to the end of the topic, [B] seems to have a hard time fathoming what [J] is saying. This gravely jeopardizes [B]'s ability to share in on the understanding. However, for the work to continue, it is crucial that they share the same topic space and occupy the same island of understanding. In the end, [H] and [J] are able to instruct [B] enough to achieve this.

6.5 Developing knowledge by tagging

This section focuses on further indeterminate situations, but now on the ones where the problematic situations are solved by tagging. Again, this does not mean that the actual issue might be solved altogether, but the team accomplishes some kind of a resolution by, for example, 'moving' the obstacle out the room to be handled elsewhere, between other people than themselves or by other people than the ones physically in the room.

6.5.1 Example 16 (Meeting #1, Nov. 28, 2007)

A very simple example of where the situation becomes indeterminate is when the participants do not understand the requirements that would enable them to act – quite literally.

Extract 32 Dashboard comments (topic #13, Appendix 2)

1. [C]: aa in a:r-one-dot-one dashboards which:: were asked to be removed in two-dot-one as per [person_M] e-mailed () have dashboard comments captured >okay<
now as part of a:: there are lot of places where you can capture-ee dashboard comments
(discussion on the item + searching for the requirement in the clarification items' list))
2. [C]: so:: but we would need to understand wher:e in the dashboard they need that comments box and all those things

3. [D]: mm h yea it's not in in the **cee-ar description** it's not detailed enough now
4. [H]: **they've just written** that ee dashboard comment for opportunity dashboard dashboard comments also to opportunity ()
5. [D]: okay then then yea I-I
6. [C]: actually **the problem with the cee-ar is that it's very cryptic** most of the time is like one-liner something like that and then **it's too ambiguous**
7. [A]: yea
8. [D]: okay I will note down that I will check this
9. [C]: okay

Here, the indeterminacy is quite obvious: the resources for identification and accountability are clear, but legitimacy and validity not so. The team cannot begin to validate the legitimacy of action as the entire requirement remains unclear to everybody in the meeting. Even with their shared technical and non-technical understanding, inadequate guidance leaves them nonplussed and unable to act.

The extract above is also rich with intertextual elements. As we can see, [Person_M] has sent *e-mail* on the topic of *dashboard comments* (line 1 onwards); there is further reference to a *CR description* that is not clear enough (line 3). From [H] (line 4) we learn what 'they' have written in the CR, and it is clearly way too ambiguous for the team to even begin to decipher (line 6). The e-mail and the CR description are the boundary objects (products of reification) that, even when combined with the teams' current knowledge of dashboard comments functionality in the tool, clearly fail to recontextualize the discursive content sufficiently enough for understanding. While the message (for whoever has sent it or put in the CR) has been clear for the sender, as she or he has had the contextual cues available including the usage environment, she or he has not managed to convey enough of that context in the e-mail or CR. In other words, the originator of the requirement has not been able to put enough of *local* immediate contextual resources in the message to allow for its *non-local* interpretation or reframing. The team cannot act on this CR until they receive new information from [D], who promises to check what the request is all about (line 8).

6.5.2 Example 17 (Meeting #2, Dec. 4, 2007)

The following extract is rather similar to the one described in section 6.4.2 (page 150) in that the team finds the actual requirement somewhat lacking in details.

Extract 33 Change in graphic? (topic #10, Appendix 3)

1. [B]: alright eh moving on eh to **[person_N]'s comment**
so there are e it looks like question to [J]
2. [J]: mm

3. [B]: graphic (needs) country state city eh number of store selling [brand] is
eh (not) useful information
4. [J]: mm () (comment) ()
5. [B]: yeah
6. [D]: **well I didn't e-even understand that** that
er **cee-ar-or requirement like hundred percent** so
is it clear because I've tried to update the use cases but I didn't know
how to (read) this one so
7. [A]: → yea he's eh what he's really meaning here is that
should we modify that specific applet
and remove for example the number of stores selling to
if you can show that there it is
yea there
8. [B]: () (very clear)
9. [A]: → no was it in the [stakeholder] [stakeholder] profile
10. [B]: ()
11. [A]: there you have it
12. [B]: yea
13. [D]: (and just remove it)
14. [A]: → so he-he's not seeing the benefits or the value for for this column also
15. [C]: for this full applet
16. [A]: → no: he's saying actually that the applet might be
useful that but we need to define again that wh-what actually we should
be
17. [C]: ()
18. [A]: info-information that we are looking after in here
19. [B]: this is eh from eh first release
this particular requirement
20. [A]: mm
21. [D]: mm
22. [B]: so maybe it is (.) to some extent area specific eh information
() (and it is not used for example in [country_1] or)
23. [A]: yea actually we should see that we need to see how they've been using
this in [TOOL] one point zero
24. [B]: yes yea exactly
25. [A]: → but w-**we need to leave this open** because i-it was more like an open
question from [person_N]'s end as well so
he didn't define that (.) what is replacing that column or or like that so
26. [B]: alright
27. [A]: just saying let me think about it
28. [C]: **okay it is for input or analysis**
29. [A]: **yea yea from the business**
30. [C]: (leave it) open

While [A] carefully explains what [person_N] had been driving at with his requirement (*comment* on line 1), he nevertheless says the requirement needs to be left open because it's more like an open question, something to be analyzed rather than implemented directly. It is not clear how [A] can understand the requirement so much better than the rest of the team (lines 14 & 16), but one possible answer to that could be that [A] has been discussing the requirement with [person_N] on some occasion previously. It seems that even [person_N], who submitted the request is not entirely sure of the legitimacy of action, and the resource for identification (possibly the user?) remains hazy. In the end, the team decides to leave the requirement to business for input or analysis, before anything is done to it.

Here the intertextual element, [Person_N]’s *comment*, leaves the team guessing despite [A]’s ability to recontextualize the question for the rest of the team. [A] is in the brokering role, and as such, he seems to manifest himself as a *roamer* who goes from one place to another, moving knowledge from one place to another. Otherwise, his ability to explain the question so thoroughly would be hard to explain.

6.5.3 Example 18 (Meeting #2, Dec. 4, 2007)

There are some occurrences in the meeting materials where the discussion is proceeding in quite a determinate manner until something upsets the determinacy. In the following extract, this determinacy (lines 4-7) is upset by the introduction of [person_M]’s thoughts on how the requirement should be implemented.

Extract 34 Growth rate percentage (topic #20, Appendix 3)

1. [A]: the growth rate yea so the growth rate percentage we should not have that column in there ins-instead we should calculate that automatically in the [System_2] [(so)
2. [C]: ()
3. [A]: we can actually calculate that from previou (or) from the total
4. [C]: → is that [Info0] growth rate or [Info1] growth rate
5. [A]: → [Info0]
6. [C]: → [Info0] ()
7. [A]: → [Info0]
8. (2)
9. [C]: okay what was (the question)
10. [B]: → because **[person_M]’s comment** suggest that we should have [Info1]
11. [A]: [person_M] is saying [Info1]?
12. [B]: yea
13. [A]: okay let’s check actually that cos but **maybe if [person_M] is saying that it’s [Info1]** it’s it’s calculated currently in the [Area_1] at least
14. [C]: ([Info1] is)
15. [B]: ()
16. [A]: okay (.) **let’s base it on [Info1]** the I guess it’s **[person_M] is probably right**

Until [person_M] was tagged, the situation was determinate, and the power stayed within the meeting (lines 4-7). [A] has a one word answer to the question of which figure should be used as a basis for calculating the percentage. He does not hesitate. However, after having learnt of [person_M]’s suggestion, [A] first thinks that this should be checked, but quickly decides that since [person_M] is saying so, then whatever he suggested earlier can be changed into [person_M]’s suggestion. From line 10 onwards, we can see how [B] and [A] jointly recontextualize what [Person_M] is saying. There is a bit of buffering and hedging in [A]’s words when he says that maybe [person_M] is right. Looking at the discursive moves, the situation first turns from determinate to indeterminate as there is a momentary confusion as to the legitimacy of action (line 13), but then it reverts back to determinate (albeit with a different

outcome/decision) once [A] settles on [person_M]'s suggestion (line 16). [Person_M], while also represented here as the one with whom [B] and [C] identify for a tactical relationship, is also helpful (once his message is recontextualized for local use) in providing understanding for how the requirement should be interpreted in terms of implementation in the product.

6.5.4 Example 19 (Meetings #2-#3, Dec. 4 + Dec. 10, 2007)

Multiple understandings that were carried on from one meeting to the next were not that frequent in the series of R&D meetings that comprise the materials. Or, at least, they did not surface in a manner that might have allowed their analysis. More typical examples were ones, such as the example in 6.1.1, where the interactants refer to a discussion that has taken place elsewhere and from where they have carried differing understandings with them. There was, however, one major incident where there were not only multiple understandings but they were in serious conflict with each other. Unfortunately for the project, the misunderstanding (in this case it could be called that) was carried forward to the offshore team for analysis who then headed for the wrong direction. The following example covers two meetings (December 4th and 10th) that took place fairly early in the series (second and third). For the full transcription of the discussion on this item in the December 4th meeting, see topic #9 in Appendix 3. The transcription of the discussion in the December 10th meeting, see topic #7 in Appendix 4.

The meeting on December 4th was the first one for [B], the project manager who had just come back from a holiday. The topic that the team is discussing is a requirement related to functionality showing shares of transactions in percentages (in a pie chart). The system should force the user to fill in a full and exact 100 percent by displaying an error message should the user fail to do so. The introduction of the requirement already shows some disparity in shared understandings.

Extract 35 Prolonged understandings – part 1 (Dec. 4, 2007)

1. [B]: Alright eh let's move on to next item
buying from and selling to applets automatic calculation rule,
percentage can () more than hundred in second period
so eh question is
2. [J]: → () what are the solutions like
how does system prevent it
y-you would want a button for user to check it
whether it's thirty percent less or no
3. [A]: mmh
4. [J]: or
5. (2)

6. [D]: **eeh (I don't know ()**
 7. [A]: ()
 8. [B]: () always when a new record is added for a es-tee-pee
 9. (2)
 10. [A]: yea, for example, when you're adding a new record it's
 11. [J]: () ()
 12. [D]: → it's difficult to have because we add one record at a time so it should
 then
 when you have all
 for that period th-then it should check, or
 13. [A]: wh-why is it actually difficult
 14. [D]: for the hal
 15. [A]: hey if you're adding now a new es-tee-pee
 16. [D]: yea
 17. [C]: mhm
 18. [A]: e like eitch ((h)) one two thousand and eight it would
 automatically be filled like one hundred percent
 19. [D]: yea so eh
 20. [A]: and then when you can like change that one
 and when you are adding a next one it's calculating automatically
 21. [D]: mm
 22. [A]: **or [how do you see it, what is possible?**

At the very beginning, we see how [J], who clearly has some responsibility over the implementation of the requirement, indicates that the requirement is far from clear (line 2). As one follows the discussion, it seems that it is not that clear for anybody else either (line 6). Despite saying that he does not know what the requirement is all about, [D] attempts to unravel the inherent complexities (line 12), but fails to convince [A]. This sequence, and what follows, is some of the best examples of two different communities-of-practice colliding. We can see how the knowledge and knowing 'sticks' although the interactants make their best in trying to convey their thoughts and to understand one another. [A], it seems, can afford to be pretty straightforward with the requirement as he does not understand how solving this might be a complicated matter for the software designer. After the initial sequence, we get a glimpse of how the team has tried to interpret the cryptic requirement:

Extract 36 Prolonged understandings – part 2 (Dec. 4, 2007)

23. [B]: **I think I would like to take one step back and eh give our
impression of requirement**
 24. [A]: mhm
 25. [B]: eh our impression is that you can not have more than hundred percent
 buying and selling
 26. [A]: yea, that's quite clear, yea
 27. [B]: so, every time you enter, system calculates for that es-tee-pee
 28. [A]: mhm

[B]'s wanting to clarify the rest of the team's understanding of the requirement is a clue for realizing that the requirement is so vague that it allows for multiple interpretations (line 25). It is also (possibly) entered by someone who has not thought the requirement through in a manner that would explain the usage scenario. Now, the team is forced into

a lot of guesswork, and the fact that their understanding of the design capabilities varies considerably does not help. [C] (lines 32, 41, 45, 47) is trying to establish some key ingredients to be added to the scenario:

Extract 37 Prolonged understandings - part 3 (Dec. 4, 2007)

29. [C]: but maybe the question would be that is it required to be exactly hundred, first question second is ee how we then achieve it
((some turns not visible here, see Appendix 3))
30. [C]: it is, **they forcing it to be hundred percent so**
I think we have to stick to that hundred percent at least
31. [A]: yea
32. [D]: but
33. [B]: **I don't I don't understand it** because then when suppose I enter () I make first entry, buying twenty-five percent from [company] wh-what does system do what does system validate?
34. [D]: nothing yet
35. [B]: nothing right, so exact hundred percent is always a typical but if I say twenty-five percent from [company], and hundred percent from other distributors then system says sorry you cannot buy hundred twenty-five percent
36. [A]: mm
37. [B]: it means so that it is something which I'm able to at least understand ()
38. [A]: **okay, that's that's something that we are requiring**
39. [C]: okay, let's make it as **upper limit is hundred percent**
40. [A]: yea
41. [D]: yea
42. [B]: yes yes for for a es-tee-pee
((some turns omitted, see Appendix 3))
43. [C]: **okay, I think that we have clarified it now**
44. [A]: mm
45. [C]: **It cannot exceed hundred percent let's put that as a ()**
46. Ul: () for an es-tee-pee
47. [C]: for an es-tee-pee, yea
48. [J]: ()
49. [C]: **can we (.) also close this then**
so the limitation here would be that somebody can actually put in just sixty percent as buying in

The unclarity of the requirement becomes more and more obvious, and it seems that [A] is improvising (line 38). Instead of the system forcing an exact one hundred, it should ensure that the upper limit of one hundred is maintained. The discussion, however, continues as [A] indicates that in case a user enters sixty percent, the system should produce a pie chart that displays a hundred percent pie – with a forty percent unknown or unspecified – and the discussion goes on despite [C]'s efforts to end the discussion on the topic (line 49). Failing in closing the topic, [C] then pushes the discussion topic off the table by suggesting the team analyzes the requirement offline (line 50 & 55).

Extract 38 Prolonged understandings - part 4 (Dec. 4, 2007)

50. [C]: **okay let's analyze it and get back**
((some turns omitted, see appendix))

51. [C]: put the action point on
52. [B]: us
53. [C]: us (.) good
(some turns omitted, see Appendix 3))
54. Offshore: yes, [C], we are here
55. [C]: **an analysis point for the [SYSTEM_1] team**
if, if percentage is provided for buying from is not hundred percent can
on the reporting side we
show that what is the percentages and the the remaining part as
not known or something like that so if like buying from is only sixty
percent which has been provided for

Now, it seems that by asking for the representation or display on a pie chart (obviously some kind of report, see Appendix 3, topic #9), [A] inadvertently pushes the solution to the [System_1] side, or at least, that seems to be [C]'s interpretation (line 55) as he asks the people participating over the conference line (Offshore) to investigate the matter and see if and how the requirement is technically possible. However, although the team spent some eight minutes discussing the requirement, it never became really obvious what the usage scenario would be – other than that the user should not enter percentage values that, added together, would equal more than one hundred percent.

In the next meeting on December 10th, we find out that the requirement has, indeed, changed into a slightly different one, this time – building a pie chart. The team, however, has figured out that the user should be notified (lines 3 & 5).

Extract 39 Prolonged understandings - part 5 (Dec. 10, 2007)

1. [B]: moving on to next item
2. [A]: yea
3. [B]: analyse possibility of building a pie chart for channel landscape eh yea
context here is that eh what happens if user is eh not eh capturing
buying or selling pattern that sums up to hundred percent in [Info0]
requirement what we eh understood eh was that system should
automatically eh complete the pie chart
eh identifying a segment as un-unspecified we are investigating it it
seems eh difficult in the way we thought **we would like to achieve it**
eh however now we are: exploring possibility of showing a error
message to the user
4. [D]: mm
5. [B]: which means that if a user is not capturing eh buying or selling percent
which sums totals up to hundred percent then **on [SYSTEM_1] side**
the system can prompt user that the eh this is not summing up to
hundred percent eh
6. [A]: mm
7. [B]: please update it now here again we have two possibilities one is to
build the pie chart anyhow e by giving a warning
8. [D]: mm
9. [B]: to user that your pie chart is not based on hundred percent totals but
this is the break-up
or only show error and not show pie chart until user has updated this is
something that we are exploring at this point in time eh

[B] then continues to ask [A] if he has a preference among the two approaches. [A] clearly has not paid any attention to the fact that [B] is talking about [System_1], which is the one a user has no direct access to, and it is not until [D] point out that the solution is not optimal (lines 10 & 12) for the user that [A] wakes up (line 14):

Extract 40 Prolonged understandings - part 6 (Dec. 10, 2007)

- 10. [D]: yea and **it's on on [SYSTEM_1] side** not not on o-operational side so
- 11. [B]: yes
- 12. [D]: yea so I **think it's not the optimal** but if it's the only way then then we have to go this way
- 13. [B]: yea
- 14. [A]: **wh-what do you mean that it's in [SYSTEM_1] side not in the [SYSTEM_2]?**
(some turns omitted, see Appendix 4))
- 15. [A]: **is there any other way to do it in the [SYSTEM_2] side** actually that it's giving there the notification when you are filling in the information

After [A]'s question, [B] launches into a lengthy explanation of how they thought the usage scenario might go, and what the rationale was for the suggested approach:

Extract 41 Prolonged understandings - part 7 (Dec. 10, 2007)

- 16. [B]: so so it it was that at the time of review it becomes important that now do we have hundred percent break-up available and that's when we thought maybe a error message is only good enough here
so what **we are assuming that eh what users are expected to submit is a hundred percent break-up and therefore they know it e: only in exceptional cases wherein by mistake they have probably either missed out some value or something like that**
that's () is required so that's that's what our thinking was when we thought about this solution
- 17. [D]: mmm
- 18. [F]: **but with this one it might be that the user doesn't even notice that he is missing the hundred since he (might) not necessary go to the [SYSTEM_1] side at all**
- 19. [A]: mm exactly
- 20. [D]: yea this then somebody else need to communicate that please correct this and
- 21. [A]: sorry, I couldn't hear you
- 22. [D]: yea I then somebody else has to communicate to the account managers that peas-please correct this one so it's maybeh this is not the op-optimal now so err sh-should you still try to find another solution or [A] how do you want to proceed in this one?
- 23. [A]: **yea definitely not going to do that S-[SYSTEM_1] thing**
- 24. [D]: okay.
- 25. [A]: yea
- 26. [D]: have you thought of everything or is there still still some possibility
- 27. [B]: → **yea I think until until last discussion we werree mhm stuck with [SYSTEM_2] and then we decided to find the solution on [SYSTEM_1] side let let system fill the gap that () resolution last time was can [SYSTEM_1] handle it somehow and that's the ()**
- 28. [D]: → **mmh I don't recall that** at all I thinkhh I at least I I thought it would be on the operational side but
- 29. [A]: → **yea, definitely that's something that we have been communicating all the time**
- 30. [B]: → **no, that's documented in my memo** that's what we agreed

- 31. [A]: that the rule needs to be there when you're filling in the numbers so
- 32. [D]: hmh
- 33. [A]: because for yea definitely in the [SYSTEM_2] side
 because there there is the like error error happening

As is obvious, the team has been designing a solution that would only operate on [System_1] side without considering the operational realities – as pointed out by [F] on line 18. [A] also sees the impossibility and announces that a [System_1] solution is out of the question (line 23). On line 27, we see how [B] refers to the previous discussion and insists that the decision was to find a solution on the [System_1] side. Given the evidence from the discussion on December 4th, it is not surprising that neither [D] nor [A] recall any such decision. The turn to [System_1] was very subtle, and, as it seems, definitely not intentional on [A]'s side. Looking at the memo [D] refers to on line 30, one can see that the decision was to “analyse possibility of building a pie chart” without any reference to the part of the system where this analysis would take place.

Both [B] and [C] are clearly upset about the heavy opposition and are trying to challenge [A] and [D]:

Extract 42 Prolonged understandings - part 8 (Dec. 10, 2007)

- 34. [B]: ye-actually I mean **unfortunately we are going back to this discussion** we had last time
- 35. [C]: yea, I know
- 36. [B]: **when you said let [SYSTEM_1] handle it,**
- 37. [D]: nnhh
- 38. [B]: (we documented) ()
- 39. [C]: **let's let's maybe refresh everybody's mind**
- 40. [A]: o, no no
- 41. [C]: because we discussed this but I think we we have forgotten that
 over period of time so what happens is you're doing a multiple row
 entry
- 42. [D]: mm

This is an interesting part of the discussion because one can see how strongly [B] thinks that [A] has actually said that [System_1] should handle the issue. In fact, [A] has never said anything to this effect (at least, based on meeting materials), and it seems that [B] and [C] themselves have concluded that the issue should be taken to that side because of the pie chart display part. Despite [B]'s protests (line 34 above), the discussion veers back to what the requirement actually is; [A] has a hard time understanding why the requirement should be so difficult (lines 43 & 45 below):

Extract 43 Prolonged understandings - part 9 (Dec. 10, 2007)

- 43. [A]: but I don'th I **don't see what is the big problem** or actually over here
 because you are actually keying in
 like four figures

- and it should not be that difficult to
key in four figures which which the sum is
one hundred percent and if there is an error message
I guess it's quite easy to calculate that
as well, while you are doing the error or
44. [C]: mm, from system point of view you mean to say, [A]?
45. [A]: so so what I'm what I'm meaning that
at this solution that you are actually proposing
i-**it's not that hard** actually e it's not that
you're saying that there is a usability issue over there but I-I don't think
that there is actually that it sums up automatically that those numbers
and that it's it's not letting you continue before you have that exact one
hundred percent
((some moves omitted, see appendix))
46. [D]: so the lo-logic would be that the end-user would always put like a-
47. [C]: hundred percent
48. [D]: all, yea, a hundred percent, so he can't just add one row of twenty five
percent then come back later and put seventy five **he has to do it all at
one one session**
49. [A]: but but **I believe that that's actually the idea over here**
50. [D]: yea
51. [A]: **that's what they are required to do in the [xx_plan] template in
[acronym] as well...** so it needs needs to match exactly one hundred
percent
52. [C]: okay so let's let's think about it again on the technical front and get
back to you so
53. [A]: yea, that's good

In the sequence above, we are again witnessing the clash between two different communities. In the case above, [A] does not have the deep insight into the intricacies of software development, but clearly the software developers seem to be thinking that the tool users' processes are a lot more complicated than they in reality are. This much becomes evident with [A] indicating (line 49) that the users' work actually can be rather simple at times.

Looking at the two discussions from December 4th and 10th, one can see that in the first part, the requirement is all but clear for most of the participants. The team has tried to make some interpretations but it seems that they have not exactly caught the essence. Towards the end of discussion on December 4th, the team, with [C] leading them, takes the solution to a crucially wrong direction. There is never any summary as to what the requirement actually is and [A] and [D] both clearly miss it when [C] explains the offshore people ([System_1] team) what they should analyze. So instead of closing the discussion on the item, the team might have avoided further problems by discussing the initial challenge at least to the point that they understand what the requirement is. As it is, the decision to move the topic offline comes too early, and a misguided team (offshore) starts to work.

6.5.5 Example 20 (Meeting #3, Dec. 10, 2007)

While power is an inherent part of all communication, there are times when the kind of power that would be needed is simply absent in a very palpable manner: the participants are quite clear about their resources for identification (in the following example: business) and to whom they are performing (accountability to business), but they cannot verify the legitimacy of action in the absence of the resource of identification – or, their opinion. The question is laid out towards the beginning of discussion, on lines 6 and 8.

Extract 44 Campaign functionality - part 1 (topic #13, Appendix 4)

1. [B]: I think then let's move on to next item eh this is about eh account plan campaigns and opportunity campaigns
account managers eh need to have all campaign view eh as read only (that's clear these) opportunities campaigns still needs to be addressed
so I'll maybe eh: ask [J] and [F] to sort of refresh the the what has been discussed () with them but eh
2. [J]: → we have multiple tiers of campaigns now (in the new new design)
3. [B]: yes yes
4. [J]: → so and then we (can) select campaigns and (the) account plan for accounts and we select campaigns for opportunities
5. [B]: yes
6. [J]: → so **do we need any filters to filter (these) sort of campaigns** when user (uses these) campaigns here or (all the campaigns) available for selections
7. [B]: okay
8. [J]: → so account plan (again to understand) the users can select any type of campaign but for opportunities **do we need to filter out some type of campaigns** or all campaigns are available to (users unrestricted)
9. [B]: okay yea I think good point because eh this campaign discussion is now again open () regarding account campaigns should be confidential and limited to account by that token then trade marketing campaign you can not select as a end user
10. [C]: that was a response from who?
11. [B]: → eh there have been some reviews seems with [person_S] and eh:
12. [C]: [person_Q]
13. [B]: → [person_Q] yeah so anyway there still is concern about can account level campaigns be shared across accounts that we discuss anyway but [F] do we know of this opportunity: ee campaigns any preference from [country_1] ()
14. [F]: we had that discussion
15. [D]: → we had a meeting with [person_T] but we didn't discuss this so I think eh we have to wait until Wednesday or or then eh so you can ask [person_U] that eh does there have to be any filter or or then then I can try to call [person_T] tomorrow
16. [C]: (primarily) [person_T] didn't suggest anything different from what was the existing
17. [B]: I-I was just thinking yea
18. [C]: so at least from two-dot-zero point of view she was okay with the campaign business
19. [D]: yeah

On [B]'s request (line 1 onwards), [J] begins to relay the development of the campaign functionality, in effect recontextualizing the work he and the rest of the team involved have done (lines 2, 4, 6, 8). While doing this, he also introduces the 'snag', i.e. what the

team needs resolved before it can continue working on the functionality: “do we need to filter out some type of campaigns” (twice, on lines 6 & 8).

It appears there have been multiple discussions on the topic with the business representatives, and we see a review with [Person_S] and [Person_Q] (lines 11-13) as well as a discussion (line 14) or a meeting (line 15) that has taken place between [F], [D], and [Person_T] being recontextualized. While it seems that the reviews [B] mentions (line 11) have dealt with the topic, but clearly their decision power has not been enough to bring the topic to a close. [D], although having had a meeting with [Person_T], has not discussed this particular topic with her. The discussion sequence above is a vivid example of the kind of mesh of matrices that the participants in meetings weave: they are indexing the organization and supplying communicative contexts, i.e. different context spaces by doing so.

As the team discusses the feature further, they decide that they will document all different kinds of campaigns and suggest an implementation for the whole campaign functionality:

Extract 45 Campaign functionality - part 2

20. [D]: okay so if I schedule a short meeting with [person_S] tomorrow an
 because he has went through this many time an and also with
 [person_Q] so (.5) .hh can then hhave a suggestion for for a
 wednesday's meeting
21. [C]: good idea
22. [A]: yea

Despite their apparent lack of power as regards decisions, the team figures out a way to speed up the decision process by devising a suggestion beforehand. So while the lack of decision power prevents them from acting, it only prevents their ability to act on the tool itself. Hence, they act on the decision process and try to make it as smooth as possible.

6.5.6 Example 21 (Meeting #3, Dec. 10, 2007)

One discussion item, a certain process that in this study is dubbed the [ACRONYM] process in the transcripts, is discussed in all but three meetings (Nov. 28; Dec. 18; Jan. 3). From the design point of view, it is a particularly long and multi-leveled process that requires careful design so that it is logical and intuitive for all user groups (multiple). The development of this process in the tool is largely on the shoulders of [B], who

presents the current status of the process development in almost all meetings (bar the three mentioned above).

In the meeting on December 10, 2007, the first, approximately seven minutes have been spent in explaining the [ACRONYM] process based on a process flow prepared by [D]. [B] explains the complexities and complications they are still facing in trying to understand and figure out what is it exactly that business wants from the process.

The discussion revolves around [ACRONYM] items that have been added to certain plans in different geographical areas. [ACRONYM]s (measurements of sorts) can be added to plans and their weights can be adjusted before they are reviewed and approved. Who reviews and approves them seems to be clear by this time, but a big question as to who can revise [ACRONYM]s during a short-term-period if needed still remains, and what is the related process and is it a standard requirement. It seems that the guidance they have received is conflicting (by this time, [D] has left the meeting and is participating over the conference bridge from his car):

Extract 46 [ACRONYM] process (topic #31, Appendix 4)

1. [D]: → **yea I could comment from eh from [person_M]'s side he said that only**
only requirement was that country managers should be able to edit the targets and weights but not account managers but **but then I saw [A]'s mail about the account managers should be able to edit** after they are approved so maybe you can, [A], eh explain or e wh-why is that needed if they are already approved so is there a new new (like) a loop or a new new round of approval(s) needed (and eh) is this (some) how they're doing business at the moment or ()
2. [A]: yea I believe that this is because there are differences between [Area_3] and [Area_1] for example so so in [Area_3] there are account managers which actually can do it at the moment kind of and they are doing some of the jobs or the same stuff that country managers are doing in [Area_1] they are doing it in [Area_3] in in account manager level (.) so
but really yeah (I) understand [person_M]'s [person_M]'s point over here but
3. [C]: → **I think even [person_Q] commented** that eh the account manager should not be allowed to change anything once he submits so it should become read-only
both eh targets and weightages yea
4. [B]: weights
5. [A]: yea but then then we should have like the first first solution that we are having over there currently which is there's not much difference into that then
6. [B]: but basically we are saying that-e revision is a practice which is original: question from [C]
7. [A]: mm but e tha- yeah
8. [C]: so so d-
9. [A]: → **it's not like that like actually you are saying** how is going in in [Area_3] at the moment so
not like directly
10. [C]: so

11. [A]: but yea we can suggest
that if there is revision needed then country manager is is o-or line
manager
those are the only persons that can do it
12. [C]: I think it makes more sense
13. [A]: is that is that what you are suggesting as well
14. [B]: () either we need another sort of (request) () and approval ()
15. [C]: yea I think that can be a good suggestion because then the: approval
process can be much faster because he can first update it and then
straight away approve it
16. [A]: mm yea yea let's do it like that I believe
it would be much better
17. [B]: okay aah
18. [C]: okay
19. [B]: so only supervisors can revise
20. [C]: revise
21. [A]: yea

At this stage, there is considerable confusion among the team as to the social control: should they believe [A] or [person_M] as it seems that the guidance they are giving is conflicting and both are instances who can legitimize their action in the situation. Here, however, [A] with his understanding of [person_M]'s special circumstances in [Area_1] can explain how the situation might be different in that particular area and how it may affect the design of the tool. [A] takes a creative route here and decides they can suggest a solution for business, which entails stricter rules for [Area_3] as compared with earlier, and accommodation to the needs posed by [Area_1].

In this sequence, we have recontextualizations of circumstances in different geographical areas as well as the intertextual element of [A]'s e-mail (line 1 onwards). In recontextualizing the special circumstances in [Area_1] and by contrasting that with the situation in other areas, [A] literally uses rather global resources for local interpretation. By using his special understanding and expertise of the situation globally, he can reframe the situation in a manner that helps others see it in a more coherent manner.

6.5.7 Example 22 (Meeting #6, Jan. 3, 2008)

Occasionally, as the team moves on with the development and gains more understanding as to how a certain feature should really work in the tool, they need to reflect on what has already been decided. This means that they seek legitimacy for their actions from their own previous decisions.

Extract 47 Drill-down (topic #9, part 4, Appendix 7)

1. [A]: but then so we're not gonna have this drill-down functionality over here
2. [H]: mm: no

3. [B]: yea drill-down **actually sorry I think maybe I distracted the group quite some time back we decided not to have dri- drill-down** reason being drill-down always focuses on a period and then **your observation** was that there should be possibility to see other periods relatively
uh.hh what I mean here is that if when we were still in drill-down kind of solution a drill-down on Q-one only was (exploring into) Q-one months and **then you observed saying** that uh well e-one should always be able to see other: months also it should not always
4. [A]: yea ()

Here, [B] identifies [A] as the source of social control and refers to their earlier discussion on the topic. He carefully recounts [A]’s own wishes to justify the legitimacy of their choices as to the functionality related to reports (line 3 onwards, in bold). [B]’s words, “quite some time back”, recontextualize the meeting that took place on December 18, 2007, where the team decided that instead of drill-down to a particular quarter, the user could just toggle from quarter to monthly level which means that the view explodes to allow for more detail. As the discussion continues, [K] brings up yet another problem – drilling down to weekly level. Turns out that this is similar to Extract 28 (p. 171) in that a participant envisions functionality for which there is no requirement; once again, it is not clear where this idea stems from.

Extract 48 Weekly level drill-down

5. [K]: yea **there is one more limitation on this** (is)
6. [A]: mhm
7. [K]: when you’re () you’re enabling an quarter, quarter will t- go to period
8. [A]: mm
9. [K]: but still (our) we have some selling data at weekly level
10. [A]: mm
11. [K]: **so the problem happens is still it will enable fro- the users that there is a still drill-down from period to week**
12. [A]: mm
13. [H]: yea
14. [A]: **but I don’ know if there is that kind of requirement**

After [B] verifies that there is no such requirement, [K]’s problem and limitation is dismissed without further discussion; [K] cannot legitimize the feature as the requirement does not exist. As in the example in Extract 28, it is not obvious as to why [K] thinks a user needs to drill down to weekly level. This does not become obvious in discussions elsewhere either. The only reason one can think of is the commonly recognized engineering tendency of thinking of add-ons that do not necessarily add value from the user’s perspective. One of Orlikowski’s (2002 p. 264) interviewees also identified this tendency and said “everybody wants to [...] put his own little Cadillac in the code.”

All in all, discussion on year-on-year reports in this meeting lasts a bit more than twenty minutes. Towards the end of the discussion, the team is pondering what to include in reporting for a quarter that has not finished, yet. The first three lines reveal that there is both discrepancies in understandings as well as lack of knowledge.

Extract 49 LE in quarterly report

15. [A]: → we should show the el-ees for that quarter
16. [H]: → we should not show the net sales actuals at all for that quarter
even if we have the figure for the first month?
17. [A]: → I don' know
18. [H]: because if you remember **[person_M] had this observation** for one of
the reports in one-dot-zero
19. [K]: internal market share
20. [H]: the internal market share where **he was saying that it should take the
actual available and the el-ees and then sum of them and that's
what our understanding** (is for this also)
21. [A]: yes yes in those reports
22. [H]: so
23. [J]: because **[ABC]** does it that way
24. [K]: [ABC] does
25. [H]: yes [ABC] does
26. [J]: () [ABC] shows it (cumulative)
27. [A]: mm m
28. [B]: and cumulative is actual plus el-ee
29. [H]: yea whatever actual is available and then whatever el-ee ()
(*group discussion options that might solve the problem, [A] is quiet -
~25 seconds not transcribed*)
30. [A]: yea I-I need to think about this
31. [B]: yea okay
32. [A]: yea **I can go it through with (.) some other people**

The absence of user expertise (and with it, strategic power) is quite palpable here; the software engineers [H], [J], and [K] attempt to tag both [person_M] and [ABC] (a team as well as a data source) here as the source of control, but fail to justify their choice. [A], for his part, seems to see that there probably is some common way of handling a case like this, and tags the tactical resource of “some other people”. This deictic expression also works as a ‘discursive closure’ (Kuhn, Jackson 2008) which works by way of closing the discussion but also suppresses the possibility to act and silences the further questioning of possible responses – at least, for now.

6.5.8 Example 23 (Meeting #7, Jan. 7, 2008)

As already explained in section 6.5.6 (p. 186), the [ACRONYM] process is almost like a standard item in each meeting. The process is a cause for constant worry as it seems to be somewhat unclear from the beginning to the end (see also section 6.5.10). Business users’ needs, however, do have an impact. In the following, the team discusses the revision part of the process and hits a ‘snag’.

Extract 50 [ACRONYM] process (topic #17, Appendix 8)

1. [B]: beyond this, there are two possibilities
one is account managers are updating actuals
the supervisor is sort of monitoring and reviewing
on timely basis at some point in time if we feel that we need to change
[ACRONYM]s then the it goes to the revise process
which is again just a button as you can see here
the the revise button will change status fo- from approved to
waiting approval again
so this again it's it's again like defining and approving
so that's only change so that's ee here I've shown the parallel activity
basically
2. [A]: → **so do we really need that revise [ACRONYM] button**
3. [B]: aa a-we uh well uh
this has been uh sort of stated direction for the requirement that there
may be a need to change [ACRONYM]s for any reason
4. [A]: later on yeah
5. [B]: err
6. [C]: → **I think [person_M] was also pretty insist- y'know insistent on
having this capability**
7. [B]: yes yes yes yes
8. [B]: → **yes it's like don't freeze it forever**
9. [A]: yea but it it means but that means then that
that will be used for example uh when [ACRONYM]s are already
approved and maybe
in one month or so the country manager wants to revise the
[ACRONYM]s then
10. [C]: he can use it
11. [B]: yes
12. [A]: yea it's alright yea

Once [A] questions the need for the revise button above (line 2), [B] seems to be quite hesitant and addresses [A]'s question with quite a bit of hedging (*well, uh, sort of*). [C], however, is more confident and introduces [person_M] into the discussion – thus indexing him as the source of identification and the one who legitimizes the solution. Not only is [Person_M] the source for legitimization of this feature in the tool but [C] also forces this connection by characterizing [Person_M]'s state of mind when he was laying out the requirement. Here, it seems that [A] finds it easier to accept the solution once he has voiced the understanding as to what the functionality entails in real life.

6.5.9 Example 24 (Meeting #8, Jan. 16, 2008)

The organizational change is one of the causes for developing a new version of the tool that is used in the organization. Although the new organization has been effective as of January 1, there are still details that need tuning as the remnants of the old organization need to be cleaned in the new version of the tool, too. This example could, perhaps, be categorized as cooperative alignment, but because of the crucial role played by a slide set (and multiple references to it), I've decided to discuss it within the category of tagging.

In the following extract, the team is discussing the organizational structure and how it should appear in the tool. As they have worked on the structure based on a model they have received, they have noticed two levels of the same kind of structure, called ‘cluster.’

Extract 51 Two instances of cluster - part 1 (topic #5, Appendix 9)

1. [B]: [J] I think we'll take this uh organation (position) related discussion now .hh
uh you shared with us the [ABC] structure some time back and we (are) now started looking into it
uh first observation [J] has made is that there is uh I can maybeh keep it open
2. [J]: mm
3. [B]: hh which was it
4. [J]: () this one
5. [B]: this () .hh uh okay **the point of discussion uh [A] here is that we have understanding of the organation structure model**
6. [A]: mm
7. [B]: so global then channel then cluster and so forth
8. [A]: mm
9. [B]: and **when we are trying to apply that model here what we observed this cluster has kind of: two instances**
10. [A]: mm
11. [B]: there is a cluster total
and then there are cluste:rs
12. [A]: mm
13. [B]: these clusters also map with the: presentation that we used to discuss in early days of conceping .hh uh and if you look at these ()
14. [A]: ((clearing his throat))
15. [B]: these are like (equal end of) area
I'm not trying to say that this is area but this is like markets [area_2]
it is written as cluster total .hh

Here, the confusion is brought on by the tool itself that contains conflicting information. [B] explains that they cannot have two levels of the same instance, but one or the other should be renamed so that it can be properly used. [A]’s response is to say that the other cluster level will not be used. The observation the team has made leads [A] to discover that there is a problem in the way the structure is modeled in the example [B] is showing.

Extract 52 Two instances of cluster - part 2

16. [A]: **there is kind of a problem here**
17. [B]: yeah?
18. [A]: **which I haven't recognized earlier**
19. [B]: (yeh)
20. [J]: ()
21. [J]: ()
22. [A]: because there is e-exception k- kind of because
((*[A] gets up from his chair and walks closer the screen*))
(we can open this because we can discuss it with this context)
23. [J]: ()
24. [B]: ()
25. [A]: uh in in uh distribution east actually
26. [B]: mm
27. [A]: this is one cluster the greater [country_1]

28. [B]: yes
 29. [A]: and these are the sales units uh [country_3] and [country_1] under this greater [country_1] cluster
 30. [B]: okay
 31. [H]: (so these are not)
 32. [A]: so this is actually sales unit not a cluster
 33. [B]: (oh and [area_4] is a)
 34. [A]: this is sales unit
 35. [B]: okay [country_1] is
 36. [A]: and [area_4] actually doesn't belong under this one
I don't know if this is actually correct

[A]'s comments on lines 16 and 18 is the kind typically not welcomed as it breaks the topic space, and at the same time, introduces a new problematic situation. As the team discusses [A]'s comment, [B] notes that "but this has our element of analysis and sometimes we may be wrong in analysis." The discussion continues on what is and what is not a cluster until they decide to see the latest version of the structure they have in a slide set that [J] sends to [B] via e-mail in the meeting. [B] then projects the slides to the screen and [A] can explain what the structure is.

Extract 53 Two instances of cluster - part 3

37. [A]: **so these are the clusters**
 38. [J]: () it's the one which we have
 39. [B]: this we have discussed so often yea
 40. [A]: () actually so that is that is something that you need to use these are the clusters ((*showing with his hand at the screen*)) plus there should be actually [area_6] ()
 41. [H]: ()
 42. [A]: yea and these two () and these are the sales units
 43. [H]: → **but eh in that case the next ppt that eh is showing another level if you go to the next one**
 44. [A]: yes but d-don't remind like this one
 45. [H]: okay
 46. [A]: this is [org_name] organization
 47. [H]: okay
 48. [A]: and it's it's organized a bit differently
 49. [H]: okay
 50. [A]: so this is like the sales unit structure is something that we need to (follow here)

The team is obviously looking at a slide set that contains multiple pages. During the meeting, [J] sends [B] a slide set on which [J] comments: "so ([A]) is this structure still changing or the one the file which we (.) *we got it like three weeks back* or (something) (.) will it change (or)". [A]'s response is that the structure has not changed. So, the team has had the correct structure available for three weeks, but it is apparent that they have made some interpretations of it that are not correct. Based on the material (see Appendix 9), it becomes clear that the set contains multiple slides and that there have been multiple versions of it: first [J] tells [B] to *open the latest* after which [K] tells [B] to go to *slide four*. Turns out that the slide set possibly contains multiple views to the

organization as at the very end of the discussion on the item, [H] (above, line 44) notes that the next slide (the one after the ‘correct’ slide) shows another level of the organization. The team then learns from [A] that this particular slide shows the structure of another organization which is something that should not be followed.

This extract is interesting because of the fact that here we have knowledge (the structure of the new organization) that someone has rendered to the form of information (a slide set that can be sent around in e-mail, shown, and printed). However, as a piece of intertextual information, it fails because it is too ambiguous, has unnecessary and obsolete information and lacks the detailed background information. Because of all this, it is quite difficult to assimilate. [A] obviously has the knowledge and the understanding it entails, but lacking the same background information, the team has not been able to come to the same understanding based on the slide set only. The slide set is a reified product that nevertheless fails as a boundary object, because [A], the broker (roamer) has not been available before to recontextualize the information in the slide set in a correct manner.

6.5.10 Example 25 (Meeting #9, Jan. 25, 2008)

The recurring topic, [ACRONYM] process (see also sections 6.4.1, 6.5.6, and 6.5.8) pops up again in the last meeting in the series.

The team has decided that the process will use only one view in the tool in a certain update part; [B] points this out by saying “this is what we e:h sort of agreed eh (.) that we will not have multiple views (.) this was last time [...] so we basically have one view rather than multiple views past current and [...] so this is current understanding.” [A] still asks [B] to once more go through the reasoning for why would they need multiple views. It seems that [A] wants to thoroughly understand the functionality and the related possible restrictions (line 4).

Extract 54 [ACRONYM] process, part 1 (topic #12, Appendix 10)

1. [B]: .hhh **in order that we take kind of decision making out of users**
hand we thought we'll
((lengthy explanation, see Appendix))
 .h that was the: thing but then it obviously: has downside
2. [A]: yes
3. [B]: which is that it complicates uh let's say training (and)
4. [A]: → it may may be complicat- yeah
so the question is that is there an- any restrictions
to have only one view then

- is there something that you are not able to do?
 ((two moves removed))
5. [B]: **user will need to be aware of which records to select**
 as simple as that
6. [A]: → **so meaning that uh**
 needs to know that which es-tee-pee
 he's planning
 (([B] explains))
7. [A]: **so do you think that it's it's it might be like**
handled in a trainings
8. [B]: **yes then it's a training issue** if w- if we really sort of: rule this solution
 out
9. [A]: mm

Here, [B] is evoking an image of a user (starting from line 1), who might be so busy and distracted that s/he might choose the wrong time period when doing her/his plan (not exactly a professional at her/his work). By designing a more sophisticated tool, the user would be rid of these considerations. [B] also adds that the multiple views' solution brings complications; [A] agrees and asks if there are any restrictions for having only one view. The issue of having either one or multiple views for this solution has been discussed (and decided) already earlier, but for some reason, [A] still wants to hear the reasoning for having the multiple views' solution; [B] uses users to legitimize the solution (strong identification and accountability with the user), and his lengthy explanation sounds oddly more like a sales pitch rather than justification for a more complicated solution. All along the way, [A] keeps making sure that he has the same understanding (lines 4 & 6) and voices his understanding. It seems [A] wants to be sure that the decision of having only one view (instead of a possibly costly multiple view solution) is feasible, and asks [B] if the user could be guided to pay attention to which time period s/he chooses, could be tackled by training users (line 7), [B] – instead of giving an answer one might expect – says that “yes then it’s a training issue” (line 8). It is the *then* in the answer that one does not expect; what follows “if we really want to rule this solution” out confirms the impression that [B] votes for the more complicated solution.

However, later in the discussion one actually realizes that [B]’s recommendation (see below, line 2) is to have only one view as it makes the tool functionality (and its implementation) easy and simple.

Still later on in the discussion, the reason why [A] goes back to the idea of having three views starts to unravel (line 12). While this requirement is not an absolute must, business has now decided that they would want to have it anyway already. It seems that the business side has changed their mind and [A] serves as a *broker*, mediating the

wishes from business to the team. At the same time, he is working as a sort of a negotiator towards business as we can see later on.

Extract 55 [ACRONYM] process, part 2

1. [A]: so would I'm still thinking that would actually that help would that be like more more usable solution to have that kind of next current
2. [B]: → you mean three views? if you will (have) take our recommendation I will say no .hh
3. [A]: no? no three views
4. [B]: yea it's it's better solution to have one view
5. [A]: yea
6. [R]: actually three views increases the configuration and (some) ()
7. [B]: → **the three views we are also resulting because of the approval process**
if you take the approval process out
8. [R]: yea
9. [B]: the need of three views actually goes away
the reason was
10. [A]: yea the approval
11. [B]: yes
12. [A]: → let's talk about [that because now **now the business actually is saying** that
(let's have that)
13. [B]: (let's have that)
14. [A]: yea there is not that clear reason to have the approval process because this is not basis for salary
15. [B]: yes
16. [A]: so so in that sense but in the future it might be the case that [tool] is used for setting up the targets and then that's like linked (to [xx]) ()
planning) so in that sense we already now need to have that kind of mode mode that there is approval process in place
that they will learn all the users will learn for that
17. [B]: for approval
18. [A]: for approval process
19. [B]: okay so **what is the business call like have develop approval functionality already now?**
20. [A]: yes
21. [B]: or? okay
22. Someone: oh
23. [B]: if approval is required then three views
(*general chuckling*)

We learn that while business has not made the approval process an absolute requirement, they want to have it for future purposes. It turns out (as explained by [B], line 24 onwards) that this might be very confusing for users. Again, [B] evokes the image of confused users and indicates that when working on this tool, he and the team are accountable to future users. The team continues discussing various options, but does not seem to (at least in this meeting) come up with a solution that would include the approval process in a single view. Frustration is clearly running high as [B] bursts out talking (line 25). This is where we learn that [B] feels he has had no visibility to the full process and has been designing it by using his/their imagination.

Extract 56 [ACRONYM] process, part 3

24. [B]: because **for users with approval it will be very confusing**
at a given point in time you are planning so one set is new
and this is you you will you are about to submit the others that you need
to update so up for the status of that is approved or waiting approval
.hh and so so in single view you you should be always clear about
which records are allowed to edit which are not allowed to edit and then
it it actually complicates (the whole system) if you need approval have
separate views if you don't have approval have a single view that is the
(.) recommendation here
*(([E] suggests a light version; discussion continues on various
requirements and restrictions...and no easy solution is in sight; after
some 3.5 minutes, [B] bursts to talking))*
25. [B]: and **that was one reason I was sort of keen to get visibility of what
actually this [ACRONYM] process is at the end of the day** cos I'm
sure if if users are doing in some way in some system it is possible to
model it here but **we need to know what that process** is so far we
have used imagination
and when you use imagination the only risk is you are sometimes able
to be user sometimes you are also solutioning it so you are no more a
user

The team continues discussing the pros and cons (see details in Appendix 10), and especially [A] makes his thinking process apparent for all by voicing it. [A] seems to be between the rock and the hard place. The business side clearly is oblivious of the complexities involved. Still, the whole team – [A] included – is accountable to the business side, too, and they need to make this relationship work for them. With the business changing their mind as to what the requirement is, the team is shooting a moving target. [A], however, is quite ingenious and thinks of a way forward. At the face of a changed requirement, [B] also sees they need to buy time. They would need to develop a whole different kind of solution, and have the thinking ready for the milestone. But as developing software is also a cost issue, [A] quite wisely asks the team to develop cost scenarios for both alternatives. In a situation where the team is running out of time, this seems like a sensible move, and it moves the pressure to the business side.

The discussion on the [ACRONYM] process logic is a powerful example of the effects the rest of the organization can have in terms of problematic situations. This is intertextuality in action. A solution which has been discussed in almost all meetings during the past nine weeks is suddenly receiving new requirements. [A], who is in a brokering role in bringing two different context spaces together, can apparently see the potential disruptive ramifications the new requirement is likely to have in the planning. [A]'s recontextualization of the discussion with the business representatives earlier the same day is quite tentative (Extract 55, lines 12 & 16). [A] first evokes the discussion on multiple views and then moves it to the approval process. It is not obvious if [A]

foresees the confusion the new requirement is likely to cause, but if he does, his way of introducing the topic helps in softening the blow to the team.

6.6 Conclusion – knowledge development

As one considers the extracts and examples in this section, one can appreciate how categorizing this body of materials further might be challenging. What we see is a tangled web of multiple understandings, non-understandings, uncertainty and ambiguity all ending up in confusion of some sort. Pointing out exactly which type of confusion we are witnessing seems unnecessary.

However, what we are witnessing in terms of knowing, understanding, sensemaking and learning is much more interesting: we see a team of people building a tool for a specific purpose for users who share a specific (different from that of the team's one) experiential world. In a sense, the team has embarked on a journey to waters partially previously unknown to them (they are familiar with the previous version of the tool). Where the determinate situations provided them with landmarks of sorts that helped them maintain their course, the indeterminate situations lead them to treacherous waters where – while they have some charts for navigation in the form of requirements – they find that their charts are sometimes misleading, sometimes lacking in details, and often ambiguous. As the insufficient chart is combined with the differences in interpretation that the team makes, their navigation task is doubly burdened. Finally, to top the difficulties off, one has to imagine that the journey necessarily combines multiple contexts as the participants bring in other boat rides where they have been or will be involved in. This means that whatever problems they encounter, they occur not just 'there and then', but involve multiple presences both in time and space. This is the process of recontextualization that is ever present in all our interaction.

While the 'snags' (problematic situations, see p. 118) that the team hit on its route almost invariably slowed the progress, they nevertheless were an inherent part of tool *development*. If it were not for the 'snags', the team encounters, they might possibly have made little progress. The snags helped them chart the waters (clarify requirements) and understand the scope of work. Simultaneously, in making this new knowledge manifest, they ensured the team's learning.

The distribution of indeterminate examples further support the findings discussed in chapter 5: once the project team had defined the perimeters of work and clarified the simplest issues, the true focused work began. Problematic situations the team faced became increasingly complex and indeterminate. This is also reflected in the number of indeterminate situations (also examples reflect this distribution) in the data. The fact that tagging, if used in resolving the situation at all, was predominantly used in indeterminate situations towards the end of the series of meeting is also reflected in the distribution of examples.

6.7 Detailed observations on individual problematic situations

In this section, I discuss problematic situations where I found phenomena that may well be common in organizations, but not frequent enough in the current data to allow for far-reaching conclusions. Despite this, they deserve a more detailed discussion.

6.7.1 Use of non-specific terminology

Although research has shown that business English lingua franca (BELF) speakers are fully capable of communicating in a language that is not necessarily even their second language, there were occurrences in the meeting materials where the fact that the participants were all non-native speakers probably contributed to the prolongation of a problematic situation. An example is given in example 6.4.4 (p. 154) where the discussion begins with two framings of a problematic situation. As the discussion proceeds on two separate trajectories (on whether to remove or hide fields that user manually fills vs. that the system automatically fills), one can see how [A] might have landed on the same island of shared understanding earlier had the participants used more accurate and specific terminology. The particular pain in the example seems to boil down to the verb “get”. The verb *get* is particularly slippery as it can be used as a transitive verb (taking a direct object) or as intransitive (do not allow any type of object) (for more information on verb categories, see e.g. Greenbaum, Quirk 1990). *Get* can also serve as an infinitive or even as a noun. In speech, its many uses clearly cause confusion. While there are very specific terms available for data processing and information technology (such as *enter*, *save*, etc.) in general, the participants in the meeting of December 4th use these specific terms sparingly. In any case, [J], who introduces *get* first (see Extract 17, p. 156) does not specify what his meaning for it is.

Towards the end of the 11-minute discussion, it becomes obvious that [J]'s meaning for 'to get' is manual whereas [A] seems to translate it into automatic in his mind.

While the above is an isolated incidence, in my experience similar use of language would seem to abound. It is perhaps not so much related to people's language skills but rather their choice of words. Kankaanranta and Louhiala-Salminen (2009), who studied the perceptions of 'communicative success' in a survey and interviews targeted at professionals (in five companies) working regularly in international contexts found that language skills are the third most important factor contributing to communicative success. The first two were related to communication overall and business – including items such as the choice of channel, audience focus, and clarity as well as business know-how and genre knowledge, respectively. As to what those language skills entail, the details Kankaanranta and Louhiala-Salminen identified were "basic English with adequate grammar", "flexible competence", and "understanding different Englishes." In this study, I have not delved deeply into the intricacies of lingua franca, but as this brief point indicates, there surely is a lot to investigate in that area.

The observations discussed above leads me to encourage people participating in meetings to not only pay close attention to their own language use but also to the understandings the other participants bring to table, in their turn. In detecting these types of problems early entails as much listening as it does speaking accurately – and surely increases effectiveness when thinking of what the total cost might be in time lost.

6.7.2 Risks of discursive closure

As Kuhn and Jackson (2008) mention, meaning can be distorted by the use of power in organizations – by discursive closures. In the micro-level of meeting interaction, these discursive closures might be enforced by simply suppressing discussion on a problem that the team has discovered. As one can deduce from the multiple understandings and conflicting views that meeting participants carry from one meeting (or similar occasion or other discussion) to the next, suppressing discussion might be a more recurring phenomenon than what one might think; an alternative thought is that this suppression might be self-inflicted in the sense that participants in meetings do not necessarily protest even if they feel the discussion of some topic is still far from clear. There can, of course, be time constraints or other issues that prevent the proper handling of issues that are still 'under construction.' Often enough, in meetings a decision is purposely taken

out from the meeting for a resolution elsewhere, or the meeting participants might decide to continue discussion in the next meeting. What is dangerous for what action might develop into, is rushing to conclusions for pushing the issue off the table.

While these kinds of occurrences are probably fairly common, especially R&D would benefit from examining the details of each decision.

7. DISCUSSION AND CONCLUSIONS

In this study, I set out to explore the role of multiple understandings in company internal meetings. In practice, many of us perceive these understandings as misunderstandings, and certainly recognize the phenomenon from half a sentence. Regardless of what one calls these problematic situations, they often contribute to communicative breakdowns and lay obstacles for progress and action. While multiple understandings in meetings often surface and cause problematic situations, sometimes they do not, or they are dismissed and ignored. This is when an understanding that might actually be diverging quite a lot from what its original meaning and purpose was sails out from a meeting, and steers work to a wrong direction.

Meetings have been the object of numerous studies. Research has looked into various types of meetings, such as business negotiations, sales meetings, and internal strategy – to mention a few frequently studied types. Very often, however, these studies have focused on individual meetings, and very often the approach involves linguistics or conversation analysis. Research that takes as its data multiple consecutive meetings focusing on the same topic has been practically non-existent thus far. This study fills that gap. Additionally, this study differs from the majority of previous meeting research in that this study examines the role of the rest of the organization (previous meetings, calls, e-mails, discussions) in crafting understandings insofar as it becomes manifest in the meetings studied. Further, instead of studying understandings, knowledge, or learning as something that could be captured, represented, codified, transferred, or exchanged (cf. Orlikowski 2002), I have focused on talk-in-interaction in meetings of an organization to learn how participants of these meetings make sense of those understandings and knowing, and how they subsequently learn *in practice*. For doing this, I have studied a series of project meetings (nine in total) where these understandings and knowing come about in the interaction that takes place during the meetings. While there are some reifications of at least some form of knowledge (clarification log being the most important item and change requests related to the next version of the product being the other) in the meetings studied, these reifications serve more as props for the discussion on the topics identified as anything else. The participants come to know how to proceed and learn through their discussion – mostly after they have stumbled on a problem of some sort.

Viewing meetings and the interaction therein from multiple points – as done in the current study – is vitally important. This is because meetings do not take place in isolation from the rest of the organization. Meetings are a frequent and an important way of working as teams regardless of whether teams have been established for the purposes of a project or whether they have some more permanent standing. As Boden (1994 p. 81) points out, meetings are “the essential mechanisms through which organizations create and maintain the practical activity or organizing,” and as we learn from this study, meetings are essential mechanisms for not only crafting understandings but also for aligning those that are ‘inherited’ from previous interactions.

Specifically, I began the study to find an answer to the following main question:

1. What is the role of multiple understandings and other difficulties (in understanding) in meetings?

To help me see the full scope of the role of multiple understandings, I sought answers to the following sub-questions:

- a. How do difficulties and problematic situations come about in meetings?
- b. Do the difficulties in understanding become less frequent as the team progress in their work?
- c. Do the difficulties change in nature over time as the team progress in their work?
- d. What is the role of the rest of the organization in creating multiple understandings?

To find the answer to the questions above, I first explored the processes and related concepts that one might find when examining understandings in meetings in a corporate context. The processes that emerged from this exploration were knowing, sensemaking, and learning which are discussed in chapter 3. In the type of meetings studied here, these processes coincide in a joint enterprise that is in a constant and dynamic move – contributing to individual and organizational understanding, knowledge and learning. Once participants in meetings were faced with conflicts in understanding and knowing –

or other types of issues blurring understanding – *problematic situations* emerged giving cause for sensemaking and (in a happy outcome) for learning.

Studying problematic situations in talk that is close to naturally occurring speech might seem like a messy project, but the framework developed by Kuhn and Jackson (2008) offered a systematic way for analyzing those situations. Problematic situations that are, as Kuhn and Jackson indicate in their framework (see p. 99), shaped by past and projected future practices and pose a threat or obstacle to the ability to go on and that were ones that broke the normalcy of interaction and forced the project team to focus on solving the issue. Invariably, the team learned more either through knowledge deployment (using existing knowledge in determinate situations) or through knowledge development (developing new knowledge in indeterminate situations). While, for the purposes of my data, I did not see the further division into information transmission or information request of determinate situations, or instruction or improvisation in indeterminate situations necessary, I did see value in classifying examples further according to the way the team managed to solve the situation. Having identified the solution, I classified both knowledge deployment and development situations into two classes; in the first, situation was solved by *cooperative alignment*, and in the second, by *tagging* (a term I coined for the frequent and ubiquitous referencing of the rest of the organization, other occasions, or tools and systems).

Given my focus on problematic talk in meetings, I found the concepts developed by Linell (1998) useful for discussing the way understandings came about interactively.

In the following, I will present the answers to my research questions and discuss the results of this study by progressing from the general (main question) to the particular (sub-questions). I begin by discussing the results related to the role of multiple understandings and knowing, and how the two comprise problematic situations when there is observable mismatch, confliction, ambiguity, or confusion (among other confusing phenomena) related to the two. This is followed by more detailed discussion on how the multiple understandings come about. I then move on to reviewing the frequency of problematic situations, how they appear over time and to examining their significance for knowing and knowledge accomplishing. The next area of discussion relates to *tagging* – a term I adopted for all sorts of referencing occurring in the meetings studied. This is where I discuss the role of the rest of the organization.

7.1 The role of multiple understandings and other difficulties in meetings

A short answer to the main research question, “What is the role of multiple understandings and other difficulties (in understanding) in meetings?” is that challenges in aligning understandings and knowing into coherent ones were vital for accomplishing knowledge in the meetings examined. The challenges that constituted the problematic situations studied were not related to multiple understandings only, i.e. to the fact that participants might not share the same understanding, but to many other factors that muddled up understandings or prevented understanding completely. Multiple understandings, or multiple, differing, conflicting, non-existing, confused, and ambiguous understandings were triggers that brought to surface the differences participants had in their respective understandings. Whether those understandings were based on some previous discussions in other meetings or phone calls or e-mails, or whether they were formed locally just seconds or minutes earlier, they nevertheless helped bring the mismatches and conflicts to the surface where they could be dealt with. In the best case, interaction that followed the surfacing of a problematic situation led to aligned understandings and knowing that at the same time allowed the team to continue with their work.

Having learned the above, one can conclude that pure misunderstandings are, in fact, relatively rare. We all understand the spoken word (as long as it is uttered in a language we comprehend reasonably well) in our individual and idiosyncratic way to some degree. No two understandings are ever the same; the degree of closeness of understandings can vary considerably. Once these multiple understandings emerge again in meeting interaction, the participants are forced to concentrate and pay attention. If one thinks of the example of Gherardi (2006), where a person driving in a nail with a hammer does not focus on the handle striking the palm, but rather on the head of the hammer striking the nail, the very same happens in talk. We have come to master not only talk, but interaction. Further, we master interaction in many kinds of social situations and are, for example, able to adjust our talk depending on the situation we find ourselves in. But typically we do not pay attention to our talk as it comes more or less naturally; we focus on the topic. However, when we experience problems or a breakdown of some sort, we must focus not only on the topic but to what is being said. To understand, we need to really engage into sensemaking and learning. In this study,

more often than not, the project team was more knowledgeable after a problematic situation.

To conclude, the problematic situations are truly very important vehicles for bringing multiple divergent understandings and other confusion ‘to the table’ for common scrutiny. By focusing on resolving these problematic situations, the team members come to know and learn in interaction. This is learning in meetings in practice, in organizations.

7.2 The emergence of difficulties and problematic situations in meetings

As regards research question 1.a. (How do difficulties and problematic situations come about in meetings?), I can only say that the ways in which difficulties that converted into problematic situations arose in interaction were very heterogeneous.

Given that the interaction in the meetings examined for this study was very close to natural talk in that the agenda was loose and people, who exchanged ideas and thoughts on the item discussed rather freely, the problematic situations also evolved in a ‘messy, moment-to-moment manner’ (cf. Broadfoot, Deetz, Anderson 2004) and the difficulties came in many forms. In chapter 6, we witnessed multiple examples of problematic situations, and based on those, one can say that the difficulties came in a myriad of ways. Sometimes we witnessed lack of information, other times the problematic situation might have related to missing or different background knowledge; requests might have been ambiguous or the team felt they were receiving conflicting guidance; or, there was ambiguity in the talk of the participants. And, of course, there were the multiple understandings that were inherited from other occasions or were derived at based on some materials (slides, e-mails) that were possibly confusing.

Given the focus of the study and the heterogeneity of problems, I did not find it useful to classify the examples based on their birth mechanism. Instead, I categorized them further based on the ways the team found their way out of the problematic situations. As regards determinate situations (that dominated the early part of the series of meetings) where existing knowledge was used to solve a situation, cooperative alignment seemed to be the preferred way. However, as the problematic situations became more indeterminate and the project team needed to engage into developing knowledge, tagging seemed to offer a solution.

To conclude, as problematic situations emerged in a myriad of ways in the materials analyzed, it would be very difficult to indicate any specific pain points. Given, however, the way the project team managed to move on from the indeterminate situations by tagging either business, technical experts, or some reification, it seems that business and organizational knowledge (knowing who to ask or where to look for information) is a definite asset.

7.3 The frequency of problematic situations in meetings

In the data studied for this research, problematic situations remained on a relatively high level throughout the nine weeks studied. Given that problematic situations seem to be vital for accomplishing knowledge, the team therefore kept accomplishing knowledge through the series of meetings.

As discussed, the role that problematic situations and problematic talk in particular plays in knowing, deploying knowledge, and developing knowledge was vital in the meetings studied. Knowing-in-practice (cf. Orlikowski 2002) is an ongoing social practice that is enacted in everyday interaction. As such, knowing is virtual and ever changing. Problematic situations constitute an obstacle or a threat for progress and action, and hence, resolving problematic situations aim at removing that threat (Kuhn, Jackson 2008). While the clarification meetings studied were addressing the threat to the capacity to act they had identified, they could be considered as large communicative projects – after all, communicative projects aim at solving a communicative problem of some kind (Linell 1998). However, communicative projects are typically nested in the sense that one communicative project can be nested within larger communicative projects, and the performance of one project often provides the initiative for another one.

My focus here was on the communicative projects the participants engaged in while they already were engaged in a bigger one (the meeting). As can be seen from the analysis, communicative projects, once overcome and solved, often provided the initiative for another one. The handling of one topic could host multiple communicative projects all aiming at resolving first the actual topic and second the suspected failing in understandings or other confusion. Looking at these communicative projects, or, problematic situations that were nested inside larger communicative projects over the period of nine weeks, one can see that the rate of problematic situations remained

relatively stable – or even increasing – all through the nine weeks, peaking in the seventh meeting (January 7, 2008). As the team began working on topics that need clarifying, they hit an increasing number of snags until they reached a point where most problems had become sorted and the number of problematic situations decreased. What is important, however, and what translates into the answer to research question 1.b. (Do the difficulties in understanding become less frequent as the team progress in their work?), is that there were no dramatic fluctuations in the number of problematic situations the team encountered. If it were not for the problematic situations, the meeting participants might not have been forced to evaluate and align their respective understandings and knowing on the matter at hand. Problematic situations were the points in discussion where many mismatch or illogicalities were caught. The fact that problematic situations decreased as the team came closer to the milestone stands to reason as the team was bound to have resolved more problems than it was likely to encounter anymore. At the same time, their work as a team seemed to have become more seamless. Given the distribution of problematic situations throughout the series of meetings, it is obvious the team kept accomplishing knowledge all the way from the first to the last meeting in the series.

7.4 The nature of problematic situations in meetings

In the meetings examined for this study, meeting participants were likely to develop knowledge rather than deploy it (in three out of five cases), but the development part began only once the ‘low hanging fruit’ were done and dealt with.

Understandings and knowing seemed to intertwine in many of the problematic situations analyzed. At times, understandings were recontextualized based on previous discussions and found problematic, whereas at other times understandings developed during the handling of a topic could lead to separate islands of understanding. Understandings that the participants recontextualized were based on something that they ‘thought’ they knew. Depending on how well they were able to legitimize their knowing (using the resources for identification, accountability and legitimization) it was either validated or modified into something new or something different. The resources used for defining the determinacy of a situation (identification, accountability, and legitimization) could be applied to all problematic situations in the materials. Depending on whether the determinacy was high (determinate situation, knowing how

to proceed) or low (indeterminate situation, ambiguity and vagueness prevail), the situation could transform into knowledge deployment (rendering knowledge as information and passing it on) or knowledge development (creation of new knowledge and even innovation).

Analyzing the situations according to their determinacy yielded interesting results when all the problematic situations were classified as either determinate or indeterminate. The analysis showed that out of all problematic situations found (119), 39% (46) were determinate and 61% (73) were indeterminate. This means that in three out of five problematic situations, the participants were more likely to develop knowledge rather than just deploy existing knowledge. One could, of course, ask if that is not the whole point of R&D (research and development) but the question is not as simple and straightforward as that. R&D teams in organizations produce new innovations, tools, and products, but as to *how* they do it and to what extent R&D teams are relying on previous knowing are not information that have been available. And previously learned knowledge plays an important role. In Wenger's words, "Our knowing – even of the most unexceptional kind – is always too big, too rich, too ancient, and too connected for us to be the source of it individually" (Wenger 1999 p. 141). This means that the project team in this study did not begin their work from scratch, either. In creating new knowledge they tapped into existing knowledge that surfaced in the interaction of participants and that (as can be seen, for example, from section 6.4.4) in some cases seemed to be more known to some than others.

The answer to research question 1.c. (Do the difficulties change in nature over time as the team progresses in their work?) of this study relates not only to the number of problematic situations in terms of their determinacy stated above but also to the way the determinate and indeterminate situations were distributed over time. Looking at the number of determinate and indeterminate problematic situations, one can see how the indeterminate situations began to dominate the meetings after the fourth meeting in the series of nine meetings. It seems that the project team's need to resort to existing body of knowledge reduced once they had established the parameters they needed for having a basis for planning and development of the next version of the tool. However, it is important to note that determinate situations did not wither away completely; the need for tapping into some constant element remained all throughout the series of meetings.

7.5 The role of the rest of the organization in meetings

Research question 1.d. was “What is the role of the rest of the organization in creating multiple understandings?”, and the answer is that the rest of the organization had a marked influence on the work of the team in meetings; the need to tag the rest of the organization (or system/tools or other occasions) diminished radically after the first three meetings; in problematic situations, however, tactical tags were used predominantly in indeterminate cases if at all. This would seem to suggest that in major obstacles – as the work progressed – the team needed to resort to the rest of the organization for acquiring more information based on which to act.

Multiple understandings, while surfacing in the talk of participants in the meetings studied, most often involved recontextualization of previous talk (retrospective sensemaking). In other words, multiple understandings and other problematic situations involved multiple presences both in time and space. These recontextualizations could be local, i.e. they may have related to what someone else in the meeting had previously said, in which case the speaker tapped into a pool of resources immediately available – translating into co-text produced in the meeting that was ongoing. These recontextualizations could also span over temporal and spatial spaces and involved recontextualizations that were not only *intertextual* (as in from one meeting or discussion to another) but *interdiscursive* in the sense that they could transfer from abstractions, too (such as the software product). These recontextualizations were, of course, always only partial and each participant had her/his own understanding of what had been said or done previously – regardless of whether it had been said a couple of seconds ago or whether the recontextualization referred to some other occasion, for example.

So, people were connected in various ways, they interacted at different times across time and space and also through documents, e-mails, and online presence – and then, wandered between situations. While parts of the knowledge, knowing, and understandings were conveyed via some artifact – such as a document or an e-mail – in meetings, a considerable amount of these understandings and knowing were conveyed in speech.

One of the first features in the meeting talk I analyzed was the copious amounts of referencing that I came to dub *tagging*. Tagging is an inherent part of

recontextualization and as such, an essential feature of organizing in talk; we cannot relay our previous experience or knowledge without referring to its origins if we want to add on the validity and legitimacy of that piece of information.

The sheer number of tagging to meetings and occasions other than the meeting where the tagging took place, tagging to people and teams never attending the meetings, or tagging to systems/tools that total 291 over the period of nine weeks painted an interesting picture of not only the spatial and temporal features but also the number of people indirectly ‘attending’ the meetings. In total over the period of nine weeks, the unique tags in individual meetings to people and teams totaled 88. These 88 tags are divided between a total of 31 different, unique people or teams in the entire body of materials. Now, thinking about the fact that some of the tags were teams that could consist of quite a number of people, one can deduce that the number of people involved in the production of the new version of the software tool could be calculated in tens if not hundreds. Bearing this in mind and factoring in individuals’ partial understandings or possibly slightly erroneous inferences of each others’ words one can see how the variables of the function increase and complicate the overall situation. So clearly, while being a source of information and knowing, the rest of the organization surely contributed to problematic situations in both good and bad. For removing the obstacles and threats for progress, it was, however, important that these understandings were recontextualized and brought to the table for common scrutiny. Without this, it might not have been possible to align understandings.

Tagging people, especially, can be an efficient micropolitical means for legitimizing one’s knowing and understanding *tactically*. Lacking professional (or hierarchical) authority, people depend on others to identify, legitimize, and showing accountability. Tagging people and teams over time is significant from two perspectives in particular: firstly, the distribution of tagging people and teams over time, and secondly, the use of tagging people and teams in problematic situations.

When looking at tagging people and teams over time, one could see that after the first three meetings in the series of nine meetings, the need to tag other people and teams diminished dramatically. The team seemed to have established the perimeters of work and had relayed the understandings (on change requests, for example) of other people and teams, and focused on the task at hand. From the fourth meeting onwards, the team,

in a manner of speaking, turned to itself and started finding answers for their clarification items themselves. Table 4 on page 122 includes the mapping of strategic (participants use their professional authority) and tactical dimensions to problematic situations. Information in Table 3 indicates that strategic power was used in most of the problematic situations (71%) whereas tactical power was either used or attempted at in 29% of the cases. Clearly, the team consisted of professionals who *knew* what they are doing; they had the professional skills and capabilities to resolve the problematic situations within the meetings. This finding supports the survey results, where Kankaanranta and Louhiala-Salminen (2009) found that the second most important factor contributing to communicative success is business know-how, including not only understanding of the business but the shared goals and objectives as well as organization. Tagging in the meetings observed was one of the ways in which this business expertise became manifest.

Considering the above, one can identify yet another significant phenomenon: while tagging reduced as the team focused on the task at hand, and problematic situations became more complex (less determinate), tactical use of power – while all the time being less than strategic use of power – polarized to indeterminate problematic situations only. This would seem to suggest that towards the end of the nine-week period and closing in on the milestone, the team had exhausted its own problem-solving capabilities; at the same time, they had identified the problems that were beyond their power to solve.

To sum the key conclusions drawn from the fourth finding: the rest of the organization had a marked influence on the work of the team in meetings; the need to tag the rest of the organization (or system/tools or other occasions) diminished radically after the first three meetings; in problematic situations, however, tactical tags were used predominantly in indeterminate cases. This would seem to suggest that in major obstacles – as the work progresses – the team needed to resort to the rest of the organization for acquiring more information based on which to act.

7.6 Conclusions

In the preceding sections, I have discussed the results of my study on problematic talk in meetings and the role that understandings and knowing play therein.

As can be seen from the results, first of all, problematic talk is vital for the participants of meetings. Problematic talk in the form of confusions and multiple understandings, for example, is the way in which participants come to learn what others think and know – or what they think they know. A basic and fundamental requirement for this to happen is that participants voice their understandings; in fact, this is crucial especially in meetings and discussions where there is no formal agenda or facilitator to take notes and distribute minutes after the meeting. The data for this study also give evidence to the fact that especially informal discussions seem to be prone to create multiple understandings. It seems that if participants do not take the time to reiterate and reformulate their understandings, they end up carrying either highly or partially divergent understandings to the next situation, where the topic is discussed. The kind of formal meetings that have been the focus in this study are good places for aligning those understandings; this aligning does not happen if the understandings are not voiced.

The revelation that misunderstandings in meetings are, in fact, quite rare, and that we all understand (bar a complete language or subject-matter based non-understanding, of course) in our own specific way, can be quite liberating, particularly to employees regularly taking part in meetings of different kinds. I hope that the more fundamental result – that problematic situations are vital for knowledge accomplishing – will open eyes to multiple understandings and their innovative potential in meetings. In fact, the findings of this study have given a whole new depth to the old sayings of “learning by doing” and “learning from one’s mistakes.” Further, this study proves that at least in meetings, the saying, “silence is golden,” does not apply. In meetings, the vehicle for aligning understandings and overcoming obstacles is talk and more talk.

Although the findings and results indicate that the problems meeting participants face were in many ways “messy,” and thus it is no surprise that they usually are thought of as a nuisance. However, based on the results of this study, I would even say that as regards meetings, “the messier the better,” as talk is the only way with which meeting participants can ensure they share the same understanding of what needs to be done. This, of course, requires vigilance and full engagement from meeting participants.

Given that problematic situations in this study remained on a good level all the way from the beginning to the end, one can conclude that the meetings remained very effective all through the nine weeks. It would seem that meetings, where something new

is developed, problematic situations that emerge in discussion and require sensemaking help promote new understandings, knowing, and learning, and must therefore be considered effective. In the meetings studied, the clear purpose and objective surely also contributed as it was very clear from the outset: scoping and clarification. Additionally, the team had a clarification log that they consulted as they moved from one topic (item to be resolved) to the next. The clear purpose and objective surely contributed to the effectiveness of the meetings: the team was on a mission. Often enough, one hears people talk about meetings they have attended where they have thought “what is this meeting about?” or “what is my role here?” or “what am I supposed to do after this meeting?” Questions such as these should be cause for concern, and there is, of course, no shortage of guidebooks on how to design good meetings. Meetings such as the ones studied for this research are testimony to the fact that there can be very efficient meetings that contribute not only to the project and the progress of the task at hand but also to both individual and organizational knowledge. Moreover, the meetings in the current data had a clear purpose and a very methodical way of conducting themselves which also contributed to their efficiency.

As we have witnessed, the problematic situations in meetings tended to be indeterminate rather than determinate which means that the team was more likely to develop knowledge rather than just deploy it. This is an indication of the role meetings play as venues for accomplishing knowledge. While investigating how long it would take an individual to sort and clarify the items handled in the meetings was not in the scope of the current study, one can probably safely assume that in terms of resolving matters relatively quickly, meetings still seek their rival. This, of course, entails that the right people need to attend the meetings – and this circles back to the good design of a meeting.

Finally, looking at the results related to tagging, one can really start to appreciate not only the power and influence the rest of the organization had for the understandings surfacing in meetings but also the importance of meetings as the synapses of the nervous system of an organization. Meetings condensed and transferred the signals (understandings) from the rest of the organization in the talk of the participants. While a lot of information and understandings were brought into the meetings, a whole lot of traffic moved to the other direction as the team needed to find out more information,

learn more, align their understandings, and seek decisions from the surrounding organization. The two were in constant ‘interaction’ of sorts – like a living organism.

7.7 Validity and reliability of the study

Validity and *reliability* are the two “classic” concepts that are used for evaluating research (Eriksson, Kovalainen 2008). Although reliability typically refers to matters such as repeatability and measurability, in qualitative research reliability could also refer to the degree of consistency in research. If a research is done in a transparent and consistent manner, another researcher should be able to repeat the study with similar findings. Validity, for its part, relates to the accuracy of the conclusions; it is used to evaluate if the results provide a valid explanation of what has taken place. Like Eriksson and Kovalainen say (see also Bryman, Bell 2003), these concepts are, however, mostly used for quantitative research, and for qualitative research, other criteria for evaluation have also been proposed. The one proposed by Lincoln and Guba (1985) to replace reliability and validity in qualitative inquiry has been particularly influential: *trustworthiness*. Lincoln and Guba divide this concept further into four aspects, those being *credibility*, *transferability*, *dependability*, and *conformability*. In the following, I discuss my research in the light of these four aspects of trustworthiness.

7.7.1 Trustworthiness in terms of credibility and transferability

This study proposes that meetings are significant venues for knowledge accomplishing – especially when the meetings concern research and development and aim at determining the features of a product, for example. This knowledge accomplishing emerges as the team faces an obstacle or threat to their progress, and it invariably occurs in speech. I hope I have managed to show with my multiple examples and explanations how this knowledge accomplishing occurs via problematic situations where the team faces obstacles of various sizes and degrees of complexity. The problematic situations are nested in larger problematic situations (meetings), and themselves host other problematic situations.

I realize that identifying these types of episodes is a subjective undertaking but by indicating and discussing problematic situations (exemplified in the extracts of this study), a reader familiar with the framework created by Kuhn and Jackson (2008) can see that this study closely follows the methodology proposed by them. I am confident that other researchers with somewhat similar materials could conduct research and come

up with plausible results. I realize that I, as someone with a long background in technical business and experience from similar meetings in other contexts and organizations, have some capabilities for discerning and analyzing the problematic situations that a complete outsider might lack. However, in some other context, with a subject matter reasonably familiar to the researcher, I think this type of investigation is quite feasible to replicate.

7.7.2 Trustworthiness in terms of dependability and conformability

As I wrote this research up, my attempt was to do it in a manner that is as transparent and logical as possible – to make my research as dependable as possible. I wanted the reader to be able to follow my train of thought and see the choices I made along the way, and understand the rationale behind these choices. I also hope I have been able to convey my discomfort when figuratively standing at the crossroads between cognitive and social practice approaches. Although there is a fair bit of intuition involved in a qualitative study that is heavily data-driven, I hope I have managed to shed enough light on why some decisions made more sense than others.

As for conformability (referring to the idea that the data and interpretations are not just imagination), I initially chose meetings – and interaction therein – as my area of study, because I felt (having sat in hundreds of meetings over multiple years) that there was something interesting going on, something I could not quite put my finger on. Initially, I felt that there was quite a bit of misunderstanding flying around, and in fact, based on my discussions with colleagues, this is what many business practitioners typically seem to feel about meetings. Having the possibility for gaining access to company internal meetings, the possibility of using simulated data never even occurred to me. However, what I soon learned was that I could not use meetings wherein I myself was a participant as I was too deeply engaged in the meeting to be able to observe the meeting. This meant that I needed to find meetings that are far enough away from my own area. The project team meetings that I ended up choosing as my data offered me content that was reasonably familiar (software development), however with participants in an organization that was relatively unknown to me. I think this distance was a necessity because it also allowed me to concentrate on what took place in meeting interaction.

7.8 Contribution of the study

There are three main contributions that surface from this study: first, we gain important understanding of the meeting as specific practice and its role in contributing to both organizational and individual learning and knowing through problematic talk that takes place in meetings. Second, this study contributes to understanding how this learning and knowing develop over time. Third, this study shows the importance of the surrounding organization in the development of understandings, knowing, and learning. Additionally, the study also reveals interesting insights that might prove useful for practitioners.

While studies on organizational meetings have contributed to our understanding of what goes on in meetings especially in terms of linguistic features, this study has shed light on how participants in the meetings examined for this study accomplished shared understandings and knowing, and how they subsequently learned *in practice*. So instead of focusing on the linguistic features of talk, my focus was on talk-in-interaction as a social practice in meetings which are venues where organizations perform at their liveliest. I have investigated this social practice by focusing attention on problematic situations that became manifest in the interaction taking place in the meetings examined for this study. Further, where the majority of meeting research thus far has tended to focus on individual meetings, this study has examined nine consecutive project team meetings all focusing on the same topic – the specific features and requirements of the next version of a software tool. Given that the materials comprise meetings covering a period of nine weeks, this study adds to our understanding on how the project team came to understand and accomplished knowledge over time. This fills the gap in previous meeting research where multiple consecutive meetings have not been in the focus. Finally, where meeting research up till now has predominantly stayed within meetings, this study has explored the rest of the organization and the effects it had on the understandings and knowing of the meeting participants. The dynamics involved between the meeting and the surrounding organization is not just plain intertextuality; the tagging taking place in meetings conveyed not only multiple understandings and knowing but carried a fair share of power, too. As such, this study is interdisciplinary in nature in that it incorporates concepts and combines approaches from different disciplines, including language and communication studies as well as organizational communication and organizational science.

7.8.1 Theoretical contributions and implications to organizations

When considering the theoretical contribution of this study, one needs to revert back to the conceptual framework presented in chapter 3. While the study began to take form from an interest in multiple understandings, the related concepts of knowing, sensemaking, and learning – especially valid in organizational contexts – were ones that needed to be taken into account. This study has shown that all these concepts – understanding, knowing, learning, and sensemaking and the related processes are crucially and even necessarily linked in individual and organizational learning and knowing. Given the context, a multinational corporation, and the fact that the meetings studied are all on the same subject and take place over a longer period of time, one gains important understanding of not only the meeting as a specific practice but also of how the organizational and individual learning and knowing develops over time as well as the contribution of problematic situations in talk-in-interaction to that learning and knowing. The findings that were outlined in the previous sections, lead to some interesting insights that contribute to the theoretical base discussed.

First, the role of multiple understandings and other problematic situations was found to be vital for accomplishing knowledge. While learning and accomplishing knowledge are a result of competent participation in the practice, an important part of that accomplishment is negotiation. This much has been understood, but how the negotiation part comes about has not been the focus of attention in an organizational context earlier. Based on this study, we have learned that problematic situations in talk-in-interaction are the fuel of learning and knowing. As such, they contain rich potential not only for learning and knowing but innovation, too. Given this, meeting facilitators and managers will probably be wise to allow problematic situations to flourish and let interaction run its course – for at least as long as the interaction remains fruitful and seems to be proceeding. As we have witnessed, cutting the wings of a discussion – although possibly difficult and complex – may cause problems later.

Second, although people in organizations learn and come to know as they interact over their daily activities in practice, meetings offer a particularly condensed and specific way for accomplishing both learning and knowing. As the analysis indicates, the rate with which the project team encountered problematic situations remained on a good level from the first to the last meeting in the series. However, while this is interesting, a

much more important revelation was the fact that the nature of problematic situations changed over the course of the nine weeks studied so that the determinate, less complicated situations that dominated the beginning of the series soon gave way to indeterminate and more complex situations. Now, given that determinate situations typically deploy existing knowledge whereas indeterminate situations develop knowledge, knowledge development really only began in full blast once the team had sorted the perimeters. This would seem to suggest that an organization or a team wanting to develop something new should allow the team time to sort the existing knowledge, but also to weld together as a team: the individual members of the team each bring their existing understandings and knowing to the team, but it can only be accessed via interaction – most effectively in meetings. Allowing the team time to deploy existing knowledge is, however, also necessary because the existing body of knowledge is very important for making sense of the requirements and for developing new solutions.

Third, this study has brought the context – the surrounding organization – into the very center of investigation by showing how the participants recontextualize not only something that has occurred some seconds or minutes ago but previous encounters, often with participants, who never took part in the meetings studied here. By focusing on this aspect of interaction, we came to learn how multiple understandings and other problematic situations often involved multiple presences both in time and space. Additionally, we have learned that the learning and knowing that transpires in meetings rarely is a pure result of negotiation that takes place in the meeting, but many people have already contributed to the meanings and understandings and many other people will further contribute to them and other meanings and understandings later on. So the surrounding organization is an important resource for situated problem-solving; it is a resource meeting participants frequently use to validate their knowing either by ‘tagging’ the rest of the organization or by referring insuperable obstacles to it. This would seem to have two practical implications. One is simply the importance of participating in meetings: meetings are the place where not only the participants come to share their views but they bring along a host of other views and knowledge that originates from their encounters with other members of the organization who are not present in the meeting in question. If one does not participate in meetings, one misses the opportunity of learning and knowing that emerges from the often fruitful hotchpotch

of participants – either virtual or real. The second implication relates to the overall importance of networking with other members of the organization and seeking out their views. Forming an opinion or learning, let alone knowing, is a near impossibility in isolation in any organization.

7.8.2 Methodological implications

Given the results, this study contributes both to organizational as well as communication research. First, we have come to learn how the organization played a significant role in crafting the understandings of the meeting participants. By indicating how this occurred in the interaction observed in the meetings, I have shown how the dynamic between the project team meetings and the rest of the organization worked in terms of understanding and knowing. Participants of the meeting – when, for example, legitimating their knowing – come to tag the rest of the organization, and this dynamic stays throughout the series of meetings. This also gives indication of the importance of meetings as sites for accomplishing organizational learning. Additionally, the way the examination of the dynamic between the meetings and the organization was conducted (focusing on intertextual features of talk in problematic situations) carries a significant methodological contribution for more linguistically oriented researchers in particular, who might wonder how business specific know-how could be investigated. Second, we have learned how a method originally developed for analyzing organizational problem solving can be applied to analyzing problem solving occurring on the level of interaction. This has allowed a new avenue for the study of problematic talk in meetings. Third, the quantitative part proved to be a useful companion to the qualitative part in that it revealed interesting patterns in how the problematic situations developed over time.

7.8.3 Implications for practitioners

This study has shed new light on the efficiency of meetings: the meetings in the scope of this particular study remained efficient all the way from the first to the last meeting in the series in the sense that the team kept accomplishing knowledge (by facing and solving problematic situations). We also learn new information from the distribution and number of determinate vs. indeterminate situations (determinate ones dominated the beginning, indeterminate more numerous and dominating in the latter part). Judging by these numbers, it became obvious that R&D stayed true to its nomination, and, indeed,

developed more than deployed. However, no team begins their work from scratch and the share of existing knowledge was solid, while smaller than the share of new knowledge gained. Considering this, one could even make a suggestion to practitioners to try and ensure that when beginning a new version of a product, such as a software product, one part of the team consists of people with experience from the previous version, whereas the other part could be relative novices, learning not only about the tool but about software development, too (this recommendation, of course, applies to a wide range of activities, and not just product development). These relative novices and other newcomers could bring in fresh thoughts and different understandings that help prevent the thinking of the team from becoming ossified.

Finally, by tracing the contours of the organization as it is reflected in speech of the participants, our eyes have opened to the complex spider's web underlying the understandings the participants bring to the meetings. When one string (understanding) in the web is pulled, we can see how many parts of the organization 'wobble.' The meetings did not exist as secluded islands as regards understandings developed in them, but heavily relied on the thoughts and understandings the meeting participants brought in from the rest of the organization.

7.9 Limitations and future research

Every study has its limitations; so does this one. The first limitation is related to the data and the fact that all the data come from one type of meeting only. While having data that remains on the same topic over a period of time is an indisputable asset, it gives little indication of what might be going on in other types of meetings. Before this study, I had gathered data from a high-level management team meeting, where the agenda was tightly controlled and time-boxed, and where the interaction seemed to be somewhat dominated by the head of the organization, but given that the data examined for this study already provided such rich materials for investigation, it was a practical impossibility to include more and different kind of data, and so the high-level management team meeting was abandoned, or left for future research. This does not remove the fact that meeting research could benefit from a comparative approach, where different kinds of meetings might be compared to see how, for example, power might become manifest in differing degrees in the meetings studied. Further, remaining

on one type of meetings means that no far-reaching generalizations can be made from the results.

The second limitation is related to the fact that this study had only audio recordings of meetings as its data. While I discussed with the participants in and especially between the meetings – and also afterwards, when doing the analysis – the data does not comprise any interviews. Interviewing participants might give valuable indication as to how participants themselves view the problematic situations and problematic talk in meetings. Additionally, interviews could provide interesting and valuable insight into the identities of participants and how they portray and construct themselves as ‘knowers.’

Thirdly – and finally – this study has paid little attention to meeting conventions and organizational cultures. These are areas that might benefit from comparative studies of meetings in different companies or organizations. For example, when people change jobs and move from one company to another, they might experience a culture shock of sorts with the meetings being so very different from the ones they had gotten used to in their previous organization. Similar feelings might arise when someone’s company is acquired by another, possibly bigger company and the new owner brings new habits and conventions that might need to be assumed.

All of the above are limitations of the current study but also possible avenues for future research.

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APPENDIX 1 – TRANSCRIPTION NOTATION

The notation used has been adapted from the ones used in Silverman (2001), Boden (1994), and Schiffrin (1987).

Notation	Example	Explanation
[A: quite a [while B: [yea	Left brackets indicate the point at which a current speaker's talk is overlapped by another's talk
=	A: that I'm aware of = C: = Yes. Would you confirm that?	Equal signs, one at the end of a line and one at the beginning, indicate no gap between the two lines (speakers)
(0.4)	Yes (0.2) yeah	Numbers in parentheses indicate elapsed time in silence in tenths of a second (or seconds)
(.)	to get (.) treatment	A dot in parentheses indicates a tiny gap, probably no more than one-tenth of a second
—	What's <u>up</u> ?	Underscoring indicates some form of stress, via pitch and/or amplitude
::	O:kay?	Colons indicate prolongation of the immediately prior sound. The length of the row of colons indicates the length of the prolongation
WORD	I've got ENOUGH TO WORRY ABOUT	Capitals except at the beginnings of lines, indicate especially loud sounds relative to the surrounding talk
.hhhh	I felt that (0.2) .hhh	A row of h's prefixed by a dot indicates an inbreath; without a dot, an outbreath. The length of the row of h's indicates the length of the inbreath or outbreath
()	Future risks and () and life ()	Empty parentheses indicate the transcriber's inability to hear what was said
(word)	Would you see (there) anything positive	Parenthesized words are possible hearings
(())	Confirm that ((continues))	Double parentheses contain author's descriptions rather than transcriptions
.	That's that.	Indicates a stopping fall in tone

,	One, two,	Indicates a continuing intonation
><	>so that's it<	Shows talk that is noticeably faster than surrounding talk
?	What do you think?	Indicates rising intonation
→	→ I thought that	Arrow in front of key lines of transcription to highlight analytic phenomena.
<i>Italics</i>	We should <i>remove</i> those	Emphatic stress
CAPS	NO!	Very emphatic stress
Bold	We discussed this last time	To highlight those discourse markers being discussed in the text.
[Name]	This is a [Company] policy	Company name appears in the original, and has been replaced with the text in angular brackets.
° °	°I thought so°	Degree signs are used to indicate talk that is quieter than the surrounding talk.

APPENDIX 2 – MEETING 1, NOVEMBER 28, 2007

Duration: 02:17:00 (137 mins)

Transcribed: 00:14:15

8.1 Beginnings / starting a topic - #2

[C]: okay so if [F] has already left then maybe we can (.) just (.)
[D]: °do all°
[C]: [do all and then start (1) and see all the open items
[A]: mhm
[C]: okay (.) aa (2) so starting from () eh
do we have eh [offshore] (.) are you there on the line?
(2) (°no [they dropped°)
[A]: [no [F]'s left
[C]: ((mumbling))
[Offshore]: yes [C] we are here we are here
[A]: oh
[C]: we have some of the offshore ()
[Offshore]: (the offshore team is) ()
[A]: yea yea yea I'm sorry (.) we didn't know
[C]: yea so (.) .hh okay first was a (.) I think [ACRONYM] metric where (2)
we needed to update the [ACRONYM] metric list
so that's: been there for some time
((continues))
[D]: I think eh can you decide [A] that .h do we want (2) this mmm category share shares or
not (1) so if they have business groups now (1) or who can make that call
[A]: mm
[D]: that's the biggest (in here)
[A]: [yea
[C]: [mhm ((mumbles in the background))
(3)
[D]: if you go up to those [Info1] and ehm (.)°was it [Info0]°
(3)
[D]: so under sellout (.) there is [Info1] and [Info0]
((typing in the background – 3 seconds))
[A]: no no category is (.) working assumption here is that categories are not going to replace
[C]: [business
[A]: [business groups in here (.) in the [ACRONYM] metrics (.) so the (.) but (.) so we can
continue by (.) eh having only that [Info1] and [Info0] for ()
[D]: okay
[C]: so should we call it at least [Unit_1]
[A]: yea (.) but er or I don't know actually (4) because then we should have there (.) [Unit_2] as
well (.) but why not to have it actually in the [ACRONYM] metric side
[D]: mm
[A]: but then we can't compare actually af as we're not getting those (.) figures from the [ABC]
(5)
[D]: so it would be only two [lines
[A]: [oh yeah hey (.) it's going to in the incentive yeah (.) that's that's
that's right (.) we'll replace business groups by [Unit_1] and and [[Unit_2] (.) yea
[C]: [[Unit_2] (2) and it's
coming from [System_2]
((lots of overlapping talk))
[H]: sellout sellout data
[C]: sellout data so sellout data would not come from [ABC]
[A]: mhm (.) yea those are the sell sellout actuals
[C]: yea

8.2 #3

[C]: okay .hh next one will we still (.) require to capture

8.3 #4

[C]: next (.) account snapshot business environment [company] share

8.4 #5 Indicative gross margin

[C]: Next one was indicative gross margin (.)
I think ee (.) this was a discussion where ee (1)
[Area_1] doesn't want to see the sensitive informati[on]
[D]: [yea]
[C]: for some of the [dashboards]
[A]: [and and the other areas are not going to see it as well]
[C]: o:kay
[A]: except (.) country managers and (like that)
so there's gonna be (.)
going to be this visibility rule (.) which is restr- (.) restricting the access to those
that information (.) in account manager level
[H]: → actually we-e that in that call we had one call
with [person_M] (.) myself and [D]
and what [person_M] was saying that was he was not very sure whether even country
managers also can see [()]
[D]: → [yea [in [Area_1]
[A]: → [in [Ar] in [Area_1] yea but in (.) all the other areas [it's gonna
be
[H]: [mhm]
[C]: [mm
[A]: [at least that's the proposal that's on the table at the moment (.) [so
[C]: [then
[A]: so th-th-that (.) eh solution you are actually now proposing is really (.)
really good to divide that into two pages
because then we can really (0.3) do that kind of visibility rules
that country managers can see it but account managers not
[C]: yes

8.5 #6

[C]: what is eh: the GMT organization as a category management responsibility area
((reading the topic from a list))

8.6 #7

[C]: okay: .hh next one (.) POLT forty-five forty-six

8.7 #8

[C]: next one (.) ah in the current dashboards ()

8.8 #9

[C]: ah next one is a: (.) this is [topic]

8.9 #10

[C]: next one is a: (.) this is primarily for [person_M], [D] I'm not sure if you've discussed that
ah (.) new columns like eh

8.10 #11

[C]: okay campaign, this (.) [D], I think, and [A], this is an open item eh

8.11 #12

[C]: okay .h next: eh:

8.12 #13 Dashboard comments

[C]: aa (.) in a:r-one-dot-one dashboards which:: were asked to be removed
in two-dot-one as per [person_M] e-mailed () have dashboard comments captured
>okay<

(.) now (.) as part of aa:: there are lot of places where you can capture-ee dashboard com[ments]

[A]: [mm
[C]: like as part of: market (.) and also as part of account
now if we're removing these-e dashboards from one-dot-zero
do we (.) still need to keep the dashboard comments=
[A]: =no=
[C]: =functionality=
[A]: =no fo-for those dashboards
[C]: for those dashboards
[A]: no no
[H]: the account objective and the (level buffer) monitoring both have that (.) so they don't appear anywhere
[A]: yea
[H]: .hh so only we are left with the market level account eh market level dashboard comments
so we'll (.) we will no longer have any account level dashboard comments
[A]: >okay<
[D]: bu:: [country_1] wanted [country_1] has a requirement for [(opportunity)
[H]: [they have but we are not very
sure that (we are able to do it) [(in this)
[D]: [(yea) so that's [(A]'s decision then
[C]: [because then
we don't even have that in the requirements list (.) as of now
[A]: yes it should
[C]: should (.) is there?
[A]: I believe it is
(searching for the requirement - ~1 min. 20 secs. left untranscribed))
[C]: so:: (.) but we would need to understand where in the dashboard they need that
comments box and all those things
[D]: mm h yea (2) it's not in in the cee-ar description it's not detailed enough now
[H]: they've just written that ee (.5) dashboard comment for opportunity dashboard (.)
dashboard comments also (.) to opportunity ()
[D]: okay then then (.) yea (.) I-I
[C]: actually the problem with the cee-ar is that it's very cryptic (.) most of the time is like one-
liner something like that and then it's too ambiguous
[A]: yea
[D]: okay I will note down that I will check this
[C]: okay

8.13 #19 Headcount/market overview

[C]: this is eh (.) headcount (.) market overview yea I think this was-[a (.) another
[A]: [aa (.) lets' see
[C]: comment from [person_N] (1) [actually we had ()
[A]: [ee-ee I believe we're gonna remove the whole
headcount
[D]: yea I heard something like that
(2)
[A]: yea (1) most probably (.) that-that's something we're we're gonna propose for (.) core
team
[C]: okay (.) so I [we had another suggestion for
[A]: [on Friday se (.) session
[C]: okay we had another session ee suggestion for market overview because .hh
that's where there has been some confusion (.) [so
[A]: [yea
[C]: I'll just run you through this small present[ation
[A]: [yea that's actually good yea
[C]: so (primally) what we could (.) feel from [person_N] was that e he was a bit confused with
regards to internal measures and external measures with regards to market .hh so we
thought about doing that kind of aggregation where we've done an account profile
[A]: mm
[C]: so what we came up with (.) is something like this (.)
under the: market overview you have two tabs internal measures and external measures
(.)
[and then
[A]: [mm

[C]: group whatever is internal measure as part of that (.) and external measures keep attachments and eh dashboard comments at the same level
[A]: mm
((C] continues explaining the solution suggestion (for 1 min. 12 sec., not transcribed) and asking whether it makes sense.))
[C]: market profile would go because (.)
[headcount is not required
[D]: [(yea) mm
[C]: so if headcount is not required [in: report also
[H]: [()
[D]: yea
[C]: country monthly scorecard [report has headcount
[H]: [()
[C]: yea
[D]: → but didn't eh [person_M] say that country monthly scorecard is basically not needed
[H]: → no
[C]: → no no no country[monthly scorecard is needed
[H]: → [country monthly scorecard is needed
[D]: ye[a well
[H]: [country overview he was saying
[D]: → no but also country monthly scorecard he () but yea let's not go to that now but (I-I understood him correctly) ()
[H]: ()
[A]: no we are not taking that away
[D]: no

8.14 #23 Inconsistency in reports

[C]: period had () (in two lines) in-con-sistently (.) I think this is ee'
[H]: this is by [person_Q] actually eh: what happened in one report () autoarranging () (best) possible fit [that you have it on your screen
[A]: [mm
[H]: so some ee periods like (pee-ten) two-thousand-and-seven or something like that because it was autoarranging it has to comp compress it into a screen
[A]: mm
[H]: it's just made like pee-ten on top and then below the (two-thousand-and-seven) () (.) so then somebody said that should be ()
[D]: can you do that
[H]: e we can do that but it will be like eh (.) it'll also not guarantee that () every time it'll be fully arrang (it) (but) if you asked eh the best way to have it autoarrange (.) and anyway we're talking that we'll change the layout a bit in the financial dashboards (.) so aa in that case i:it this problem might not be there (.) [and eh
[D]: [and could could it have been a data problem or
[H]: no it's [not data problem
[C]: [it's not data problem (.) it's like if you have too many columns in a page then what happens is it tries to fit it in the same page (.) it prevents you from scrolling too much on the right (.) that's where it does that autoformatting [like
[D]: [(what)
[C]: it's like in word or excel [when you compress at it
[D]: [()
[A]: [()
[C]: [kind of wrap text functionality
[D]: but why does it compress only for some
[H]: >no no< it will compress for all because while we observe those only those reports which have [thirteen months
[D]: [yea
[H]: like eh and and you can if we change the year it's like say () two years span you'll have twenty-four months something like that
[D]: mm
[H]: so there (we observe) if you check in () observation on some of those reports which has those thirteen months or fourteen months (.) and if you don't have those many columns then you don't have this problem (.) it's only about
[D]: I I think it's now if it's consistent so that if it has to like compress or what(ever) you say then it can be in two lines but if it doesn't then it should all all always be on one line or something

[C]: that automatically is taken care of
[D]: [()
[C]: [if if in that same selection you make it for like one year then there will be no wrap text it'll spread (.) but if you make it two years then the report would
[D]: yea
[C]: bring it closer
[D]: but (all them) because [because we saw some some that that
[C]: [o:kay okay okay
[C]: (so was it for all)
[H]: () because it depends on the data month () also ()
[D]: yea cos it doesn't look good if some are and some are not
[C]: "okay"
[H]: we will look into this and eh (.) whatever we can do we try to do
[D]: yea (.)

8.15 #26 Markets snapshot report (business environment)

((Team is discussing the visibility of certain data (average net price existing even when there is no sales) in a market snapshot report))

[C]: I think this is with regards to [unit] regions like [country_1] north south east they are still
[H]: appearing in the
[C]: appearing
[H]: () (problem) because there are () arguments (in)
[C]: the whole confusion is because of that (1) cos what happens is that when you come below country level
[A]: mm
[C]: like this will be in [country_1] and [country_2]
[A]: mm yea
[C]: so now there are some measures that you get from [ABC] are at the [country_1] level
[A]: mm
[C]: and the user can actually in the [dropdown select regions as well
[A]: [mm
[C]: so that is where all this (.) this entire cee-ar revolves around
[H]: (yea) ()
[A]: so it's not show-showing a real figures then on
[H]: no actually what happen is that if selected [country_1] east and now you are calculating average net price
[A]: mm
[H]: it is like net sales divided by [Info0]
[A]: okay
[H]: so what average net price did (.) it summed up all the sell net sales figure in that organisation
[A]: yea
[H]: [country1] east divided by the sales [Info0] in [country_1] east organisation
[A]: yea
[H]: but eh (.) the user didn't get the market [Info0] or value (.) because those figures are coming at [country_1] level
[A]: yes there are no figures for that [(they're regional)
[H]: [yes (.) so that's why they commented that they can see average net price but they can not see sales because (.) the total market size is not coming
[J]: let's go to the attachment ()
((some 12 seconds left untranscribed as the participants are opening the attachment))
[J]: the first one is market figures
[A]: yea
[J]: which are not available (.) the lower one [is [company] figure [which
[A]: [aah yea
[C]: [here we selected [country1]
east
[H]: () physically account level figures aggregated at [country_1] east level (.) and the top one is something directly tagged with the market and [country_1] is not with [the market
[A]: [yea but ee
I believe that we should have it like this (.) ee at least we should not like hide (.) these figures if we are having those (.) at the moment (.) instead we should like explain (.) then that why we are not getting figures
[H]: yea

[A]: in here when we are looking at the region level but maybe it should read like (.) see (.) the lowest level is the country level or or I don't know

[H]: some

[D]: yea

[A]: how to explain them (.) there is already now this information screen we can add it (.) in here saying that you can't (.) you're not able to see figures in the region

[J]: no

[A]: or below country level or (something)

[J]: no actually the problem was (.) you will not be able to see () per country because (.) that is total market figures from [ABC] (.) and [ABC] will never give the market value=

[A]: =yea=

[J]: =so they will always give [Info0] (.) so that figure that graph will always remain nil

[A]: mm

[H]: (nil) yea because that is value graph (.) so value we're not getting from [ABC] we're only getting [Info0]

[A]: oh yea

(([H] and [J] talking simultaneously 3 secs))

[J]: so for () countries that figure will always remain blank

[A]: but how

[J]: () so this will be there

[A]: are we getting this value in (.) is it some [SYSTEM_2] side

[J]: [no [ABC] data

[H]: [(no nothing) it's just there (.) we're not getting anything

[D]: so should we (.) remove it or

[A]: so we (.) we never get any figures

[J]: no

[C]: we should recheck [with [ABC] if they could give us a value

[A]: [u::hhh

[C]: because what happened [when we

[A]: market value

[C]: (originally I think) [person_O] got this information that we would get it

[J]: yes

[C]: but when we discussed it with the [ABC] team they said we can not give it (.) get it that was the reason the report was then there but actually no data came for it

[J]: actually (.) we had a call with [person_P] and [person_M] for this issue () I think (.) where they explained this issue and she agreed that okay we'll keep these figures

[A]: yea [let's keep

[J]: [let's keep these graphs and [she was okay with it

[A]: [yea

[H]: [()

[D]: [but why you [would keep those

[J]: [(and it's not commenting () after we had that [discussion on this

[A]: [okay hey (.) let's keep this

like this but let's start investigating if we could get those value figures from [ABC] or (.) or not

APPENDIX 3 – MEETING 2, DECEMBER 4, 2007

Duration: 02:21:00 (141 mins)

Transcribed: 00:26:08

8.16 #1 Getting organized

[C]: In addition to that eh there are a couple of things which we would still want to discuss what is the [ACRONYM] process - so [D] has eh kinda drawn the process flow for [[ACRONYM]]
[D]: [mhm]
((Beep sound indicating that someone came online in the phone conference))
[C]: so eh at least to.. from the starting point of view there are two options that we have..
[A]: yea
[C]: We would like to maybe spend a couple of minutes on those two options
[D]: mhm
[C]: so whichever from the usability point of view seems to be a better option and we can look at that.
[A]: yea
[C]: so this is based on thee e kind of analysis that we have been doing at a technical (.) eh from the technical solutioning point of view
[A]: mhm
[C]: also (.) an update (.) from the campaign point of view the process that we discussed last time is technically possible
[A]: mhm
[C]: so account manager can directly go and create campaigns or add campaigns two buttons as we discussed last time
[A]: that's good
[C]: so that can technically be done
[A]: yea that's good to hear
[C]: We: have not been able to get time from [Country_1] in terms of validating the campaign process for opportunity management (.)
[D] had to do the call this morning but we didn't have any participants from [Country_1]
[A]: Mmm
[C]: so that is still pending as an action item
[A]: okay

8.17 #4 Remove/hide fields that are automatically filled in the [SYSTEM_2] side (length: 11:07)

[J]: There's some requirements which were there (.)
in the requirement excel (.)
we did not have () information (.)
and so we did not (.)
(we need you to say) what to do with these like (.)
this requirement is (.) about remove manually (filled) fields (.)
from market information update such as market [info0] [info1] and all (.)
so, (.) what do we do with these
[A]: Ee:hm (1.5) well the question actually is that should we hide those columns which are automatically filled (.)
[D]: mhm
[A]: in [SYSTEM_2] side because the the main reason to have those is to (.)
to be able to see the reports (.)
actually so we're not using those for for [for kind of reporting purposes in the [SYSTEM_2] side.
[D]: [mm]
[C]: mhm
[A]: so I guess this is coming coming from that perspective (.)
so (.) that the u-users won't like confuse about those columns when those are not yet filled.
[D]: mm
[A]: so so we can actually check the tool.
[J]: yea
[A]: if if if you want (.)
so we can explain more but
[E]: yea open ()
[C]: IT tool environment

[J]: ()
[B]: I can open that eh (.)
what I was about to ask is that has this been logged as a requirement item?
[C]: [yes. I think there'll be a reference there
[J]: [() be a number (.) for this item
[C]: for [Area]
[A]: so actually (.) I-I guess eh (.)
it should it should not be stated that we should *remove* those (.)
instead, we should maybe *hide* (.)
[E]? No:h
[A]: actually those fields that are automatically (.) filled
but but then there are for example so-some [ACRONYM] (.)
[D]: mm
[A]: metrics that are automatically [filled by [ABC] data so so (.)
[D]: [yea ((quiet voice))
[A]: [those *those* we don't need to hide
[C]: [we don't need to
[D]: but
[C]: we don't fill that as an actual on the [SYSTEM_2] side it's always (blank)
it (does) only appears in reports [(directly)
[D]: [mm
[C]: so that (.) already is there (1)
[A]: mm
[D]: okay but ee like (.) it's easier to hide but we we don't need those (.)
fields in future if it always comes from the financial [side
[A]: [mm okay yea
[D]: so why would you need them in in [SYSTEM_1] ee P-[SYSTEM_2] side
[C]: you need to set targets in [SYSTEM_2]
[D]: [yea targets but,
[C]: [if you don't set targets then how will you find whether you have achieved them or not (.)
so in [ACRONYM] metric once [you define (them)
[D]: [yea in [ACRONYM] but for example these eh w-what were
the examples so (.) .hhhh
[A]: yea let let's c[heck the examples (.)
[D]: [yea
[A]: it's much more easier to understand (2)
[J]: () (3)
[D]: for example in use cases I have just removed those (.)
so fields (.) that I (0.2) think that is (.)
that are not needed they should come directly from (.) financials. (3)
((Mumbling talk on the background))
[C]: What were the examples there?
[J]: Examples were not given there.
[D]: Market
[J]: () just says (.) market, [info0], [info1] and [ACR] (1)
[E]: () need to (open) in the [SYSTEM_2] those fields ()
[J]: market [info0] is what we enter and ([SYSTEM_2]) [info1] we don't enter and [ACR] so
[E]: ()
[J]: ()
[A]: So which fields fields we actually manually enter and
[C]: All these are manually entered (.) so
[J]: [info0] and [ACR] are entered (.)
[info1] we don't enter
[A]: so [info1] is coming from [ABC]
[J]: [info1] (also) we do not get from [ABC] (2)
so only one field is (coming) that is [info2] [info0] (.)
which we enter here yearly (.)
and we get from [ABC] quarterly
that is only (0.2) (measure) which is coming.
[C]: [but what [ABC]
[A]: [oh so so we get the [info2] [info0] (.)
even from [ABC]
[J]: yes (.) we get it quarterly from there yes.
[A]: so so should we actually (.)
automatically fill that that (.) one as well
[C]: the only question there is [what does
[A]: [() yearly figures

[C]: what does [ABC] provide, is it [Company] market [info0] or is it total market [info0]
Many: total ((simultaneously from multiple people))
[E]: total total
[C]: okay (.) so so we can hide this from [SYSTEM_2] here (.)
and just show it on the report in the [SYSTEM_1] side (2)
that can be done
[A]: yea we should (.) like do (.)
as much as possible automatically and then (.)
like hide all those columns that are not (.) [supposed to be filled
[needed
[E]: by user so (.) then (.) that that's kind of usability issue as well
[D]: mm ((very quietly))
[J]: ()
[B]: [()
[A]: [but I also kind of understand your (.)
your point in here because when it might be useful to see it
[J]: ()
[A]: here with the rest of the figures
[J]: yes
[A]: in some level so
[E]: [()
[C]: [and then it is entered once in year for a country
mm
[C]: so (.) so like it's one person in [Country_2] has to enter it once a year
[A]: mm, so I I wouldn't like remove those columns yet because I guess it's quite easy [to hide
[J]: [yes
[A]: those columns if if needed
[C]: yes ()
[A]: so in this point I would s-still have those columns in (.)
and then, we can later on decide before deployments (.)
that let's hide these columns or or something like that because
[E]: well eh
[A]: I want to see those like like those applets wh-when we load the data
[J]: okay
[A]: and w how those seem (.)
yes, [E], you
[E]: no hiding means eh hiding the () from the user interface point of view or hiding the ()
from the system
[A]: hiding from the user interface
[E]: okay
[A]: point of view (.)
because it's really easy
[E]: yea yea that's real easy
[A]: and it doesn't like (.)
there's no performance issues or anything [like that
[E]: [no but if someone again (.)
h-he can make it unhide so
[A]: yea, [ee, yea they can but
[E]: [or can they control it
[A]: then maybe someone wants to see those figures in the [SYSTEM_2] side (.)
some, [someone
[E]: [mhhmm, yea
[A]: don't, so (.)
so I I guess that (0.2)
the best solution would be that we would (hiding) (.)
instead of removing because I really yea I understand that seeing those figures in the
same line might be beneficial (.)
at the same time so so from the concepting point of view I would like to (.)
have those figures still still in but (0.2) not remove the columns
[E]: okay
[J]: yes
[A]: completely
Offshore: () eighty seven
[J]: okay
[A]: because it's a configuration issue then then to hide the columns so it's (a bad) reason
[E]: no () from the user interface hiding is () just there is already eh context [() to hide them
[A]: [yeah, yeah

[C]: there is one place that I found where you can remove some of the columns if you go, [B], to market overview (1) and eh (0.2)

[B]: yea

[C]: (competitor) environment

[B]: yes

[C]: okay now, if you go below (.) you get sales [info1] sales [info0] (.) then market share (.) [info1] (.) this is for market overview and you have market share, [info1], percentage, market share, [info0] percentage

[A]: mm

[C]: now percentage calculations can be done provided we ensure that all competitors are defined for that market

[D]: mm

[A]: yea

[C]: so (1)

[A]: .hh but the that means that all the competitor information is in

[B]: [ye:es]

[C]: is in

[A]: so there is always risk [that someone is not filling

[D]: [mm]

[C]: yes

[B]: yes

[A]: and then the market share is is completely different so

[J]: yes yes

[C]: that's right

[A]: so I'm a bit afraid that that we're not getting all the figures every time so

[D]: [yea]

[D]: so small competitors

[A]: but you're right actually that that it can be calculated (2)

[C]: it can be done provided that everybody enters everything (.) so if that is not the case then you would still like to keep the percentage value

[A]: yea, but it means that then there need to be really strict guidelines how to (.) what information needs to be filled or then then some (.) some kind of somehow kind of a rule ((laughs)) and it's really hard to define that

[C]: yea

[A]: kind of a rule that is (.) if all the competitor information is in

[C]: [yes]

[D]: [mm]

[C]: definitely point(h) is there (.) so that's again a trade-off

[B]: yes

[C]: so we need to whether we leave it like this or we ()

[A]: mm

[B]: coming back to the the point (.) h-hi-hiding (.) market [info0] (.) it's it's not just (there's no) hiding because then there's this report in country monthly scorecard (.) eh so hiding means we are (.) sort of letting users not enter it and which means that in this () because there is no market [info0]

[C]: w-we get it from [ABC]

[A]: we are getting it from [ABC]

[D]: mmh

[B]: then we ought to do that change

[J]: then this report ()

[B]: (all I'm trying to say) ((overlapping with previous, indecipherable))

[C]: yes, yes yes yes it is

[B]: () ((overlapping, and [B] sitting further away from the microphone than [C]))

[C]: so (primary) what happens, [A], is currently we're getting this data from [SYSTEM_2]

[A]: mm

[D]: mm

[C]: as a source (0.2) if we now change it, then we will have to get this data from [SYSTEM_1] (.) and not only get it but (.) cumulate it (.) like for four quarters and total it up to a country

[A]: but it is it

[C]: so it will be (.) like it'll be a change because [you're
[A]: [mhm
[C]: we have to define new mappings on () and get it and some logic to aggregate it
[A]: but I believe that it's eh
[C]: it *can* be done
[A]: yeah
[C]: so (.) it's not that it cannot be done just that eh,
[A]: I-I guess that figures from [ABC] are more accurate than the figures that we are keying in
in the [[SYSTEM_2] side so
[D]: [yea
((noise from phone line))
[A]: in in that sense it it would be like the [Company] official figures then
[C]: yes
[A]: and then then we are (.) really
[C]: yes
[A]: following the right line (1) from here (0.5) [I believe that we should do it like that
[C]: [can be done
[C]: okay so let's put that as a (.) change
(3)
[B]: so (.) maybe I'll come back to [J]'s question
[J]: ()
[B]: so, so we are here talking about eh market [info0]
[A]: mm
[C]: market [info0]
[B]: () we are identifying another data point
[A]: mm
[D]: [()
[C]: [so this is as of now just the market [info0] (.)
which needs to: come up from (.)
so we will keep the [SYSTEM_2] field however, (.)
what we've decided is on the reports we would get it from, [[ABC]
[A]: [from [ABC] yea
[J]: so that's then conflicting (.)
() we should not keep [SYSTEM_2] field if we [want to use the [ABC] data
[D]: [mm-yea I agree .hhh
[J]: because if we keep the [ABC] [SYSTEM_2] field and people enter the [SYSTEM_2] data
here and what we see in [SYSTEM_2] will be different from what we show in [SYSTEM_1]
[C]: yes
[J]: we need to stick to one either this or that
[A]: so the [SYSTEM_2] field actually is not (.)
th-that column is not filled by [ABC] numbers
[C]: no (.) no no [ABC] data comes to [SYSTEM_2] (.) that's a thumb rule which we've had
[D]: [(no no)
[A]: oka:y, yea
[D]: yea
[A]: even in case of some [ACRONYM] metrics
[C]: [nothing comes nothing comes because
[E]: [no no no yea no
[A]: everything is manually keyed
[C]: the re[ason is [SYSTEM_2] data goes into your (.) eh mobile client
[E]: [yes
[A]: mm
[C]: and mobile client is not a secure database (.)
so financial information we don't take into (.) the user's laptop
[E]: [yea mainly if we u
[A]: [okay then I-I I think that we should not have it in
[C]: [SYSTEM_2]
[A]: mm
[E]: if we use just [SYSTEM_1] data then we can hide those field from the (.) [SYSTEM_2]
[C]: remove it
[E]: [remove it
[D]: [remove it is better yea
[E]: because there is no use anymore [(but
[D]: [mmh
[C]: okay (.)
so (.) can we decide that, now?
[A]: let let's think about it

[J]: let's think again
[A]: I'd say yea let's let's have it (.) still open
[J]: okay yes yes
[B]: () (...is important here) (([B]'s voice drowning again))
[A]: yea I I believe so
[C]: okay (.)
so let's put that as a requirement and take an effort implication for this change (.)
and then as part of gap analysis (.) prioritize whether it's in or it's out
[A]: yea

8.18 #9 Buying from and selling to applets (length: 08:05)

[B]: Alright eh let's move on to next item (.)
bying from and selling to applets automatic calculation rule, percentage can () more than
hundred in second period (3)
so eh question is
[J]: () what are the solutions like (2)
how does system prevent it (.)
y-you would want a button for user to check it (.)
whether it's thirty percent less or no
[A]: mmh
[J]: or
(2)
[D]: eeh [(I don't know ()
[A]: [()
[B]: [() always when a new record is added (.) for a es-tee-pee
(2)
[A]: yea, [for example, when you're [adding a new record it's
[J]: [() [()
[D]: it's difficult to have because we add one record at a time so it should then (.)
when you have all (1)
for that period th-then it should check, or
wh-why is it actually difficult
[A]: for the hal
[D]: hey (0.5) if you're adding now a (.) new es-tee-pee
[A]: yea
[C]: mhm
[A]: e like eitch ((h)) one two thousand and eight it would (.)
automatically be filled like one hundred percent
[D]: yea so eh
[A]: and then when you can like change that one (0.2)
and when you are adding a next one it's calculating automatically
(1)
[D]: mm
(2)
[A]: or [how do you see it, what is possible?
[B]: [() ([A]) this thing is something different from what
[J]: yes yes
[A]: what is was is what is like the (0.2) solution you're proposing for this autom-automatic
calculation?
[B]: I think I would like to take one step back and eh give our impression of requirement
[A]: mhm
[B]: eh our impression is that you can not have more than hundred percent buying and selling
[A]: yea, that's quite clear, yea
[B]: so, every time you enter, system calculates for that es-tee-pee
[A]: mhm
[B]: what is the
[A]: mhm
[B]: sum total of ()
[A]: yes
[B]: and if it goes above hundred system prompts that you can't have more than hundred
percent
[A]: yes
[B]: so but, the percentages are always entered by users that's our understanding of
requirement
[A]: mhm

[B]: so it's not something that is getting autopopulated
[A]: mhm
[B]: what I gather from you is that (.)
you create a record (.)
it gets autopopulated
[A]: yea well well that that's just one one kind of solution
[B]: () part, okay, okay
[D]: mm
[A]: so that's just I'm just proposing what would be like the easiest way to have it
[B]: alright (.) eh
[J]: () (button is) available [()
[C]: [no I don't (.) so family (1.5) okay (.)
so y there is a percentage column here
[J]: yea ()
[B]: [(in an es-tee-pee)
[J]: [() ((laughs))
[D]: I think the most simple should be that it can't go over one hundred but h should it also
check that it's (.)
it is one hundred and then then it ()
[J]: () exactly one hundred
[D]: yea, so it makes it a little bit
[C]: but maybe the question would be that is it required to be exactly hundred, first question (.)
second is ee (.)
how we then achieve it
[D]: yea
[C]: in terms of
[D]: th
[B]: I think exactly one hundred I would disagree because you may not exactly know your
bying and
[J]: yes
[B]: selling pattern (.)
it's just it can't be more than hundred
[C]: it can be others can we put eh (.)
others as an account?
[B]: yea then you are forcing somebody that if you don't know then it is others ((laughs))
[A]: but what happens if they only know (.) that
[B]: yea
[A]: sixty percent (.)
we are buying from from *these* parties but what [()
[B]: [() yea, account is not declared
[A]: yea
[B]: or not shared
[C]: yea, [xx_plan] the current version it is hundred percent
[D]: yea, it is
[C]: it is, they forcing it to be hundred percent so (.)
I think we have to stick to that hundred percent at least
[A]: yea
[D]: but
[B]: I don't I don't understand it because then when suppose I enter () I make first entry,
buying twenty-five percent from [company] (.)
wh-what does system do what does system validate?
[D]: nothing yet
[B]: nothing right, so exact hundred percent is always a typical but if I say (.)
twenty-five percent from [company], and hundred percent from other distributors then
system says sorry you cannot buy hundred twenty-five percent
[A]: mm
[B]: it means (.) so that it is something which I'm able to at least understand
[()
[A]: [okay, that's that's something that we are requiring
[C]: okay, let's make it as (.) upper limit is hundred [percent
[A]: [yea
[D]: [yea
[B]: yes yes (.) for a es-tee-pee
[A]: mm
[B]: so and that is what (.)
generally the element of complexity is that system has to always get require an es-tee-pee
but

[D]: yea
[B]: I hope it does not have any performance implications
[J]: () once the user is able to () that record
[D]: yes
[A]: mm
[D]: yes (.) no button ()
[J]: [()
[B]: [every time you create a new record ()
[A]: [no button, yea, to validate (.) the figure
[J]: okay
[B]: I'll not go for the solution where user validates because
[D]: no, no [no
[J]: [()
[B]: it is very difficult for the user to always remember that [I need to validate
[J]: [yea
[A]: yea, [let's not use them
[E]: [()
[J]: [()
[E]: [you can use a user property () I guess
[J]: () but they are different records and they are linked through a parent record
[C]: it will not work (.)
the user property will not work here
[E]: it's linked to multiple records?
[C]: yes (.) you can have multiple records for eitsch-two, twothousandandseven (.) it need not
be one
[J]: () will be linked to their parent account (.) it has to find parent account and find other
records (.) in the same table with the parent ID
((overlapping mumbling + silence, 6 secs))
[C]: okay, I think that we have clarified it [now
[A]: [mm
[C]: It cannot exceed hundred percent let's put that as a ()
UI: () for an es-tee-pee
[C]: for an es-tee-pee, yea
[J]: ()
[C]: can we (.) also close this then (8)
so the limitation here would be that
somebody can actually put in just sixty percent [as (.) buying in
[mmh mmh
[D]: yea that's right
[A]: just sixty
[C]: can be because the validation only triggers in if it exceeds
[A]: [yea
can we then when when we are (.)
drawing these channel landscape pies (.)
piecharts in (.) in a reporting side if it's only sixty can we then illustrate that forty percent
that we don't know
[B]: unspecified
[D]: [mm
[A]: [yea
[D]: automatically somehow
[A]: because s we are we are not
[B]: () comment
[C]: .hh okay (.)
the other way round (.)
so instead of percentages can we (.) can they provide val actual values and we calculate
the percentages
[D]: no, [()
[A]: [no, that's the problem
[C]: that's the problem
[A]: and these and these are like the best estimates
[D]: yea
[J]: that's ()
[C]: () that also estimates like saying ten thousand from here and fifteen from here because
then what happens is whatever they provide that becomes hundred percent (.)
so automatically you can calculate it back (.)
just a thought

[A]: yea hopefully in in release two point five we can do that (.)
because then we are using the sell-through figures

[C]: yes (0.2) okay (.)
so eh (1)
report side (1)
I don't think because it's dyn[amically]

[B]: [because I would agree with [A] (.)]
this is this is in a way a backround of this discussion because if I enter only (.)
one record () show hundred percent and it's only one value

[D]: mhm

[B]: that's how it's calculated (.)
so even those that are buying sixty percent from one party (.)
in report it shows hundred percent ()

[C]: okay let's analyze it and get back

[B]: yes [() ((continues talking "under" [C], but inaudible))

[C]: [I don't I don't (.) we can't answer it at this point

[A]: mhm

[C]: put the action point on

[B]: us

[C]: us (.) good

(4)

[C]: (this) (.) [K], you there on the call?

(3)

Offshore: yes, [C]

[C]: okay, so

Offshore: yes, [C], [we are here

[C]: [an analysis point for (1)
the [SYSTEM_1] team (.)
if, if percentage is provided for buying from is not hundred percent can on the reporting
side we (0.2)
show that what is the percentages and the the remaining part as (.)
not known or something like that (1.5) so if (.) like buying from is only sixty percent which
has been provided for
sorry, come again?

Offshore:

[D]: ()

Offshore: okay

[C]: okay so if buying from is only provided for sixty percent (.) then (.)
the remaining forty percent is not known (.)
so in the (.) in the pie chart that is drawn so should be clearly identified that sixty percent is
from () this whereas forty percent is not known (.)
so (.) just need to analyze it and then let's see technically how whether and how it is
possible or not (3) yes

Offshore: () and we can get back to this

[C]: okay that's fine

Offshore: yes, [C]

8.19 #10 Change of graphic?

[B]: alright eh moving on eh to [person_N]'s comment (.)
so there are e it looks like question to [[J]

[J]: [mm

[B]: graphic (needs) country state city eh number of store selling [brand] is eh (not) useful
information

[J]: mm () (comment) ()

[B]: yeah

[D]: well I didn't e-even understand that that (2)
er cee-ar-or requirement like hundred percent so (1)
is it clear (.) because I've tried to update the use cases but I didn't know how to (read) this
one so

[A]: yea he's eh (.) what he's really meaning here is that (2)
should we modify that specific applet (.)
and remove for example the number of stores selling to (.)
if you can show that (.) there it is (2)
yea there

[B]: () (very clear)

[A]: no was it in the [stakeholder] [stakeholder] profile

[B]: [()

[A]: there you have it
[B]: yea
[D]: (°and just remove it°)
[A]: so he-he:'s not seeing the benefits or the value for for this column also
[C]: for this full applet
[A]: no: he's saying actually that the applet might be (.)
useful that but we need to define again that wh-what actually we should be
[C]: ()
[A]: info-information that we are looking after (2) in here
[B]: this is eh from eh first release
[thi]s particular requirement
[A]: [mm
[D] [mm
[B]: so maybe it is (.) to some extent area specific (.) eh information
() (and it is not used for example in [country_1] or)
[A]: yea actually we should see that we need to see how they've been using this in [TOOL]
one point zero
[B]: yes yea (1) °exactly°
[A]: but w-we need to leave this open because i-it was more like an open question from
[person_N]'s end as well so (1)
he didn't define that (.) what is replacing that column or or like that so
[B]: alright
[A]: just saying let me think about it
[C]: okay (.) it is for input or analysis
[A]: yea yea from the business
[C]: (leave it) open
[A]: and if we're not getting the input it's not going to be in two point one so
[C]: yes we'll draw a timeline when ((laughs)) we have to [draw
[A]: [yea
[C]: what goes in and what doesn't so (.) that's fine let's keep it open
[B]: I'm not sure [D] if it's possible for you to (.) just have a quick word with [person_M] (.)
[D]: [yea
[B]: [because this is a (release one) requirement [()
[D]: [yea yea (put my name in there) () (.) I'm
just wondering that should we
[A]: yea it might be some hh () that this is the same that we were discussing with [person_N]
that that actually it might be that it's [Area] requirement that they are really needing this (.)
in there so we need to (.) investigate that so if you can [D] check that with [person_M]
[D]: mhm
[C]: it is [Area] requirement (one dot zero)
[A]: yea they have a bit different kind of market over there and it's not so valuable for [Area1]
or for [Area2] or ()
[B]: Alright eh let's move on to next item eh (.)

8.20 #11 Channel landscape (length: 04:24)

[B]: Alright eh let's move on to next item eh (.)
channel landscape eh removing a number of retailers, wholesalers, comma number of e-
m-dees (2) so eh question is is that in scope or not [()
[J]: [mhm
[B]: () item six seventy [()
[A]: [i-it's the same kind of thing [than than the previous one
[C]: [mhm
yes
[B]: eh [()
[D]: [from who (.)
eh was this this from [person_M] directly or is it
[C]: no it's again from [person_N]
[J]: it's from ()
[B]: I think it is [[person_M] ()
[J]: [()
((lots of overlapping talk for ~2 seconds))
[A]: okay [()
[D]: [yea

[A]: can you can you show that applet (1)
then again (.)
yea I thought that that was [person_N]'s

[D]: mmm

[7 seconds]

[B]: so aa (.) once we have this (6)
so once we have second tier accounts () we can drop number of em-dees [()
[D]: [yea ()

[B]: () second tier accounts (2)
eh (1) that's what I think this comment is (.)
eh removing number of retailers slash wholesalers and e number of em-dees which are
like second tier accounts () (.)
so this particular column number of retailers wholesalers ()

[C]: I think ee (.)
there is input here that this field can be removed as we eh () () have channel landscape
as [a separate applet

[D]: [yes

[D]: m (.) thi-this was (.) we talked about this in you-ai-tee yes

[A]: then again these columns are something that can be hh-hidden (1)
but we are not using that information in in the reporting side in the [SYSTEM_1] side at all

[B]: mhmhh

[D]: not if it's (.) double

[E]: double ()

[A]: this is only used in [SYSTEM_2] (.) I-I believe (.) I don't recall that there is a report
showing these numbers

[D]: aa

[B]: yea (.) ee could we s-some of the e one point zero reports I'm not full sure I can than ()
but (.)
if if this is [person_M]'s suggestion we can safely remove it because then those would be
[AREA_1] reports

UI: mmm

[B]: so understanding is that ehm (.)
my understanding not to capture second tier accounts multiple times (.)
so just say that what are the number of second tier accounts which are em-dees, retailers,
wholesalers

[D]: mm

[B]: this is what I remember ()

[A]: yea what? (.)
what do you mean? (0.5) Are we

[B]: what what [person_M] e has has for my understanding what he said that when you are
asking users to capture this retailer wholeseller coverage,

[A]: mhm

[B]: you are saying that okay eh provide eh number of retailers wholesalers,
then you are again asking that provide eh numb eh (.)
second tier accounts (.)
and eh (.)
then em-dees now these em-dees (distributors wholesalers) these are in a way second
tier accounts (0.5)
so (.) in that sense it's confusing information for users what is it what is it that you're
aiming to capture (.)
and harmonization was what [person_M] suggested that all these fields (.) mean same (.)
they are [()

[A]: [yea, let's remove them (.)
or at least hide them

[B]: I'm sure [th

[A]: [yea and I now I recall also () discussing with [person_M] about this
(([B] and [J] continue talking on the background but it is indecipherable))

[J]: it's mentioned [()

[A]: [yea it's a bit (confusing)

[J]: [() ((keeps on talking, but cannot tell what he's saying))

[D]: [yea

[A]: number of second accounts that we're having on the reporting side as well

[J]: the internal number ()

[B]: so [eh

[C]: [this full applet needs to be removed
(([B] and [J] continue talking on the background but it is indecipherable))

[A]: how come? How come [full applet needs to be removed?

[E]: [no no not full
[A]: We only (.) can remove those columns
[D]: two columns yea
[C]: number of retailers wholesalers () we need need to remove
[D]: and then [the number of em-dees
[A]: [yea, and the number of em-dees
[J]: em-dees yes
[C]: eeh (.) go further down?
Number of em-dees
[J]: ()
[C]: only thing which should be left (.) is number of towns covered
[B]: [three columns
[A]: [and then
[B]: second tier accounts
[A]: yea
[B]: retail outlets and towns
[C]: okay
[A]: mhm
[B]: or maybe other way around number of towns (.)
second tier accounts and outlets (.) [()
[D]: [mm yes
[J]: yes
[A]: [yea
[B]: [() (alright so eh) ((altogether ~16 secs. either mumbling or silence))
[A]: yea that can be closed
(6)
[B]: alright eh let's move on to next item ((continues))

8.21 #12 New columns for units etc.

[B]: so is it like relating a contact (with the) ee (2) [(dealings)
Many: [()
(5)
[D]: so I think [A] you can
(4)
[A]: which one [w-what is this (.) sorry (.) I don't understand at all
[D]: [()
Many: [()
[B]: [this is a requirement (which we talk about) a column for content (1)
when profiling context (.) also capturing [unit1] and [unit2] both
ee (.) though the way I would understand it is that this is that context dealing in [unit1],
[unit2] decisions of (.) whatever matters almost
[C]: yea it's there in the [xx_plan]
Many: [()
[B]: [is there any
[C]: [so what should be the caption in [tool] for this
[A]: yea (1) so what what do we have at the moment
[C]: there is nothing in [tool] at the moment=
[D]: =mm
[A]: in the context?
[C]: not not this-s (.) column
[A]: in relationship (matrix)=
[C]: =yea
(1)
[D]: t-the same=
[C]: =slide twentynine
[D]: same would be introduced for campaigns ()
[B]: slide twentynine
[A]: mm
[C]: so you see it's [unit1], [unit2] or both so that is what the caption (in surface) is saying so
we need to identify what is the caption for this in [tool]
(3)
[A]: Oka:::y
(6)
[E]: yea I'm just ((coughs)) saying (.) so (.) also column name also defined by concept? Or
normally=

[C]: >yes yes<
[E]: Okhhay ((laughingly))
[C]: if it's () but if it's a new column that we are introducing then it's better to align to all business needs
[E]: () I thought that ()
[C]: can be eitherways
(2)
[A]: so we need to have just a column where a list of values (.) is=
[B]: =aaw (okay)
[D]: yea
[B]: ()
[C]: yea (.) so that is fine there'll be a column with a [drop-down
[D]: [mmm
[C]: but what should be the name of=
[A]: the column name=
[C]: =[caption
[A]: [yea
[C]: associated unit or associated business unit or ()
[B]: (organizational) (2) (what operational)
[C]: operational unit
(3)
[A]: is that that something that we already have defined?
Many: ()
[C]: for products () but not for contacts (1)
what what people understand when ee () is filling in a contact here
is we have a column named we call an operation unit will (.)
the person be able to associate what he needs to fill there
[A]: [mm
[D]: [()
[A]: when he's seeing the list of values (.) I-I believe that he=
[D]: =mm
[C]: okay so can we call as::
[B]: oper[ational unit
[D]: [operational unit
[C]: or associated operational unit (.) what is better
((many voices on top of each other))
[B]: okay
[C]: operational unit
((some indecipherable voices))
[C]: is operational unit fine then?

8.22 #16 [ACR] (32 secs)

[B]: I guess I was expecting for some kind of collective objection from this () and as [D] knows
and [C] knows () of this particular data item (.) so it started as [company] [ACR]
[A]: mm
[B]: somewhere down the line (.) objected (.) and rephrased as [company] [indicator] ()
[E]: yea that's what we are calculating that one
[A]: mm
[B]: yes (.) and now we are going back to [company] [ACR] [()
[A]: [no no we are we are not
going if [team] is saying that we are not allowed to [go so
[E]: [() I think we cannot
[A]: so this is just (.) they are stating from the business side (.) that we should

8.23 #20 [Info0] growth rate (01:07=>02:06)

[A]: the growth rate yea (1) so the growth rate percentage (.) we should not have that column
in (.) there (.) ins-instead we should calculate that automatically in the [System_2] [(so)
[C]: [()
[A]: we can actually calculate that from previou (or) from the total
[C]: is that [info0] growth rate or [info1] growth rate
[A]: [info0]
[C]: [info0] ()
[A]: [info0]

(2)
[C]: okay (.) what was (the [question])
[B]: [because [person_M]'s comment suggest (.) that we should have
[info1]
[A]: [person_M] is saying [info1]?
[B]: yea
[A]: okay (.) let's check actually that (.) cos (.) (3) but maybe if [person_M] is saying that it's
[info1] it's it's calculated currently in the [area] (.) at least
[C]: ([info1] is)
[B]: ()
[A]: okay (.) let's base it on [info1] (.) the I guess it's [person_M] is probably right

APPENDIX 4 – MEETING 3, DECEMBER 10, 2007

Duration: 01:58:00 (118 mins)

Transcribed: 00:21:47

8.24 #7 Pie chart for channel landscape

[B]: moving on to (.) next item=
[A]: =yea=
[B]: =analyse possibility of building a pie chart for channel landscape eh yea context here is that eh (.) what happens if user is eh (.) not (.3) eh capturing bying or selling pattern that sums up to hundred percent in [Info0] (2) requirement what we eh understood eh was that system should automatically eh complete the pie chart (.2) eh identifying a segment as un-unspecified (.) we are investigating it it seems eh difficult in the way we thought (.) we would like to achieve it (.) eh however now we are: exploring possibility of showing a error message to the user=
[D]: =mm=
[B]: =which means that if a user is not capturing eh bying or selling percent which sums totals up to hundred percent then on [SYSTEM_1] side the system can prompt user that the eh this is not summing up to hundred percent eh=
[A]: =mm=
[B]: =please update it now here again we have two possibilities one is to build the pie chart anyhow (.) e by giving a warn[ing
[D]: [mm
[B]: to user (.) that your pie chart is not based on hundred percent (.) totals but this is the break-up (.) or only show error and not show pie chart until user has updated this is something that we are exploring at this point in time (.) [eh (2)
[A]: [yea
[B]: would you (.) do you have any opinion at this point in time which would be a better eh aa approach meaning build pie chart without having one hundred percent eh [Info0] shares (0.2) and give a error or just give o-only an error which would be like more controlled approach (0.2)
[A]: I-I think it's good enough if the system gives notification that
[B]: [alright
[A]: [eh when eh this one hundred percent rule is not met
[G]: mm
[B]: ()
[A]: so it's it's in a user who needs to define the landscape so that that the one hundred percentage (.) is is met (0.5)
[B]: okay
[A]: so, I think it is good good enough that the system gives that notification and then user knows what what to do
[B]: right
[D]: yea and it's on on [SYSTEM_1] side not not on o-operational side so
[B]: yes
[D]: yea (.) so I I think it's not the optimal but if it's the only way then (.) then we have to go this way
[B]: yea
[A]: wh-what do you mean that it's in [SYSTEM_1] side not in the [SYSTEM_2]?
[U]: ()
[D]: so it's only on the report that they can see this error message and eh (.) and eh (0.2) then they have to go back to operational side and correct it and then then (.) it will be okay (0.5) so hhh
[A]: s-so what if user er defines something that is over one hundred percent (.) and if it's in the [SYSTEM_1] side?
[D]: yea there there will be error messaging in (.) but as I said this is not op-optimal solution so
[A]: yeah, this is bad. (3)
[D]: [can you still explore
[A]: [(is there any, any other)
[D]: yea, sorry
[A]: is there any other way to do it in the [SYSTEM_2] side actually (.) that it's giving *there* the notification when you are filling in the information

[B]: yea, [A], I can maybe:ee explain you eh (.)
when when we were stuck what were we thinking when we were trying to arrive at such a solution [eh]

[A]: [mm]

[B]: our reference being [xx_plan] what when we w when we observe it what we see that it's always supposed to be eh reported (.)
such that the totals of the [Info0]s total up to hundred percent so the thinking is that in-in in a regular course users have hundred percent break-up available (.)
eh which could be like thirty percent unspecified or unknown (.)
we were working on eh (.)
those lines (.)
so eh this idea of error was that it it's only (.)
in in some exceptional cases from reporting point of view what happens is that if someone is not reporting hundred percent buying or selling percent then probably the account plan which is submitted for review's in a way not ready and and the user will not submit it .h that was the thinking here

[D]: mhm

[B]: so so it it was that at the time of review it becomes important that now do we have hundred percent break-up available and that's when we thought (.) maybe a error message is only (.) good enough here (2)
so what we are assuming that eh what users are expected to submit is a hundred percent break-up and therefore they know it (.)
e: only in exceptional cases wherein by mistake they have (.)
probably either missed out some value or (0.5)
something like that (.)
that's () is required so that's that's what our thinking was when we thought about this solution
(3)

[D]: mmm

[F]: but with this one it might be that the user doesn't even notice that he is missing the hundred since he (might) not necessary go to the [SYSTEM_1] side at all

[A]: mm (0.5) exactly (3)

[D]: yea this then (.) somebody else need to communicate that please (.)
correct this and

[A]: sorry, I couldn't hear you

[D]: yea (.) I then somebody else has to communicate to the account managers that please-correct this one so it's (0.5)
maybeh this is not the op-optimal now so err (1.5)
sh-should you still try to find another solution or (.)
[A] (.) how do you want to proceed in this one?
yea definitely not going to do that S-[SYSTEM_1] thing

[D]: okay.

[A]: yea

[D]: have you thought of everything or (.) is there still still some possi[bility]

[B]: [yea I think until until last discussion we werree mhm stuck with [SYSTEM_2] and then we decided to find the solution on [SYSTEM_1] side let let system fill the gap that () resolution last time was can [SYSTEM_1] handle it somehow (.) and [that's the ()]

[D]: [mmh I don't recall that (1.5) at all I thinkhh (.) I at least I I thought it would be on the operational side but=

[A]: [=yea, definitely that's something that we have been communicating all the time

[B]: [no, that's documented in my memo (.) that's what we agreed

[A]: that the rule needs to be there when you're filling in the numbers so

[D]: hmh

[A]: because for (.) yea (1) definitely in the [SYSTEM_2] side (3)
because there there is the like error (.) error happening
how good or bad would it be if we give eh (.)
custom button which does the validation (.)
so if you hit on the button it validates whether it's hundred percent or not (2)
it-it would not not force a user to make it hundred percent but there is a facility for the user to validate whether it's hundred percent or not

[A]: that needs to happen automatically

[D]: yea a

[C]: the challenge with automatically would only be that the system would not know when the users: have finished entering (.) so so if we make it mandatory then if for some reason for this es-tee-pee you have still not got the hundred percent information then you would never be able to step out of that view

[G]: mm
[C]: system would not let you (.)
step out (.)
so you will be stuck till the time you give hundred percent (.)
and that would not be a very (.) user-friendly thing to do

[B]: ye-actually (.) I mean unfortunately we are going back to this discussion we had [last time
[C]: [yea, I
know
[B]: when you said let [SYSTEM_1] handle it,
[D]: [nnhh
[B]: [(we documented) ()
[C]: let's let's maybe refresh everybody's mind
[A]: o, no no
[C]: because we discussed this but I think we we have forgotten that (.)
over period of time so what happens is you're doing a multiple row entry

[D]: mm
[C]: so if like you have entered three rows and it totals up to sixty percent (.)
for any *practical* purpose you at this point of time *don't* have the information(.)
if we make it mandatory, then you can never step out of that view

[D]: yea
[C]: so (.) so that has the the problem with that, and the second thing the system would not
know that this is the last entry you're doing (.)
because for some accounts there might be (.) five people who are buying, for some other
there might be ten people who are buying (.)
so so there is no (.) like we can build a rule provided we know the logic (.) so here (.)
the challenge would be the logic (5)

[D]: so
[C]: so (.) the other option is we give a button saying that validate that can do that it checks
whether for each es-tee-pee it totals up to hundred or not if that does not it gives you a
custom error message saying that for (.)
this es-tee-pee it's not hundred percent

Someone:
[C]: mm
that's still possible (5)
[D]: yea (1) and was there then some hh other item then that we we discussed that it can't go
over one hundred percent but it can [be less
[C]: [[ACRONYM]
[D]: [yea
[C]: [this is for [ACRONYM] metric and then that we have the submit functionality
[D]: yea
[C]: so when you do submit then it does the total up
[D]: yea
[C]: so there has to be some (0.2)
the other thing what we can do here also as eh for channel landscape (.)
but then that will make it too complicated since you put a submit functionality til that time
the information doesn't go to the [SYSTEM_1]

[D]: mm, yea
[C]: but then that's making it a bit more complicated than business would want it to be (3)
and the other possibility which we discussed that time was can you put [Info0] and then
calculate the [percentage
[D]: [yea yea
[C]: out of [Info0] and then we decided that is not very (.) feasible
[A]: yea because they don't have that [[Info0]
[C]: [yes
[A]: [information in hand so
[C]: [yes yes yes
[A]: but I don'thh I don't see what is the big problem or actually over here because you are
actually keying in (.)
like four figures (.)
and it should not be that difficult to (.)
key in four figures which which the sum is (.)
one hundred percent and if there is an error message (.)
I guess it's quite easy to calculate that (0.5)
as well, while you are doing the error or (2)

[C]: mm, from system point of view you mean to say, [A]?
[A]: so so what I'm what I'm meaning that (.)
at this solution that you are actually (.) proposing (.)
i-it's not that hard actually e it's not that (0.4)

you're saying that there is a usability issue over there but I-I don't think that there is actually (0.2) that it sums up automatically that those numbers and that it's it's not letting you continue before you have that exact one hundred percent (1)

[D]: mm

[G]: so what happens if the user cannot continue (.) what does the system say?

[C]: it'll give a error message every time

[G]: ye[a

[C]: [so it's not hundred per[cent

[G]: [so the error message as such is a general message not (.) telling you anything about the one hu[ndred?

[C]: [it would it can tell you

[D]: yea

[C]: so it's a custom error message (.)

[C]: so it'll say that your total is not up to hundred percent

[D]: so the lo-logic would be that the (.) end-user would always put like (.) a-

[C]: hundred percent

[D]: all, yea, a hundred percent, so he can't just add one row of twenty five percent then come back later and put seventy five he has to do it (.) all at one one session

[A]: but but I believe that that's actually the idea over here=

[D]: [=yea

[A]: [that's what they are required to do in the account plan template in [acronym] as well... so it needs needs to match (.) exactly one hundred percent

[C]: okay so let's let's think about it again on the technical front and get back to you (.) so

[A]: yea, that's good

[C]: okay.

[J]: () I'm not sure you understand it's not about one session it's about for each row it will get there () if you know your four account () percentage (.)

[J]: even if you have the (compare) information you will be able to enter only with three error messages (.)

[J]: for each record first record you enter is twenty-five, step off you get the error

[D]: mm

[J]: so in that case the process would be the background would be first record you enter with hundred, second record you enter (.)

[J]: make it fifty-fifty, third record you enter, make it twenty-five-twenty-five-fifty

[F]: should it be made into a [pop-up window

[J]: [(yea) so many things would come

[F]: or something so you open a pop-up window and and then you calculate the pop-ups together or the figures and if that's not one hundred then you get one error message (.) something like that

[C]: okay.

[F]: but I mean like, there must be different options (.)

[F]: one thing is the what about the possibility that the account manager doesn't know (.) like

[C]: what is hundred [percent

[F]: [() all they're bying from and selling to (.)

[F]: if he just doesn't I don't know if that can be the case but if he just doesn't know (.)

[F]: so he has no option to be (0.5)

[F]: without knowledge or then there would have to be something like other and that's always a bad thing to put anything which is other (range) system just as a comment

[D]: mmh, yea (2)

[C]: okay I think let's eh (1) leave it for now

[D]: mmh

[C]: let's discuss it (.)

[C]: in terms of technical options possible and get back

[D]: mmh

[C]: what can be done

[B]: yea (.) I have one more addition item, [A], I think we have exhausted our discussion items

[B]: hh I would just like to question that are we here trying not trying to just build a channel landscape or we are trying to really (.)

[B]: get into the accuracy of hundred I mean what kind of errors would be there that I would like to question (.)

[B]: errors would would be quite obvious and by the way you filled one fifty percent you were not intending to just () you () hundred (.)

[B]: in typing (.)

[B]: so (.) those kind of things will always be there in real life I mean I I think it's not about trying to build a mathematically correct application it's trying to achieve a landscape for a channel and that's where where our thinking was that it should be (.)

highlighted at the time of review and not at the time of entry (.)
that was the thinking but anyway as as [C] is proposing with this thought we can maybe eh
proceed we'll also do our bit of thinking but as [J] has pointed out (.)
user steps out, saves every record and system prompts, we thought would be quite
annoying to users

[D]: mm

[B]: eh but with this note I think let's move on and we'll revisit it again during next eh
discussion

8.25 #13 Campaign functionality

[B]: I think then let's move on to next item (2) eh (.) this is about eh (1) account plan
campaigns and opportunity campaigns (3)
account managers eh need to have all campaign view eh as read only (that's clear these)
opportunities campaigns still needs to be addressed so I'll maybe eh: ask [J] and [F] to
sort of refresh the the what has been discussed () with them but (.) eh
[J]: we have multiple tiers of campaigns now (in the new new design)
[B]: yes yes
[J]: so and then we (can) select campaigns and (the) account plan for accounts and we select
campaigns for opportunities
[B]: yes
[J]: so do we need any filters to filter (these) sort of campaigns when user (uses these)
campaigns here or (all the campaigns) available (1) for selections
[B]: okay
[J]: so account plan (again to understand) the users can select any type of campaign (.) but
for opportunities do we need to filter out some type of campaigns or all campaigns are
available to (users unrestricted)
[B]: okay (.) yea (.) I think good point because eh this campaign discussion is now again open
() regarding account campaigns should be confidential and limited to account by that
token then trade marketing campaign you can not select as a end user
[C]: that was a response from who?
[B]: eh there have been some reviews seems with [person_S] and eh:
[C]: [person_Q]
[B]: [person_Q] yeah (.) so anyway there still is concern about can account level campaigns be
shared across accounts (.) that we discuss anyway but [F] do we know of this opportunity:
ee campaigns any preference from [country_1] ()
[F]: we had that discussion
[D]: we had a meeting with [person_T] but we didn't discuss this so I think eh (.) we have to
wait until Wednesday or or then eh (.) so you can ask [person_U] that eh does there have
to be any filter or (.) or then then I can try to call [person_T] tomorrow
[C]: (primarily) [person_T] (.) didn't suggest anything different from what was the existing
[B]: I-I was just thinking yea
[C]: so at least from two-dot-zero point of view she was okay with the campaign business
[D]: yeah
((discussion continues for ~30 seconds – not transcribed))
[B]: so if we don't filter campaigns mhm mainly classifying campaigns is like (some kind of)
cosmetic classification (.)
[D]: mhm
[B]: can we somewhere have this common understanding of campaign ()
I think it's already there in two point zero it's just a question of (.) business agreeing to it
because
[D]: mhm
[B]: anyway the campaign (needs to be) certainly revised
[D]: mm so do you mean eh like some kind of description of wha
[B]: what is the [purpose of
[D]: [mm purpose of som
[B]: eh yea e trade marketing (.) consumer and other campaigns
[G]: mhm
[B]: and and
[D]: yea yea
[B]: and then business approves it (I think it's more important)
[D]: I think that's a good idea (.) I-I will call [person_S] and (.) and eh (1) say that he will hh
document these (1) I think it's not a big thing for him

((This discussion continues for many minutes as the team discusses the functionality further. They are discussing the visibility rules and filtering of the campaigns. They mention external resources multiple times and say that this needs to be verified with the business.))

((after some 10 minutes of discussion))

[D]: okay so if (.) if I schedule a short meeting with [person_S] (.) tomorrow an because he has (.) went through this many time an and also with [person_Q] so (.) .hh can then hhave a suggestion for for a wednesday's meeting

[C]: good idea

[A]: yea

8.26 #18 Item sixty-nine

[B]: eeh (.) next item eh (.) all reports that are >okay< this is: eh (.) the one that (1) was (say [JJ]) one action item during last call also

[D]: mmh

[B]: (1) ooh just eh refresh my memory what did we agree eh

[C]: mm on this we agreed that it'll still remain open

8.27 #22 [Info1] in [stakeholder] performance

[B]: alrighth e:h (.) (2)

cee-ar six-(one-two) eh (0.5) [Info1] should also be there in [stakeholder] own (.)

yea ahh (0.5) this this is the (.) sort of kind of discussion .hh

happening maybe I should eh (.) project [xx_plan] for this and then set the context eh (3)

[A], this item e-actually is eh about eh one observation that [person_M] had that where is the [Info1] in ah distributor and retailer own performance

[A]: mm

[B]: [() eh then we also had lot of observations on consistency (0.4) which has ah (.) sort of led to: (.) bringing in [Info1] also for [stakeholder] performance (.) from a:h [TOOL] tool point of view (.) on [xx_plan]

[A]: mm

[B]: now this particular clarification eh item (.) is eh (.) eh about this thing only (.) .hh

what's happening is that if I look at the requirement (.)

there you see [Info0] and customer [ACR] are proposed to be included in this [stakeholder] performance

[A]: mm

[B]: why? because they are in distributor and retailer performance also (1)

that's the sole reason (0.8)

but I'm close to sure that once we do it we'll be again questioned that where is

[stakeholder] [Info1] (3)

I'm not sure if I've confused you (.) maybe I can repeat it but eh (.)

what I'm saying is that if (0.5)

if we say that [Info1] and [Info0] should be there for distributors (.)

and retailers then not to have [Info1] in [stakeholder] will o-open some discussion

[D]: m

(1)

[B]: that's [what ()

[e what do you mean not to have

[A]: it's not there-e today if I if I really eh (.)

[B]: take eh (.) two point zero (.) application an[d if I take the requirements

[yea

[A]: then you will [not see

[B]: [yea

[B]: the [Info1] for [stakeholder] own performance (1)

[(requirement is) ()

[A]: [but you can see it for distributors and retailers

[D]: °hm°

[B]: yes eh (.) distributor and retailer () it already there then [person_M] commented where is [Info0], we added [Info0], then we said (0.2) okay, keep it consistent, add [Info0] in [stakeholder] also

[D]: °mm°=

[A]: =m=

[B]: =then we are missing () [Info1] in [stakeholder] (.) so (.)

I mean all these things eh (.)

at least my personal feeling is we should try and match with the [xx_plan]=

[D]: =[yes

[B]: [and and not in terms of columns but also in terms of (ordering) (.)
that is that is my personal opinion (.) eh (1.5)
[and that's what (the clarification) item is
[D]: [so (so) ()
[A]: so, can you show that (0.2) distributor and retailer (0.2) from () powerpoint
(someone, unidentifiable, mumbling on the background))
[C]: so we should add it in the report
[D]: [mm
[B]: [we we should have it ()
[A]: yea can you show, [B]
[B]: you want to see the report?
[A]: no I want to see that powerpoint
[C]: powerpoint (.) [[xx_plan]
[B]: [okay, sure (5)
I have a (flashed) [stakeholder] performance, [A]
[A]: mm (.) and then if you show me the distributor performance
[B]: yes (6)
this is both retailer and distributor
[D]: mm [so
[A]: [yea (.) so (2) so what is the problem with the tool then
[B]: e:h okayh (.) problem is eh (.)
let me go to the tool
[J]: () this is (the) right page
[B]: °yes° (.) see problem is we are proposing to: bring in [Info0] this is [stakeholder] own
performance page eh (.) as of today in application
[A]: [mm
[B]: [we've proposed [Info0] and customer [ACR] for this (0.4) but there is no [Info1]
[A]: yea
[B]: so-ahh that's what the problem is so what happens when we: provide [Info1] for distributor
actually which is already there (0.5) eh (0.2) total [Info1] (0.2) and for retailer this will be a
question eh
[C]: we should have it=
[B]: =we should have it yea=
[D]: =if it's in [xx_plan] so wh- [() understand (.)
[C]: [we should have it
[B]: yes
[D]: it should be there=
[B]: =it should be there .hh so can we [sort of agree
[A]: [yea
[B]: that let's match eh in terms of columns and order (.)
to the [xx_plan] (3)
[D]: °(m) why not° (3)
[J]: (I mean) (.) order with also with [xx_plan] or with [SYSTEM_2]
[B]: I would say that match with e [xx_plan] eh because that's (how) (.)
users would be used to (reading) reports but (then) that's my opinion
and if that requires [SYSTEM_2] columns (or the channels) so (that () also) will do it?
[J]: °m°
[D]: because the sequence of columns in [SYSTEM_2] may not be same as what is
in [[xx_plan]
[B]: [°yes yes yes yes° (3)
[C]: so I think eh [A] when we: share the mockups for [SYSTEM_2] with you (.)
so one [ACR]ect that eh (.) specially for list applets we have given the: column names in
the sequence that they appear in (.)
so if [you
[A]: [okay
[C]: want any of the sequences to be changed (.)
please-eh update that (.)
eh in the mockup and eh kind of send marked saying that this is the:e updated sequence
[A]: yea

8.28 #26 Phone number format

[B]: hh one discussion is open about phone number format eh observation from e [Area_3]
that users are not familiar with this plus international format
[D]: but I-I-I don't

[B]: [I think it's a

[D]: even understand because if you go to internet and have a look there there's plus in many many places so

[G]: oh yea

[D]: so and this is it's medium but it sh I think it should be low in priority and hh it's only [person_Q] that said that that it it shouldn't be a plus so do we need to take this in because () doesn't have it in the format that we have they have

[C]: three fields

[D]: three fields and I-I don't think we need to go there now

8.29 #31 [ACRONYM] process

[D]: yea I could comment from eh from [person_M]'s side he said that only (.) only requirement was that country managers should be able to edit the targets and weights but not account managers but then I saw [A]'s mail about the account managers should be able to (.) edit after they are approved so maybe you can, [A], eh explain or e (.) wh-why is that needed (.) if they are already approved so is there a new (0.6) new (like) a loop or a new (.) new round of approval(s) needed (and eh) (.) is this (some) how they're doing business at the moment or [()

[A]: [yea I believe that this is because there are (1) differences between [Area_3] and [Area_1] for example so (2) so in [Area_3] there are account managers which actually can do it at the moment (0.5) kind of and they are doing some of the jobs or (.) the same stuff that country managers are doing in [Area_1] they are doing it in [Area_3] in in account manager level (.) so (2) but really yeah (I) understand [person_M]'s (.) [person_M]'s point over here but (1)

[C]: I think (.) even [person_Q] commented that eh the:e account manager should not be allowed to change anything once he submits so it should become read-only (0.2) both (.) eh targets and [weightages yea

[B]: [weights

[A]: yea (.) but then then we should have like the first (.) first solution that we are having (.) over there currently which is there's not much difference (.) into that then (3)

[B]: but basically we are saying that-e revision is a practice which is original: question from [C]

[A]: mm (2) but e tha- yeah (.)

[C]: [so so d-

[A]: [it's not like that like actually you are saying how is going in in [Area_3] at the moment so (.) not like (.) directly (4)

[C]: [so

[A]: [but yea we can suggest (.) that if there is revision needed then country manager is is o-or line manager (.) those are the only (0.1) persons that can do it

[C]: I think it makes more sense

[A]: [is that is that what you are suggesting as well

[B]: [() either we need another sort of (request) () and approval [()

[C]: [yea I think that can be a good suggestion because then the: approval process can be much faster because he can first update it and then straight away approve it (2)

[A]: mm (.) yea (1) yea let's do it like that I believe (2) [it would be much better

[B]: [okay aah (1)

[C]: okay

[B]: so only supervisors can revise=

[C]: =revise

[A]: yea

APPENDIX 5 – MEETING 4, DECEMBER 18, 2007

Duration: 01:57:00 (117 mins)

Transcribed: 00:05:27

8.30 #10 Homepage – what columns to show

- [B]: the next item, [A], maybe need a discussion ehm () item we parked it for this clarification session eh e related to homepage eh what columns of account to who on homepage. ((in the above, [B] foreshadows a topic that may take some time; discussion has continued for 4 minutes, 23 seconds; revolving around what columns to keep and what to hide or remove))
- [A]: We don't need to have that operational unit over there
- [B]: yes eh (.) would we need category in place of this? (3)
are account managers responsible for selling products belonging [to ()
- [A]: [no but I believe that we
- [J]: have issues (.) then if he needs to see [(.) that category he can actually[follow up that[
- [J]: [yes [drill down
- [A]: [yes
- [J]: issue by following the hyperlink=
- [J]: =right
- [J]: [() description is okay
- [B]: [(so) issues
- [A]: I believe that we just need to make this homepage as simple as possible because then they can actually drill down
- [J]: yes
- [A]: from the homepage[to the account (so) the issues (.) so
- [B]: [yes
- [B]: so let me understand you correctly did you say that it's good to replace-eh () anyway to replace but it (.) it is to replace with category did you say it's better or [(.) you say
- [K]: ["no°
- [A]: [no
- [B]: it's not required
- [A]: [no it's not required
- [B]: [so keep it simple basically as less information on homepage as possible .hh I think status and priority is fine

8.31 #11 Account year-on-year performance

- [A]: we should not show net sales actuals if the (.)
- [K]: actual is not available=
- [A]: =yea or when we are actually for example when we are in Q4 (0.4)
and the Q4 is not closed yet=
- [K]: =yesh
- [A]: we should not show actuals at all maybe
- [B]: aa[a:
- [A]: [because then there is [(.) this perception that the actuals are already
- [K]: [no I
- [K]: yea actually there was similar requirement in (.) (internal) market share
- [A]: yeah
- [B]: mm
- [K]: there what they were saying is when actual is not there (.)
consider (.) el-ee as actual and calculate the market share
- [B]: mm (.) mm
- [K]: that same can be (applied) here [also () (applet was)
- [A]: [mm
- [B]: mm
- [A]: yea I believe we need to follow the same rule
- [B]: mm (1) but wha- your coming back to your proposal to show el-ee adjacent to el-ee (.)
eh actual adjacent to el-ee
- [K]: no no no (.) no our proposal is, when actual is not there we'll consider el-ee as actual (.)
right
- [B]: [no no no no
- [A]: [consider el-ee as actu[al
- [B]: [no no no no that's
- [A]: no that (.) whe-when actual is not there we're using [el-ee

[B]:
 [K]:
 [A]: as actual (.) no i-in place of actual
 [K]: yea (.) it's not an actual it's in place of actual
 [A]: yea

[el-ee yes yes
 exactly (.) yea

8.32 #17 Top ten products

[B]: top ten products ehhhh
 [A]: that's not that's not (pro- (.) the) problem
 [B]: aa okay hh (.) only question I would have is that if-ehh (1)
 some (.) for for a period for some account if-e (.)
 value figure for [unit_2] (again) a hypothetical situation is highest ((laughs)) .hhh
 I don't (know) if it will happen so soon if if .hh some account buys [unit_2] higher than any
 other product, then
 [A]: then it's [not so e we need to have dummy model (.) [unit_2]
 [B]: [should it
 [B]: yea (.) yes so that'll be quite okay to have it I mean [I think
 [A]: [in the first phase
 [D]: [mm
 [B]: a useful information to know that this account is buying more of [unit_2] so no problem
 about this
 [A]: but then would it be like aggregated [unit_2]
 [B]: yes that's [that's wh-
 [D]: [()
 [B]: that's how we are err that's our assumption that it's actually a product
 [D]: mm
 [B]: in reality it's not but how it is handled in system it's a product=
 [A]: =yea but then it it's (aggregating all [unit_2] products)
 [D]: yea [(it's not () not correct)
 [K]: [()
 [A]: [yea it it doesn't doesn't belong here so we need to have rule that it can't be
 [unit_2]=
 [B]: =it should *not* b[e
 [A]: [yea
 [B]: yea that's what I'm questioning I mean it's actually in my opinion
 [A]: [it shouldn't be
 [B]: it's a useful infor[mation () when it's aggregated
 [A]: [yea it should really not be because we're using the aggregated [unit_2]=
 [B]: yes yes user should be aware that [unit_2] means anything and everything you sold (.) not
 (.) some unique family code=
 [A]: =yes
 [B]: okay so I'll assume it's okay for top ten products nowhh
 [A]: [()
 [D]: [so it's not there
 [B]: yeah?
 [D]: so eh
 [B]: it is there yeah (.) (the thing is) it is there
 [A]: it's not there
 [B]: it is not there
 [A]: it's [not
 [B]: [(you've filtered that out
 [D]: [yes
 [A]: [yea it it can't be in top ten products because it's it's in aggregated level and we are
 showing here individual products
 [B]: yehehss .hh

APPENDIX 6 – MEETING 5, DECEMBER 28, 2007

Duration: 01:59:00 (119 mins)

Transcribed: 00:48:05

8.33 #4 Reporting guidelines + #5 Alignment of reports

[B]: Okay, eh:hee, [A] eh so uh is my screen now good or should I sort of change the size
[A]: No, it's it's really good
[B]: [alright
[A]: [I can see it
[B]: Okay, so [K] actually helped me to come up with these points but let me start eh (.)
(in) any case ee f-first point is that eh
(0.2)
just to review the a-alignment of the reports as of (.)
as it is now because we have eh (.)
sort of seen this thing eh
(0.2)
been observed so many times during business review that sometimes left alignment looks
good and sometimes center .hh so maybe I will=
[A]: =yeah
[B]: yea (.) eh sort of let you eh guide us through it or at least share your opinion about this I
can keep the mock-ups open
[A]: yea, that's [good
[B]: [aah
[A]: if you open the mock-ups
(6)
[B]: So this is e just for instance the operator's own performance-eh page
[A]: ((clears his throat)) yea
[B]: and-a
(0.4)
well the style at it follows is table on the top and then (.)
charts follow
(0.2)
well quite symmetrical (.) enh
[A]: yea (0.8) but this is now cent- (.) centrally aligned (.) isn't it
[B]: uh it is central align yeah
[A]: yea
[B]: yes
(3)
s[o apart from the fact
[A]: [so if
[B]: that eh (.) yea sorry [A]
[A]: yea yea go on
[B]: yea I was saying apart from the fact that if if the size of the table eh is (.)
let's say small (.)
then there is some space towards left and right otherwise I mean it it looks quite
symmetrical (.) but any[way .hh
[A]: [yea
[B]: please go ahead and eh comment
[A]: yea, for example here it's really good that it's centrally aligned but I I believe that (.)
in some other pages maybe financials or business environment
[B]: yeah
[A]: there are (.)
it's not that easy to read them (.)
because you need to scroll to left and right
[B]: sure sure
[A]: then you are scrolling down
(0.2)
I believe that that was like the problem that business was raising up
[B]: yes yes I think [then
[A]: (((clearing his throat))
[B]: eh (.) we can maybe just scroll the reports and really try and pinpoint the ones which are
difficult when you cen- eh keep center (align)
[A]: yea
[K]: ((inaudible))

[B]: so own performance pages I would say would not have problem
[A]: yea
[B]: aa
[A]: I agree
[B]: I go to business environment page
(5)
so (.) this again eh looks eh goodh, [A]
[A]: yea yea it that actually is not that bad (.)
maybe it's financials then
(4)
[B]: so now I'm on financials page and maybe reduce the size of it
[A]: maybe you can take that financials with profitability even because there are more
information in that page ((coughs))
[B]: yes yes °yes°
(13)
alright so eh
(2)
let us see if there is a (situation) where
((inaudible))
[C]: no that's the other change
[B]: okay (.) so eh [A] one change to highlight here is eh the the periodicity here default is
quarter
[A]: yea
[B]: which means compared to period by [default (is) last number of columns
[F]: (((coughing)))
[A]: mmm
[B]: eh, so first time when e user clicks on this e-eh then there is no eh need of scroll because
there are not so many columns which will (.) result in (.) a eh wid-wider table or a chart
so that's all
[A]: yea
[B]: we are trying to handle it so by default it's quarter and then if user would like to change the
periodicity user can use the eh period (2) eh prompt
[A]: yeah
[B]: now this: (.) at least addresses in in one way eh (.) the the problem of scrolling but (there)
too many periods then then (.) it it gets quite (wide-a) table (.)
so in its current form it eh
(0.5)
doesn't need any kind of scrolling
(3)
[A]: yea (1) okay then it doesn't look that bad (.) any more (.)
in that sense but (0.4)
but actually when you're your screen size is a bit different (.)
than the user's screen size normally so they can't see this much at once (0.8)
maybe that's that's one of the problems
(3)
[C]?: screen resolution
[A]: yea (0.7)
because their resolution is something (0.8)
I don't know (.)
one thousand two hundred eighty times something I don't know (.)
but still you can't see it like this
(2)
[C]: can you go to the application ()
(3)
[A]: ((coughing))
((mumbling discussion and typing for 16 seconds))
[H]: () whatever we do () quarter or anything else
[C]: mm
[H]: () so whatever we do this problem (.) (somewhere or other will be there)
[C]: the discussion here is should we left align everything so that (.)
at least on the left
[H]: [()
[C]: [you can see everything from the left
[H]: [() in one dot zero ()
[B]: [()
[C]: yes, yes, so I think the discussion here is (.)
should it be centrally aligned or left aligned

[H]: [(even if it were left aligned then also when
[A]: [mhm
[H]: you make everything periodic ()=
[B]: =mm=
[C]: = the scroll will still be there
[H]: () (everything periodic) ()
[K]: ()
[C]: so [A] the:: rambling (.)
the the response here is that because there are large number of columns=
[A]: =yea=
[C]: =like if you are looking at thirteen periods all together (.)
so even if you align it left or center or whatever eh (.)
there would be some amount of scrolling which would be required now we are looking
directly in the application and not in the mock-up
[A]: yea?
[C]: so (.) so if you look at it so there is some right scroll (.) even eh::
[B]: what if it was quarter
[K]: () quarter
[A]: are these eh center aligned
[C]: these are center aligned yes
[B]: ()
[C]: (is this center or left)
[B]: (°let's see°)
[K]: °left aligned°=
[C]: =this is left [aligned
[A]: [this see- this seems to be left aligned
[C]: yea left aligned
[B]: [°yes°
[A]: yea
[B]: °anyway just one report I have eh () to quarter°
[C]: [()
[A]: [and then one one is centrally aligned
[C]: if you go up and make it also quarter (.) the ones that are left align ()
(4)
[H]: ()
[C]: so this is how it is going to look if we keep it left aligned
[K]: ()
[C]: but still the scrolling would be there because there is another report next to the:: eh (.)
report in center yea
[A]: yea
[C]: there is a weekly
[K]: ()
[H]: (not that much for weekly () (.) scroll is coming from the top () on this one)
[C]: o:kay
[H]: °()°
[C]: yea so we have two reports in parallel and that is:: also what is causing this scroll (.)
this would not change [B]
[A]: okay, [F], what do you think about this?
[C]: so
[K]: ()
[C]: () is okay
[K]: (then we can move it to) () (sales margin) [()
[F]: [sorry I couldn't hear you (.)
you asked something?
[C]: how was this left align [
[A]: [yea I was ee
[F]: [I like the left alignment
[A]: [I was just asking from [F] that what do you think about this
[F]: [aa
[A]: [you can see it over there
[F]: I think it looks better (.) (because) now it's consistent
[C]: [F] is [voting for left alignment
[A]: [()
[F]: I am. And then there is the less of the scrolling issue (.)
so that you ca[n
[A]: [yea

[F]: see more without having to go (.)
eh towards right so eh (.)
I mean
(2)
that's on practical terms in practical terms it's better (.) to being left on

[A]: yea
[F]: visual terms
(2)
yea some of the graphs like this one looks a bit silly because it's () sales actuals, es-tee-pee and LE (.) because it's like eh
(2)
from visual perspective this looks a bit silly (.)
because it's on the left

[A]: [yea
[F]: but on [practical practical terms I think it's better on left
[A]: [(b-bu-)
[A]: yea
[C]: so what is the decision, finally?
[A]: [but
(((common laughter))
[A]: [well a- actually I eh
[F]: [I do like the left more=
[A]: =I kind of kind of think that now when I see this that these are that (.)
eh qua- they are default by quarter

[F]: yea
[A]: I really eh I really think that they should be period
(2)
[C]: [okay
[F]: [Yea (if this is) default to period then it looks good
[C]: okay so we can [keep it default to period (.) that is fine.
[A]: [yea
[F]: yea yea
[B]: and left align
[F]: [yea now it looks good
[A]: [yea, and then and now they are left aligned they look really good
[F]: yea
[A]: because they are really consistent and when you are printing out for example one page
(1)
I-I [believe it's much more easier to read
[F]: [() (this is central align)
[B]: [this should be left align
[A]: [and this should be left aligned [as well this performance ()
[C]: [okay
[F]: yea [yea now it [looks good
[C]: [okay
[A]: [a
[A]: a- and then again (.)
all the other pages I believe like operator performance, and distributor own performance
and retailers own performance (.)
those are good we don't need to do anything over there

[B]: yea
[C]: do we keep them centrally aligned
[A]: yea as they were in in the mock-ups
[C]: oka[y
[A]: [because I believe there are not that much information but when we are (.) ee watching
financials page (.)

[B]: [(yea)
[A]: [with with profitability measures maybe the [Info0] page as well=
[C]: =ok[ay
[A]: [I'm not sure but but any- anyhow (.)
then we are having this kind of eh (.)
scrolling problem (.)
or readability problem when you are-e centrally aligning (0.2)
the reports so maybe we need to left align reports in this page and then left (.)
all the other pages as they are in the mock-ups

[C]: okay so (.) are we taking this conscious decision that wherever there is large number of
data we will left-align and where there is less data we will keep it centrally aligned

[A]: well th-that's pretty good (.) yea
[K]: ()
[C]: no [Info0] and financials is left aligned () (pages)
[A]: yea (1) and then I [I think
[C]: [(consistency would be something I'm sure (.)
people[e like [person_M] want to question
[H]: [() (time and again)
[F]: yea, it's going to be question[ed again in the a
[B]: [°yea°
[C]: UAT
[F]: next UAT that (.) these are [not consistent
[A]: [yea
[C]: yea so just flagging it right now saying that (.)
definitely some people (are going) to question with respect to consisten[cy as far as report
[F]: [mhm
[C]: layout is concerned
[F]: yea ()
[A]: [yea
[F]: [()
((laughter))
[C]: so are we consciously saying that this is how it is going to be?
[A]: yeah, I think it's (.) it's good.
[C]: o:kay (.) [F]?
[F]: yea
[A]: [like, like it is
[F]: [()
[C]: ((laughing)) [that's fine
[F]: [()
[C]: as long as we can that we can justify during UAT and say that this is how we wanted it (.)
that's fine
[A]: yea yea I I guess that we can (.) you know
(3)
[F]: [I mean
[A]: [() aah actually explain why it's like that=
[F]: =yea=
[A]: quite easily and there there is eh (.)
good reason that why we are doing it like that so
and regardless of whether it's left or central it's gonna still be a question there
[F]: ((laughter))
because we have these two parties
[F]: yes, one is
[A]: yea
[F]: the left party and the [central party
[C]: [central party
[A]: ((laughing))
[C]: so you're trying to make them both happy now
((laughter))
[F]: yea
[C]: okay
[F]: we're trying to make us happy ()
[C]: okay so:: I think let's (.) [B], is that fine?
[B]: yes of course you want me to say .hh-eh-eh
((laughter))
[C]: okay I think alignment (.) point is:
[A]: hey (.) but then (.)
one good question a-actually yea hold on th over there when we're having (.)
table and a graph in the same (.)
same vie-view=
[B]: =yea
[A]: how that should be done (.)
should all (.) the graphs also [(be)
[F]: [((coughs))
[A]: left-aligned or should that be (.)
centrally aligned
[B]: for this let me go back to the profitability page for a moment
(3)

this is what we are seeing eh this periodic left-align and then
 (1)
 [C]: in the application
 (6)
 [C]: graph here is also left-aligned
 [B]: because [()
 [A]: [okay
 [B]: equal number of bars ()
 [C]: () even if you make it=
 [F]: =can you change it to=
 [C]: =period quarter
 [F]: yea quarter
 [C]: (just change it to quarter) ()
 (4)
 [C]: left-align yea
 ((mumbling in the background))
 [A]: yea I guess it should be like that (.)
 because now it would if that would be centrally aligned then
 [F]: yea then it would look stupid
 [B]: yea ()
 [F]: yea yea
 [A]: yea
 [B]: zig zag okay
 [C]: zig zag o:kay (.)
 the graph's also to be left-aligned
 [F]: yea
 [A]: [yea
 [F]: [kind of like to make it look the the best it can look (.)
 to make it eh eh default as period
 [C]: okay=
 [F]: =so then it it kind of looks nicest ((laughs))
 (5)
 [B]: and I think this will also apply to [Info0] page because eh (.)
 same situation eh a lot of [data
 [C]: [yes
 ((mumbling in the background))
 [B]: status (.) eh we have already discussed eh (.)
 yeah (3) ()
 [A]: yea
 [B]: this is fine () same situation for channel performance (.)
 left aligned
 [A]: yea
 [B]: [Info0] we have discussed eh top ten is fine
 (7)
 mix accuracy (though) there's only one table for (then) [because it's so many columns
 [A]: [((coughing))
 [F]: yea
 [B]: it's better to keep it left aligned
 (11)
 how about eh
 (3)
 () accounts page this key measures page eh
 (1)
 lets' see (.)
 so we have eh
 (1)
 periodic and (.) es-tee-pee summary (0.8)
 so it always will have eh (0.8)
 let's say ten columns (1.5)
 because of these two tables
 (10)
 ((mumbling in the background))
 [B]: yea (.)
 so I think these should be fine central [aligned
 [F]: [()
 [B]: because of the element of the symmen-symmetry that it has

[A]: yea (.) yea these are good
(7)

[B]: mix accuracy eh

[F]: yea

[B]: maybe left aligned (.) th-that what we have decided (what) mix accuracy for market

[A]: mhm

[B]: country overview is fine eh (1)
country snapshot is fine page one (2)
and when I'm saying fine ()
(8)
alright eh page two of country snapshot
(3)
o:khay eh let's see about the eh internal market share
(1)
should be as it is it is left aligned
(2)
and opportunity I think we do not have e::h
(3)
big problem with
(4)
[A], how do you see this opportunity conversion days eh
(2)

[A]: mmh

[B]: now it is left aligned but see eh

[A]: I guess there's gonna be more columns in that graph (.)
than () paging only (.)
so then it would be a really (.) it's okay because it's left aligned so

[B]: yes I I agree with you yeah
(4)
great .hh (.)
aa (central) no problem
(3)
yeah
(6)
Ee [K] is this like:eh (.)
center and left or ()

[K]: [()

[F]: [((coughing))

[B]: () (center this is left)

[F]: (No they don't) ()

[K]: ()

[B]: so it should be centered, huh?

[K]: it should be centered

[B]: okay just () (some correction)
(14)
() this is left, huh? Because it eh

[K]: no because it actually () (mockup data) [()

[B]: [many periods (.)
mhm yea yea
(8)
but then that [is
[()

[K]: also true for this (.)

[B]: this should all be left [aligned not centered
[()

[K]: sell through ee [A] eh should be left aligned in this case because there is data only for one
period
(2)
It shows differently but in reality we will have many periods

[A]: mhm

[B]: which means eh many columns or () (idea is to) [() left aligned

[A]: [yeah

[A]: may-maybe it would be better if that's left aligned

[B]: yes so (.) alright

[A]: because of that ()

[B]: yea
(7)

okay eh let's go back eh (.)
 [K], have you noted ()
 [K]: reports on financials should be defaulted to period and then be left aligned
 [B]: yes yes (.) basically lot of data
 [K]: and ()
 [B]: yeah
 (2)
 alright

8.34 #6 Usage of decimals

[B]: [A] next eh topic is eh usage of decimals eh
 (7)
 so maybe eh my question to [K] is that we have this (caption) harmonization let's say the
 first guideline on how to use decimals so beyond it eh (.) what [will I do ()
 [K]: ((()
 [B]: you have doubt about some particular report, ()?
 [K]: () [ABC] measures
 [B]: for [ABC] measures because those are not addressed in () organization
 [K]: ()
 [B]: okay okay
 [K]: ()
 [B]: eh, [A], so this eh particular eh item is about what eh comes from [ABC] eh because
 (otherwise) caption harmonization sort of guides us how to use decimals and we have
 discussed that also (.) quite thoroughly (0.8) ah
 [A]: mhm
 [B]: so, ah (.)
 how to eh report what what you get from [ABC] eh (.)
 values these are absolute numbers we don't report eh (.)
 decimals (.) that has been quite clear eh [Info1] and [Info0], aah (.)
 so [K]'s question is about the [price]
 [K]: () (percentage display on decimal)
 [H]: the average () in one dot zero discussion came up and we decided to show decimal in
 decimal ()
 [B]: mm, mm
 [H]: ()
 [B]: okay
 [H]: ()
 [B]: yeah (2) ah
 [H]: but ideal () like the way we have created that caption harmonization () decimals () we
 already have one column ()
 [K]: ()
 [B]: yes we have
 [K]: ()
 [B]: yea
 [K]: ()
 [B]: but the group that was discussing that had no representation from [[ABC]] so
 [H]: that's ()
 [B]: those eh-hh .hh those things are then going to [A]
 [H]: that decision should come from () otherwise we can think of something and then do
 something that's not ()
 [B]: yes, eh so, [A], we need eh help in deciding eh usage of decimals for [[ABC]] measures
 (0.5)
 eh when we have been discussing this e caption harmonization ee we couldn't really close
 on items which are from [ABC] (.)
 ah taking one at a time from [company]
 [B]: yea[h, so
 [A]: [yea
 (3)
 [B]: yes, [A], were you about to (.) comment eh?
 [F]: ((coughing))
 [A]: if you can take an example
 [B]: sure
 [K]: ()
 (7)
 [B]: s this is eh [company] h average price eh (.)
 chart and and a table (.)

so we have used two decimals with average p-price that is what we have practiced (.)
ah we can continue with that (.)
we just need a decision on that
(6)

[A]: how did you (.)
w-what did you decide when you were having this caption harmonization session (.)

[F]: well

[A]: [what was

[F]: [in general I I say that the the line was to take (already) (.)
when you have money (.)
sort of like [euros and dollars

[A]: [yea

[F]: you have two decimals in general (.)
when you have absolute volumes you have zero decimals aah when you have like eh
percentages (in general) one, decimal, and then when you have ratios then depending on
the ratio you have either one or two

[A]: yea

[H]: () when you say that about money, euro and dollars

[F]: yea

[H]: () like reporting [Info1]s

[F]: yea

[H]: then eh () for [Info1] and volume (let's show) absolute figures () now we change the
[Info1] also () to two decimals

[F]: I understood that the the absolute figures was for was for volume

[H]: () volume

[F]: that's what I understood but ah I mean I' not

[H]: [B] is it that eh when we have [volume we have absolute figures

[F]: [because because most of where we have money [here

[K]: [()

[F]: we have we have like two decimals

[B]: yea

[F]: ah in [SYSTEM_2] side (.) now we're talking about [SYS

[C]: [SYSTEM_1] I think eh the total value figures was:: (.)
for financials also was no decimals

All: yes

[F]: yea yea

[C]: because it was like some millions and twenty cents so [()

[F]: [yea absolutely absolutely

[H]: () (you cannot generalize that) if we're just talking about money () we go for two
decimals (ideally that) can be easier option

[B]: yes, eh, moderation (.)
what we have done is we have gone through each and every measure (.)
after obviously these guiding principles [and then questioned over these generic

[F]: [yea

[F]: yea, and here [we have total [Info1] in [SYSTEM_2] and () in [SYSTEM_1]

[B]: [aa

[B]: yes e so the whole point is that these items which are
(0.2)
like sort of eh (.)
requiring [TEAM] inputs because we have some (y'know) idea how to use them but still
need to eh it's more of a double check
(1)
eh so [A], ah (.)
for [ACR] eh meaning () [company] [price] either customer or market it's it's [SYSTEM_2]
(.)
the decimal eh usage is eh use two decimals eh
(0.8)
our thinking was then eh it also becomes consistensive consistent if we eh use eh [price]
[company] [price] (.)
with two decimals (.) that's that's that's what we think

[A]: yeah, but (.) was it like that (.) what was decided in the caption harmonization session I
really didn't like (.) hear (2)
so like in this case (.) should it be two decimals

[B]: eh (1) s can you repeat your question I didn't get your question, sorry

[F]: [()

[A]: [so was it already before or earlier decided that it it's going to be two decimals

[B]: no, eh
[F]: I [don't think we decided
[B]: [we just parked it here and then eh we we we knew that this is something we need to eh get eh input from [TEAM] we cannot decide it so (0.5) that's [that's
[A]: [why not, why not (.)
why can't we decide it?
[B]: ((laughs)) good question, good question eh-heh.hh
(3)
[A]: so let's let's do it in a consistent way if we are using two decimals in every other place where we are dealing with the
[B]: yea
[A]: values
[B]: yes
[A]: let's have two decimals then
[K]: () in [SYSTEM_2] () ((mumbles inaudibly))
[H]: no but [company] [ACR], average cellular ()
[B]: no, it's [ABC] that's why we are discussing it yea (.)
so no issues no I mean ()
[H]: [()
[K]: [() [company] [price] ((mumbles inaudibly))
[B]: mhm
[K]: ()
[H]: [()
[B]: [two two two two two
[K]: two okay then it is fine ()
[B]: [(we'll) ()
[K]: [()
[A]: but hey remember that we're gonna (.)
most probably remove this [ACR] comparison because we can't
[B]: yes
((laughter))
[A]: we don't we don't see any value
[B]: () decimals ((laughs)) okay (0.5)
good. Ahh, [K], so this is item clear now (.) okay what was your next eh
[K]: () percentage ().

8.35 #13 Business issues – part 1

[B]: ...other was as you were suggesting get rid of this and bring in the new eh bee-em-ar issues and opportunities functionality so these two are eh
[A]: yea maybe maybe doing like that so bring this [company] opportunities and [company] risks as separate columns in that issues and opportunities applet (1) so that like confirms like that we are like (.) having still this opportunities and risks (.) so you can actually like (1) input that text over there
[B]: okay so again can you come again did you suggest that that this remains part of the new issues and opportunities?
[A]: no
[B]: or that
[A]: yea so that we're gonna completely replace that business issues (.) this is not required anymore because we're gonna have this issues and opportunities tab
[B]: okay okay
[A]: but we're not having opportunities and risks we are not having any place where you can actually write down the opportunity or risk if there is some against that issue (.) so what I'm suggesting actually is that you're taking this opportunity as a separate column and risk as separate column into that issues and opportunities applet
[B]: over here
[A]: yes
[B]: or (here)
[A]: so after (.) maybe before comment actually there would be [company] opportunities and [company] risks (.) columns
[B]: okay
[A]: which would be like the free text field (.) or in the no (.) it should be in the issues (.) and tha-that would actually allow us then to remove the business issues completely
[B]: okay
[A]: because I-I-I guess that that was the original require or the idea that this bee-em-ar issues country level issue would replace this business issues
[B]: okay

8.36 #13 Business issues – part 2

- [A]: yea maybe they could be he (.) here so that it's it's like the issue and then the opportunity and risk so you can actually see that into what issue that opportunity or risk is related to
- [H]: yea (.) like business issues used to be country overview page also earlier then we heard that it's coming two pages (so we will remove if from business issues from the country overview put it in country monthly scorecard)
- [C]: yea but I think if we are removing it from there in [System_2] it would have an impact (all) this business here
- [B]: an impact that that actually opens up a whole new topic of: we are removing now something and
- ((lots of overlapping talk))
- [B]: yes
- [C]: and what also we do with the historic data because I'm definitely sure [Area_1] has been using this
- [K]: yes (.) already [()
- [A]: [so that that's not a problem we're gonna replace that anyhow we're not gonna have this anymore (.) so that's like the decision
- (3)
- [B]: °okay we need ah:°
- [A]: hey come on (.) think about it (.) should we have ca two different kind of issues place (.) under that market overview applet
- [C]: no
- [A]: so business issues and
- [C]: eh definitely no, [A] but
- [A]: yea yea
- [C]: the only the discussion point primarily what [B] was also mentioning is that (.) is that a valid business scenario where you have a kind of a [company] wide theme for a particular a-account (.) and the theme can be (this is what) we strategically want to do (.) like eh (.) from eh from a business opportunity point of view something like in account [plan
- [A]: [but that's a different thing (.) that's under account plan that those are account level issues those are like like eh already defined
- [C]: like
- [A]: now we're defining market level issues
- [C]: yea if if you look at eh what [B] is just flashing right now so
- [A]: yea
- [C]: under account plan you have accounts overall strategy (.)
- [A]: yea
- [C]: and accounts overall objectives and underneath that you still have a detailed objective list so so you have theme objective or a theme strategy
- [A]: yea
- [C]: now is this concept also valid at a market or a country level so you have a country level theme eh kind of eh objective and then a breakdown of those as part of multiple (.) eh lower level objectives so is that a valid concept or it's totally not a valid concept
- [A]: that is valid conc that is this is not related to this one at all
- [C]: no it's not related to this one but in line with the same thing so like in account you can have this (.) so can we also (.) from like like eh from that business issues () take this opportunity and make like eh an entity on the top which comes around with the country name on the top (.) and then should we get rid of this business issues tab and then replace it with issues and opportunities tab coming from bee-em-ar which can be then the breakdown into multiple small items (.) so is that a valid kind of thinking or it's totally not a valid line of thinking
- [A]: eh I really didn't understand actually (.) what you're looking after
- [C]: okay I think we might need to mock it (and make it) (.) so so what we were suggesting is [B] if you can go up mouse-over thing (.) what we were suggesting can you see [B]'s mouse so primarily the next to the country on top
- [A]: yea
- [C]: we can provide to the existing (.) boxes from business issues which is like (.) opportunities (.) like that will be market overall objective (.) and (.) market overall risk so something on those lines on the top applet which is the where you see country name that applet would become bigger (.) and underneath that you will have issues and opportunities (.) directly
- [A]: I don't see that we have that kind of requirement
- [C]: okay okay so let's let's forget that
- [A]: yea
- [C]: okay

8.37 #13 Business issues – part 3

[J]: ((explains for 47 secs))
[B]: so, [A], I'm not sure if you could eh follow what [J] just pointed out here
[A]: no I, I really couldn't hear that well
[B]: yea, I'll repeat that eh (0.4)
this this relates to one experience we:: have had with objectives and strategy
functionality.. s[fo originally
[A]: [yea
[B]: eh if you can just ignore this lower part it it wasn't there in original design (.)
there w[as no
[A]: [yea
[B]: this form layout it was it was orig-originally exactly like this list as you can see here
[A]: mhm
[B]: but because of the fact that these are long text columns
[A]: yea=
[B]: =it wasn't quite eh usable fr[om
[A]: [yea
[B]: the user's point of view so then we had to sort of improve it such that
(1)
while it shows as a list but it also shows (.)
the selected record as a form
[A]: okay
[B]: so it becomes easy to read because these are long text fields (.)
so what [J] is trying to highlight here is that this is the same situation for:a
(1)
business issues wh because
(1)
these are also like long text fields and if we move them to eh list
(1)
like this (.)
then we actually::eh end up having a situation (.)
like this.
[B]: So you will [have here
[A]: [mhm
[B]: [company] opportunities [company] risks
(0.5)
laid out as a list (.) and therefore they will sort of (.)
not be (sorted) table and then (.)
we'll have to sort of go back to something like this .hh so what [J] is ()
[A]: [so actually that
that would m actually that would mean that then we should have that kind of applet
(2)
ah below
[B]: [() in in theory yes,
[A]: [issues and opportunities and then there would be like three applets
[B]: yes[then it becomes
[C]: [yes
[J]: [()
[B]: yea so (1) in theory yes, but practically speaking once you already have two applets (it's
hard) (.) it's it's it's (0.5) well it's a problem
[A]: yea
[J]: it will not look good. We can have one () but they will not look good. You will have issues
applet and issues from applet and then () it will not look good ()
(3)
[C]: and how much text is usually entered (.) in the:se fields?
How much is anticipated to be entered in these fields if you are having multiple issues (.)
currently I think [the
[A]: [mhm
[C]: reason they wanted a long text area was because they only had one field to enter
everything (0.5)
so they were entering like multiple issues in one box
[B]: mhm mhm
[C]: but now if we are giving them the flexibility of adding multiple issues so they might actually
have different rows for each issue (.)
so (.) my question primarily to you, [A], what is:e the expected test text length to be
entered in each field?

[A]: yea, that's a good question(.) I-I can't answer that one
[C]: okay because that would determine a lot of things. If you are entering something like eh one one hundred characters or one fifty characters then list applet would still do do the job for you (.)
but if you want to enter something like five hundred characters or thousand characters, then (.)
eh what [J] was saying might become a challenge
[A]: yea, I understand (.) completely
[C]: so can we get that answered and then then accordingly we can start designing (2)
[A]: ah, I believe that it's not easy to get that answer because
[F]: I don't think anybody knows
[A]: it's currently only used in [country_1] (.)
and [country_1] is using their own characters so
((laughter))
[C]: [ok:hay
[B]: [[A], one one more question I would [have here
[C]: [can we decide on list applet and then look at
changing it later if (required) (.)
so can we go over this kind of a structure what is being shown right now? (.)
[And if we
[A]: [yea
[C]: hit u[pon
[A]: [yea
[C]: that usage eh kind of a road block then we start to looking at something to modify because [this
[A]: [yea
[C]: is how kind of (.)
native [product] works so you you have a bom applet, you have a list applet and then you have also a list applet, [so usually
[A]: [yea
[C]: that is the eh kind of vanilla structure that [product] follows, and if we have any kind of a usability challenge then we can look at alternatives of having another form applet below it. Is that a reasonable approach to take right now?
[A]: yea, that's really good [C] (.) that's good
[C]: okay so let's ()
[A]: yeah, really can't say mu-much about it because (.)
we haven't been using it (.)
in that way we don't have a tool at the moment and that was that's why the requirement is in there because we need to have a tool to track the issues,
we need to consolidate those issues in a in a higher or upper upper level so for example in a (.)
cluster head needs to see that what kind of (issues there) are in overall in the cluster area and then he needs to be able to divide those issues by country
(2)
[C]: okay (.)
I think, [J], you're not very happy with
[J]: mhm
((laughter))
[J]: () ((10 secs))
[C]: yes, single
[J]: (in multiple rows) () ((8 secs))
[B]: ah (0.5) well eh let's take [A]'s opinion about but I I think that (.)
[country_1] has clearly said that this () practice we have issues and opportunities and we have concrete actions () plans, so I would not like to () and mandate here (.)
eh (.) so e [A], again eh could you eh
[J]: ()
[B]: yea, so [J] has eh sort of eh offered a solution here (.) a creative solution that you can have eh sort of a type to say that whatever item you're creating record you're creating does it belong to an issue or is it an opportunity (.)
eh that kind of scenario
[A]: mmmh yea that's pretty good eh
(6)
[J]: () ((5 secs))
[B]: mm, yeah (.) I think maybe what we need to do is [cr-
[C]: [give options
[B]: give options yeah an' mock it up and give options that's that's

[C]: because what that [J]'s option would do is that it would reduce a number of text columns in one [list applet]

[A]: [yea yes thi that's really good actually what he yeah I agree that would be actually good then we would have like (.)
the topic and then we would have one column which is like list of value column

[C]: yes

[A]: and that there you can actually define if this is an issue or an opportunity or what (.)
(for this) score

[C]: that's right
(3)
and I can still foresee one question coming why do you call it issues and oppo[rtunities]

[F]: [yea

[C]: only when you're also capturing risks=

[B]: =risks, yea

[C]: or should it be called issues, opportunities and risks

[A]: or should it be called issues only and then we're gonna have this column (.)
inside where you're actually defining if this specific issue is opportunity (.)
or is that a risk
that is also that's also a val[id]

[A]: [because

[C]: line of thinking

[A]: yea because I believe that that's the original way of that how we were handling (.)
issues

[C]: okay I think (.)
pretty valid point so we can put it as issues and then, under issues when you are defining it you can add a selected attribute an issue or a risk or an opportunity

[A]: yea hey (.) let's have it like that

[C]: okay, I think ()

[A]: [yea that was a good (.) good solution

[B]: [()

[B]: good

[A]: good thanks

[C]: four days of holidays have kind of helped us in arriving at () decisions
((laughter))

[A]: ((laughs)) yea, this is h-how this is the way how to do it

[B]: alright, okay

[C]: okay so we'll mock it up according to what we discussed, [J]

[A]: yea, that's good thanks.

8.38 [ACRONYM] (transcription: 10:33)

[B]: alright eh (.)
eh yes [A], so eh let's then change the topic (.)
and eh take up [ACRONYM] real quick eh I [had

[A]: [yea

[B]: eh I said so much about [ACRONYM] at the beginning of the session I hope I have not said (.)
more than what is required but anyway (.)
a::h
(3)
you will recall that we discussed a few stop steps in [ACRONYM] (.)
eh during our last session
(3)
and then we had to complete the process so also to discuss a few steps so

[A]: okay

[B]: ah (.)
so feel free to stop me and raise questions my idea is to just share with you what is what has been added from (.) eh last (.) version

[A]: okay

[B]: in this process (.)
by and large it remains eh mmm the same just that we have completed the steps and then we have eh m one more eh (.)
thought about how to manage [ACRONYM]s that belong to es-tee-pees (.)
so anyh-anyhow let me eh (.)
start right away (.)
ahh key user or administrator eh publishes [ACRONYM]s (.)
and an publishes [ACRONYM]s for two es-tee-pees

(1.5)
that's step one eh add [ACRONYM]s is is next step so account managers can add [ACRONYM]s eh (.)
now eh here one thing I would like to highlight and which you'll see I'll also date stamp (.) as you're discussing .hhh proposal is to provide separate views eh for current and next es-tee-pee this is a: (.)
sort of potentially real confusion orr: e-e let's say complexity in the [ACRONYM] functionality be-because you you cannot e enforce-e [ACRONYM] planning to a particular es-tee-pee sometimes it will be futuristic and people will be working on [ACRONYM]s for next es-tee-pee .hh and somet[imes they

[A]: [mm
[B]: may be already in to one or two months into es-tee-pee before [ACRONYM]s are finalized
[A]: mm
[B]: so, eh system should provide this flexibility that it it should be possible to work on (.) current and next es-tee-pee [ACRONYM]s at any point in time

(1.5)
Aah, we would like to achieve this without confusing users without making system eh very complicated so eh ah (.)
what we are proposing is we have separate views for working on current es-tee-pee [ACRONYM]s and next es-tee-pee [ACRONYM]s (.)
that's one update from what we shared previous the way of working remains the same (.)
ah a only difference is that work separately on on [ACRONYM]s related to es-tee-pees

(4)
[and next

[A]: [can't you actually do that by having a column which is showing which es-tee-pee is and w
an eh is it something we currently have actually
[B]: yes, we *have* it already eh the ch-challenge I I'd like to suggest here since we have all these steps to add (.)
eh when you add eh (.)
you get to see [ACRONYM] records belonging to two es-tee-pees user should be consciously aware (.)
about selecting that is first (potential) for () second is when your try and submit (.)
system has to really perform validations for two es-tee-pees because system has no way to eh realize whether (.)
user has created eh [ACRONYM]s for current es-tee-pee or future es-tee-pee this also has performance implications because every time you are running this logic in a loop two times

(1)
ah so e and whenever anything like submission or approval or revision happens if you have a single view (.)
then then eh the system runs the whole logic two times, users potentially may get confused because I was eh intending to revise [ACRONYM] for current es-tee-pee but there is no way to separate es-tee-pees and the the revision got affected (.)
for two es-tee-pees (.)
for instance change of sta-status(.)
so we have talked through it and we actually were working only on a (.)
one view until recently til the time we realized that it is (.)
very very confusing from user's point of view to always consciously be aware of the fact that (.)
for which es-tee-pee am I defining [ACRONYM]s, for which es-tee-pee I'm ready to submit [ACRONYM]s for approval, for which es-tee-pee I would like to revise [ACRONYM]s, all these things (.)
it's very difficult hard for users to always keep in mind and to eh basically dealing with (.)
two sets of [ACRONYM]s at all points in time in [theory

[A]: [I'm not, I'm not (.) I don't fully agree with this
[because
[B]: [okay
[A]: normally how they are setting eh [ACRONYM]s they are setting [ACRONYM]s for for next es-tee-pee
[B]: yes
[A]: for example (1.5) for for eitch ((h)) one two thousand and eight
[B]: mhm
[A]: those [ACRONYM]s should already been set
[B]: yes (.) and if eh somebody for
[A]: by the end of November or something like that
[B]: yes yes yes yes, of course (.) and[for any reason

[A]: [so in that sense they al-al-always know know that they
are dealing with (.)
a like the (.) upcoming es-tee-pees [ACRONYM]s

[B]: yes so you are saying [ACRONYM]s are always defined e ahead of time (.)
eh before beginning of es-tee-pee? To which [ACRONYM]

[A]: yea, yea that's like the normal occasion

[B]: eh and how about any exception where in for some reason there's admin delay in eh (.)
defining [ACRONYM]s

[A]: yea there might be some kind of (.) [eh
[exception

[B]: exceptions for example some some new person is starting in February and then they need
to set (.) [ACRONYM]s for (.) for him or her

[B]: exactly, exactly and that's what our solution is to take care of such exceptional cases
where in (.)
eh w so eh the process deviates from the happy path of usual practice like you stated (.)
that there may be a situation wherein somebody is eh required to create [ACRONYM]s for
current quarter quarter eh current es-tee-pee () in that case we are (just providing) a
second view for that's what we propose so if if that exception should that exception
happen then the user goes to current es-tee-pee and works there (.)
but the process remains quite simple and coherent in the sense that you always work on
one set of es-tee-pee and we actually worked on this theory that (.)
in the usual practice you will tend to work on one set of [ACRONYM]s only when I say set
I'm referring to es-tee-pee

[A]: yes

[B]: so ah, that has been the thinking so basically eh how to model this situation where in you
always work with one eh (.)
with [ACRONYM]s belonging to only one es-tee-pee and you don't really e mix up
[ACRONYM]s whether you are requiring to modify those or whether you are setting your
targets (.)
eh you don't want to see two sets (.)
that has been our thinking, maybe [[C] can comment also

[C]: [also (.) also looking at the deployment [ACR]jects eh
like (.)
since the solution is going to be deployed across countries eh around different period of
time so if you go live somewhere in April (.)
eh you would want to set the es-tee-pees eh (.)
the targets of [ACRONYM]s in the system (.)
and then that would be for the same es-tee-pee
(0.4)
so that would also be one of the exceptions (.)
so once you start deploying it different regions you might want to start setting up the
[ACRONYM]s for that es-tee-pee itself and not only for the future es-tee-pee

[A]: Yea that that's one exception case also

[B]: so given these eh exception scenarios we thought there is clear need to eh (.)
provide a view where it is possible to eh (.)
let's say (.) little bit deviate from the time (.)
ah when the (.) eh [ACRONYM] def-definition and submission should be done (.)
and and that's where we are proposing two separate views to keep this (these things)
simple and I would also like to emphasize the fact that this will improve the performance
significantly (.) (it's [likely)

[A]: [okay

[B]: ah: so

Offshore: [B], () sorry to interrupt () we also have the option of manually creating the
[ACRONYM]s if that eh (.)
scenario is () we can also manually create [ACRONYM]s for eh (.)
for a period for an es-tee-pee () () scenario () we can do handle it manually () non() ()
) just for convenience we are providing () this
(6)

[B]: yea, I think that eh but yea, yea I understand your point eh but the way I will maybe
counter argue is that (.)
e what we are talking about here is only single user interface for working with this
functionality (.)
okay e no matter now what happens if if something like this e okay now since you're
misdefining your [ACRONYM]s you need to contact some key user who will (.)
help you manually define your [ACRONYM]s and link those to your accounts (.)
I'm sure users will feel slightly uncomfortable als something why should I depend on some
person to define [ACRONYM]s (.) I just eh (.) have to define it [()

Offshore: common then we can add a () ((4 secs)) [() actually (.) if the scenario is not
 ((in the following, [C] is talking "over" offshore))
 [C]: so, the answer () there would be that once you start deployments (.)
 this would be a very common scenario because eh during deployment you would actually
 be deploying it maybe in mid of an es-tee-pee (.)
 and for that particular country you would like to create all the [ACRONYM]s and start
 defining them for the users (.)
 so (.) and if this facility of a click of a button is available for the next es-tee-pee I'm sure
 the business would also want similar facility for the current es-tee-pee (.)
 so it's it's basically (.) ah if you have given some facility and and say that It's not available
 for the current es-tee-pee then I'm sure business is not going to like that (.)
 that much (.) so e once you have given them something which is automated they would
 not like to go back to a manual process
 (2)
 even for this particular deployment scenario or for a scenario where a new user is joining
 what [A] was mentioning
 (3)
 [B]: just eh sorry five more minutes to go I'll have to rush through but the idea is, [A], we share
 it with you I-I send this (ppt) to you and you can eh comment on this also (.)
 eh ehb we are targeting to have a mock-up in place very soon now
 [A]: yea, let's let's
 [B]: yea
 [A]: let's eh get back to this when we are (.) gonna see the mock-ups
 [B]: yes, yes exactly (.)

APPENDIX 7 – MEETING 6, JANUARY 3, 2008

Duration: 01:28:00 (88 mins)

Transcribed: 00:09:26

8.39 #9 Account year-on-year report, part 1 (01:44)

- ((discussion has continued for 36 seconds))
- [B]: Yes, [H], just uh (.)
- [H]: can you just walk us through and then maybe take [A]'s comments uuh-I (what I understood as the) requirement so that you need multiple measures an' multiple time periods to analyse, and main requirement is to show different colors for actuals
- [A]: [mm]
- [H]: when it is future period when actual's not available (.) show el-ees as actual but with a different color (.) so that's what is there now if you see uh [B] it can ()
- [B]: what
- [H]: (because he) can't read that [(properly)
- [B]: [a::lright (.) then I can (.) go this way
- [H]: yes (2)
- [B]: (sorry about this)
- [H]: (more)
- [B]: but I'll take a pause, [A], uhm (0.8) (so we recollect all this discussion while I can) maybe: (.) uh refresh this discussion for you (.)
- uh the uh there were two elements in it 'n one was that you are since this is a year-on-year performance you are reporting two year's data
- [A]: hmm
- [B]: so there should be a clear visual clue (.)
- uh off: the fact that this is two years' data compared (.)
- so this (.) curve that you see
- [A]: hmm
- [B]: is essentially uh same period previous year [net sales
- [A]: [mm]
- [B]: and these bars that you see is the current (.) year
- [A]: mm
- [B]: which obviously has actuals (.) and el-ees [(.) when actual is not there
- [A]: [mm]
- [B]: this was our second requirement that (.) draw contrast between actual and el-ee (.) again a visual clue so when you see these (.) violet [bars
- [A]: [mm]
- [B]: this is actually el-ee because actual is not there (.)
- for these periods and then this is (.)
- actual is dark blue
- (0.9)
- so what we were aiming to achieve in this uh account year-on-year performance is first ability to compare two years (0.5)
- second, ability to draw contrast [between actual and el-ee .hshsh
- [A]: [do you know
- [B]: [I already saw (.) one-one
- [B]: [()
- [A]: uh (.) error in this
- (([A] explains a minor detail; 1 min. 25 sec. not transcribed))

8.40 #9 Account year-on-year, part 2 (04:10)

- [H]: mm: so basic thing that we are now able to distinguish (.) in the same graph el-ees and actuals
- [A]: hmm
- [H]: (plotting) them in a single access but we are distinguishing them by different colors
- Someone: yes
- [H]: and you can see on the righthand side how the different legend () (.)
- like uh dark blue for net sales and violet for a (period)
- [A]: [hmm
- Someone: [°yes yes°
- [H]: and then uh now (.) the difference here is (like) you select the measures from the drop-down (.)

so you have a drop-down value for each of those (.)
like y'see I have taken net sales and gross margin as to example (.)
uh: two measures in this example=
[A]: hmm
[H]: so you have the options to select as period net sales actuals,=
[A]: =mm
[H]: quarterly net sales actuals, so if you'll go to the next slide you'll have the quarterly report
(.)
[B]: [(okay)
[H]: [and then again periodic gross margin actuals and quarterly gross margin (.)
so uu it means that actual thing anyway (.)
.thhh so uh the point here is that it's not that you have the drop-down of measures and you
() drop-down of period like (quarter 'n year) or something like that [()
[B]: [(club) the element of period and element of measure together=
[H]: =y::es [because of this change that we are preferring it [like that
[B]: [aah [so
[A] what we need to:: uh muh (.)
sell to the users is the fact that it's not like drill-down it's like select (.)
from the drop-down (.)
so if you are interested to see data on quarterly basis then basically selecting from here (.)
uh we: uh
(1)
which is okay because that's what we
[H]: and also for the [current
[B]: [yea
[H]: quarter what is happening like it might happen that you have some actuals for some
month and el-ee for some months
[A]: mm
[H]: so our understanding has been that for that quarter (.)
those actuals and available el-ee should be added up and shown as the actual for that
quarter (.)
so if you see this uh Q-one two-thousand-and-eight the value here shown [is
[B]: [sorry
[H]: basically summation of the actual and the el-ee (.)
so uh if you look at the ()
[B]: have I gone a little
((is projecting the report with his laptop and scrolling information on screen))
[H]: yes
[B]: sorry yeah
[H]: so (.) here this Q-one two-thousand-and-eight graph is summation of the actual (.)
and the el-ee (.)
so we had Q-one two-thousand-eight's actual
[A]: mm
[H]: and the rest of the months' el-ee (.)
so when we reported at quarterly level (.)
the actual is reported as the available actual plus the available el-ee in that quarter (.)
so (I hope) that uh understanding is correct
(2)
[A]: mm
[H]: so (.) so basically you select from the drop-downs (.)
the periodic (.) net sales or quarterly net sales and then again for a different measure (a
sales) [Info0] here we have gross margin (.) so you can select periodic- [B], can you go to
the first (.) slide (0.5)
mm a little bit up (1)
here so you will have a drop-down like this (where) all the available measures (in there)
periodicity will be there (.)
so you will just need to select it from that and ()
(1.5)
[B]: uuh yeah (.) so uh one question I would have is u:h (1)
is this report uh required for many measures or one measure or a few measures (0.4)
because that (.) decides the number of items you have in this drop-down (.)
u::h
(1)
[A]: I think it's (2)
it's the net sales that they want to
[H]: okay (so we don't [need to)
[A]: [follow

[H]: (add all those) ()
[A]: yea because then we are hav- having this problem that (0.5) someone (0.5) u:h can see that someone not
[H]: [yes yes (.)]
[B]: [yes exactly
[H]: then (again you have to [apply all the securities separately)
[A]: [yeah
[B]: so this is basically net sales year-on-year perfor[mance
[A]: [yes
[H]: okay (then) ()
[B]: so then I think we've achieved what we:h wanted to achieve [uh
[K]: [no but in the requirement the excel (which) we have received initially
[B]: mm
[K]: shows should show all the measures so is it final that only net sales should be shown
[B]: okay I would be quite sure about these uh gross margin (.)
net [margin uh yes
[H]: [no no I just added it so I I I uh [()
[K]: [no but we want to have the final list of the measures that can be shown in the re[port because
[B]: [then let us decide let's keep it [A] only for net sales
[H]: [()
[A]: yea=
[B]: =because there are other reports [for users to yeah
[H]: [then uh we can update the gap analysis with that uh
[K]: yea because the [reporting actually initially when we received the report ()
[B]: [we need to do that
yea
[K]: the key account performance to be monitored (.)
there they have given the list of measures (.)
like [price], [gross margin, ()
[B]: [yes

8.41 #9 Account year-on-year, part 3 (00:11)

[A]: wh-wh- hey sorry just (.)
[B]: hmm
[A]: period was default in financials page (1.5)
was it like that
[B]: [()
[K]: [in the reporting guidelines meeting we had [(decided)
[A]: [oh yeah okay

8.42 #9 Account year-on-year, part 4 (01:48)

[A]: but then (.) so we're not gonna have this drill-down functionality over here
[H]: mm: [no
[B]: [yea drill-down actually sorry I think maybe I distracted the group (.)
quite some time back we decided not to have dri- drill-down reason being drill-down always focuses on a period and then your observation was that there should be possibility to see other periods relatively (.)
uh.hh what I mean here is that if when we were (.)
still in drill-down kind of solution (.)
a drill-down on Q-one only was (exploring into) Q-one months (.)
and then you observed saying that uh well e-(.)
one should always be able to see other: (.)
months also it should not always
[A]: yea [()
[B]: [there's a drill-down property when you drill-down [you only drill-down
[A]: [but but now when we are having
this that you can set periods and quarters
[B]: [yes
[H]: [yes
[A]: from here
[B]: [yes

[H]: mm
[A]: uh it (.) kind of solves that problem because
[B]: yes [yes (exactly)]
[A]: [(if we're) in-in a default have it in a quarterly and then you can drill down that [one quarter
[B]: saying [you're
[A]: and [and it's (totally)
[B]: [building drill-down on top of it
[A]: uh ye[ah
[B]: [li- hh having both solutions
[A]: yes
[B]: [H] (.) uh ()
[H]: °mm°: [()
[A]: [n- beca- of course you can't drill-down from here because now [we're in lowest level
[H]: [()
[A]: [but but from the quarter
[H]: [(so you're saying that)
[B]: what [A] is saying why not have both solutions [so if you if you have two user groups then
[H]: [(okay when you have it quarterly you want to drill-down say on Q-one-eight to see t[he: uh
[A]: [yes (.) th- that
[H]: [()
[K]: [yea there is one more limitation on this [(is)
[A]: [mhm
[K]: when you're () you're enabling an quarter, quarter will t- go to period
[A]: mm
[K]: but still (our) we have some selling data at weekly level
[A]: mm
[K]: so the problem happens is (.) still it will enable fro- the users that there is a still drill-down from period to week
[A]: mm
[H]: yea
[A]: but I don' know if there is that kind of requirement
[B]: it's not a requirement there will be uh m uh (.)
kind of objection from users why you allow drill-down when you know there is no data
[K]: [data
[H]: [°okay° (but)
[B]: [limitation is [it like
[H]: [yea this is fine but what I'm thinking here is uh (([H] continues explaining and walks to the whiteboard to draw what he means while he explains))

8.43 #9 Account year-on-year, part 5 (00:40)

[A]: we should show the el-ees (.) for that quarter
[H]: we should not show (.) the net sales actuals at all for that quarter (.)
even if we have the figure for the first month?
[A]: I don' know
[H]: because if you remember [person_M] had this observation for one of the reports in one-dot-zero
internal market share
[H]: the internal market share where he was saying that it should take the actual available and the el-ees and then sum of them and that's what our understanding (is for this also)
[A]: yes yes in those reports
[H]: [so
[J]: [because ABC does it that way=
[K]: =[ABC does
[H]: [yes ABC doe[s
[J]: [() ABC shows it (cumulative)
[A]: mm m
[B]: and cumulative is actual plus el-ee
[H]: yea whatever actual is available and then (.) whatever el-ee ()
((group discussion options that might solve the problem, [A] is quiet - ~25 seconds not transcribed))
[A]: yea I-I need to think about this
[B]: yea okay
[A]: yea (.) I can go it through with (.) some other people

8.44 #11 Metrics data in OLTP (00:53)

((discussion has been revolving around how to report null value zero; discussion has been going on for 9 minutes.))

[B]: here there's a whole set of measures (.)

[A]: hm

[B]: if you're trying to bring this year-on-year here you will have six year-on-years (.)
or maybe whatever the number of measures (.)
.hh so that that is () but anyway I don't want to sort of confuse you (.)
we have (suggestion) for it

[A]: do we actually have that (.)
now in in the reports that (year) (.)
specific [company] shares in the account and then this year-on-year performance (.)
column

[B]: aa::

[K]: [(right now we don't have)

[A]: [or

[A]: or is this just an illustration

[K]: illustration [() we [just want to explain

[A]: [okay

[B]: [you mean do we have this column now in mockups=

[A]: =yea

[B]: aa: (.) I can't re- recollect (.) [K] (help me)

[A]: ya[a

[B]: [we we don't have that (.)
okay so (if) we're going to add it

[K]: no=

[A]: =no [no we're not () yea

[K]: [what [B] was trying to say is uh when we have only: one measure showing y YOY
performance,

[B]: mm

[K]: we move (two column to the) () which give you better illustration (.)
like we [shared for [company] [price] ()

[A]: [yea

[K]: but here if you do like that we have to keep more measures

[A]: [mm

[K]: [in the same report

[A]: mm

APPENDIX 8 – MEETING 7, JANUARY 7, 2008

Duration: 01:43:00 (103 mins)

Transcribed: 00:04:05

8.45 #7 Geographical levels/Interfaces (01:53)

[J]: another () which we have been (1)
(application) we had agreed () in our system (.)
we would create accounts at the lowest level of that country.
If it's [country_1], accounts will always be created at the district level (.)
if it's [country_2], accounts will always be created at the (region) level,
in all other countries () (can be created at the country) level.

[A]: mm

[J]: because what we are doing is (.)
in the lookups table we'll have immediate parent for that column (.)
(so suppose it's coming) at a city level then we'll have (district) (1.5)
mapping for that we'll we cannot map a city to a country

[A]: mm

[J]: in [country_1] (.) so those restrictions which we had in (.) (the) system

[B]: so, [J], let's maybe understand this correctly (.)
I I c- [wha what if

[J]: [mm

[B]: I create a account in [country_1] which is at country level

[J]: then figure should come at country level

[B]: yes [so

[J]: [or should come at (region) level

[B]: okay okay

[J]: so what we can (if the figure had come in) we can map it only to one immediate parent

[B]: mmh

[J]: so if figure had come in at city level I cannot map it to a country level

[B]: m-okay okay

[J]: so we can very well (keep it) at country or (region) level as long as the figures are coming
at that level

[B]: okay

[J]: so it's like we have to (be in synch with) interfaces

[B]: mh-mh-mh-mh

[J]: if they are at city level then we have to be on district level

[B]: so you're actually addressing the: uh lo:wer level requireme[nts

[J]: [mmh

[B]: I mean you're not saying that you cannot have account in [country_1] at country level (1)
you're saying (you'll not) have account below district level in [country_1] that's what you're
saying

[J]: nn:o we I'm say[ing we do (not actually have)

[K]: [()

[J]: account (above region) above district level in [country_1]

[B]: [because (there are)

[J]: [again this is again uh understanding based on a sample data

[B]: okay let's [see maybe

[J]: [(there only da- data coming at) [(region and district level)

[H]: [(an-and) if we have them they will not have any

[J]: [ABC] data tagged to [(it)

[J]: [mm

[H]: the data will [be (tagged) ()

[B]: [most likely they are indirect accounts but [I mean

[H]: [yeah those account maybe

[B]: [opportunity management (have accounts that) yeah

[H]: [opportunity () yeah

[B]: [maybe they're indirect accounts

[H]: [but they might not have financial data

[B]: so they'll not have any direct dealings with [company] so no [ABC] .hhh anyway let's move
on sorry I just so you have to more minutes

8.46 #11 Gap analysis related items (00:57)

[B]: and also uh the: uh TCO list is uh (.)
like the existing TCO list will (.) be discontinued and there's a fresh list of TCOs
[A]: tha- yea that the new list will be used (.) but
[B]: okay [so
[A]: [we're not gonna like (2) uhhh use TCO as an entity
[B]: yes [yes yes
[A]: [over there
[B]: no uh [A] my question is that even if we don't use TCO as an en- [entity
[A]: [mm
[B]: separate .hh there's uh (.) for example TCO item training
[A]: [mm
[B]: [.hh now w-would we not have this item in future is are we going to change it completely
because that's what I understood from [D] (.)
.hh but I'm not sure if there's a sort of formal confirmation of it because it's like scrapping
the old list in new uh AM tool you don't have those h previous [uh
[A]: [mm
[B]: LOVs any more
[A]: mm [but i-it's
[B]: [so there is *no* translation it's like you stop using one list and you start fresh from new
list is it like that because that's that's our understanding
[A]: yes it is like that
[B]: [alright
[A]: [we're gonna use the complete new list (.) [yea.hh
[B]: [new list okay

8.47 #17 [ACRONYM] mockups (01:15)

(([B] has been explaining the process for almost six minutes by this time))
[B]: beyond this, there are two possibilities (.)
one is account managers are updating actuals (0.5)
the supervisor is sort of monitoring and reviewing (.)
on timely basis at some point in time if we feel that we need to change [ACRONYM]s then
the it goes to the revise process (.)
which is again just a button as you can see here (0.5)
the the revise button will change status fo- from approved to (.)
waiting approval again (.)
so this again (.) it's it's again like (.) defining and approving (.)
so that's only change so that's ee here I've shown the parallel activity basically
[A]: so do we really need that revise (.) [ACRONYM] (.) button
[B]: aa a-we uh (.) well uh (2)
this has been uh sort of stated direction for the requirement that there (.)
may be a need to change [ACRONYM]s (.) [for any reason
[A]: [later on yeah
[B]: °err°
[C]: I think [person_M] was also pretty insist- y'know insistent[on having this capability
[B]: [yes yes yes yes
[B]: [yes it's like don't freeze it forever
[A]: [yea but it it means but that means then that (1.5)
that will be used (2)
for example uh when [ACRONYM]s are already approved and maybe (.)
in one month or so (.) the country manager (.) wants to revise the [ACRONYM]s then
[C]: he can use it
[B]: [yes
[A]: [yea it's alright yea
((([C] continues to explain the scenario, [A] agrees.))

APPENDIX 9 – MEETING 8, JANUARY 16, 2008

Duration: 00:59:00 (103 mins)

Transcribed: 00:06:07

8.48 #5 Organizational structure (06:07 – total length of this stretch is 06:29, but 22 seconds from the middle left untranscribed)

[B]: [J] I think we'll take this uh organation (position) related (.)
discussion now .hh
uh you shared with us the [ABC] structure some time back and we (are) now started (.)
looking into it (.)
uh first observation [J] has made is that there is uh (.)
I can maybeh keep it open

[J]: mm

[B]: hh (5) which wa[s it

[J]: [() this one

[B]: this () (.).hh (.) uh okay the point of discussion uh [A] here is that we have understanding
of the organation structure model (.)

[A]: mm=

[B]: =so global then channel then cluster and [so forth (.)

[A]: [mm

[B]: and when we are trying to apply that model here what we observed this cluster has kind
of: two instanc[es

[A]: [mm

[B]: there is a cluster total (.)
and then there are cluste:rs (.)

[A]: mm

[B]: these clusters also map with the: presentation that we used to discuss in early days of
concepting .hh uh and if you look at these [()

[A]: [(clearing his throat)

[B]: these are like (equal end of) area (.)
I'm not trying to say that this is area but this is like markets [area_2] (.)
it is written as cluster [total .hh (.)

[A]: [mm

[B]: markets (.) greater [country_1] [so

[A]: [mm

[B]: (these are kind of) area (.)
.hh what we would like [to: do is yea- y[ou can

[A]: [(just) [(yea just a minute I'm j-) I'm gonna open

[B]: yea-
(6)

[A]: (same stuff) over here so (.) follow

[B]: yes sure=

[A]: =the whole structure yea

[B]: .hh okay so what we would like to: uh sort of clarify or resolve here is that obviously we
cannot have (.)
two levels which are cluster

[A]: [mm

[B]: [in the in the organation structure .hh simply because of the fact that it has a clear usability
im- implication [(on [SYSTEM_1] side)

[A]: [mm

[B]: you know you select cluster and then .hh okay so we need we need to name this level (.)
we need to recognize that this level exist

[A]: [mm

[B]: [this lev- this level should be named and then accordingly it should be used

[A]: mm

[B]: .hh we also would (.) ob- obvi[ous-

[A]: [we're not gonna use it in the tool though

[B]: that is a question (.) we are asking here that (.)
would we have for example some user interested to review markets [area_2] total (.)
if answer is yes then probably this level is required because there'll be somebody logging
in (.) trying to pull out the reports related to uh [area_2] market [total

[A]: [mm

[B]: but if: no users exist at this level then maybe we don't (.)
want (.) such a level but that that's a second part of this question .hh
(6)

[B]: [H], I think [it should be
[A]: [(er uh)
[B]: sorry, [A], yea
[A]: there is kind of a problem here
[B]: yeah?
(4)
[A]: which I haven't recognized earlier
[B]: [(yeh)
[J]: [()
[J]: [()
[A]: [because there is e-exception k- kind of because
(2)
(([A] gets up from his chair and walks closer the screen))
[J]: (we can open this because we can discuss it with this context)
[B]: [()
[A]: [uh in in uh distribution east (.) actually
[B]: mm
[A]: this is one cluster (.) the greater [country_1]
[B]: yes
[A]: and these are the sales units (.) uh [country_3] and [country_1] under this (.)
greater [country_1] cluster
[B]: okay
[H]: (so these are not)
[A]: so this is actually sales unit (.)
not a cluster
[B]: (oh [and [area_4] is a)
[A]: [this is [sales unit
[B]: okay (.) [country_1] is
[A]: and [area_4] actually doesn't belong under (.) this one (1)
I don't know if this is actually correct
[H]: hmm [[area_4] (doesn't) belong: to [market
[K]: [this is from [ABC] ()
[B]: [but this has our element of analysis and sometimes
we may be wrong in analysis=
[H]: =I think [J] () this is our analys () the [area_4] cluster is like [[area_5]
[A]: [but why why this is
in in two [two places
[J]: [()
[H]: () (that)
[J]: () maybe () mistaken
[H]: yea [(that may be how it is missing)
[A]: [yea (i- in in) ()
[B]: yea but we can maybe (.)
drawr attention back to the fact that there is a cluster total and there is a cluster
[A]: mm
[B]: so it could be it is a [()
[H]: [so what we are calling it cluster basically you're saying sales unit (.)
this [uh
[A]: [yea but but it actually this is it's not this is this is actually cluster
[H]: okay
[A]: this is cluster (.) kind of
[H]: okay
[A]: this is cluster (4) what else is cluster
[B]: so whatever is uh suffixed as cluster is cluster
(2)
[H]: if uh like for example if we say market [country_2] cluster, Market [country_4] and
[country_5] cluster all these are clusters=
[A]: =mm=
[H]: =then what do we call the market [area_2] total (.)
it cannot be cluster anymo[re
[A]: [yea it's not cluster yea (2) [mm
[H]: [or () do we need to roll up data at
that market [area_2] level at all () if (it) is then what do we call (that)
[()
[K]:

[A]: [yea (.) you don't need you don't need actually that level but I-I just need to check that
(how) how is it actually (.) [I've got the latest [ABC] structure now
[H]: [if we okay
[B]: okay=
[H]: =I think the earlier (ppd) that we had while discussing the orgination structure (in all) (.)
that didn't have this market [area_2] total this layer
[A]: mm
[H]: it only had clusters after (.) the: uh distribution [east
[K]: [yea but I have a ppt taken from (internal)
actually (.) if you see here (.) there is a cluster [area_2] [area_5]
[H]: then we need to know what we call [(it)
[K]: [yea
[A]: °cluster°
(above, 04:56, and after that approximately 22 seconds is left our because [J] is sending the ppt files to
[B] who is searching for the correct slide)
[J]: so ([A]) is this structure still changing or the one the file which we (.)
we got it like three weeks back or (something) (.)
will it cha[nge (or) ()
[B]: [yea (.) good question uh (2)
[A]: no I: believe that it hasn't changed (.) that that structure hasn't changed (.)
maybe the customer hie- hier- hierarchy has [changed
[J]: [changed
[B]: [changed okay
[K]: [B] (.) (I sent the mail)
[B]: you sent it to me (.) thank you
(4)
[J] is this is this the one that you sent
[J]: mm
(3)
() open () the latest
[K]: slide four
(7)
[B]: let's check this
[J]: ()
[H]: no there are differences if you go to [the planned (sales unit structure)
[A]: [if you go one one back
[H]: yea one back that's what I was saying (.) [(there's a plan)
[A]: [so these are the [clusters
[J]: [() it's the one which we have
[B]: [this we have discussed so often yea
[A]: [() actually so that is that is something that you need to use (.)
these are the clusters (.) ((showing with his hand at the screen))
plus (.) there should be actually [area_6] [()
[H]: [()
[A]: yea and these two () and these are the sales units
[H]: but eh in that case the next ppt (.) that eh is showing another level if you go to the next
one
[A]: yes but d-don't remind [like this one
[H]: [okay
[A]: this is [[org_name] organization
[H]: [okay
[A]: and it's it's organized a bit differently
[H]: okay
[A]: so this is like the sales unit structure is something that we need to (follow here)

APPENDIX 10 – MEETING 9, JANUARY 25, 2008

Duration: 01:30:00 (90 mins)

Transcribed: 00:06:24

8.49 #5 Channel dimension handling/[ABC] data

((Discussion has continued for 1 minute 17 seconds, [B] is ready to move to the next topic, but [K] intervenes))

- [K]: one more assumption in [ABC] side is [ABC] will be giving aggregated so [unit] data (.) that required on organizational level
- [B]: mm (.) okay
- [K]: that was assumption that one () we have on this slide
[because as we see the
- [B]: [()
- [K]: as we see the data (that is) being aggregated and given as [unit] product but there are some concerns that it should be aggregated at region level in [country_2] that one we already highlighted to [ABC] too
- [E]: yea (.) yea that's mainly his eh (.) mistake (for this)=
- [K]: =yes yes yes that one anyway we have highlighted (.) so far [unit] from [ABC] system we are getting [unit] aggregated [unit] sales (.) that one we (are sure of) as of now so we c we can now confirm to [A] that yes we can maintain [[unit]
- [E]: [aggregated
- [K]: [()
- [E]: [from [ABC] ()
- [K]: we don't have all the fields (.) there are fields there available (.) ([Info0]) [()
- [K]: [mm everything is available (.) and the and the (distributor)
- [B]: okay (.) are we then: ee [E] saying that we now already know or (.) we can assume that we are probably given given this aggregated [unit] data (.) are we in a position to say that now
- [E]: (yes) () we agreed that with eh: configurators (yes) that is possible
- [B]: okay (.) okay
- [K]: from [ABC]
- [B]: [ABC] side (.) alright.

8.50 #12 [ACRONYM] process – part 1

- [B]: now eh: when we talk about [ACRONYM] this is [ACRONYM] for [xx_manager] because we have at least three screens one is [screen_1]
- [A]: mm
- [B]: then [screen_2] and then there is this [screen_3] so
- [A]: let's let's go with to the:e [screen_3]
- [B]: okay yeah (3) so I'll go to [xx_plan] (9) this is what we e:h sort of agreed eh (.) that we will not have multiple views (.) this was last time (.) and then we were waiting then let's
- [A]: yeah
- [B]: so agree basically have one view rather than having multiple pa:st .h
- [A]: mm
- [B]: current and future so this is (.) current understanding
- [A]: if you can once more go (.) through why do we need those multiple views
- [B]: yes
- [A]: just so I understand
- [B]: sure (.) sure sure I can (.) the need of course of having these multiple views is to uh (.) take the uh decision uh out of the end-user's hand (.) wherever there are decision points
- [A]: mm
- [B]: which is selecting some particular records
- [A]: mm
- [B]: .hh uh and of course in this process .hh so uh (.) well we uh let's take a happy path (.) there is a point in time when a user chooses to define or set [ACRONYM] [targets
- [A]: [mm
- [B]: now h-here there are two possibilities it's done (.)
adv- well in advance or it's done (.)
little bit late (.)

[A]: mm
[B]: .h so this brings in this possibility of you may be planning for next es-tee-pee or current es-tee-pee
[A]: mm
[B]: now if you have a single view for it
[A]: mm
[B]: then when you use this add button to (.) add [ACRONYM]s [you
[A]: [mm
[B]: will have [ACRONYM]s belonging to current es-tee-pee
[A]: mm
[B]: and next es-tee-pee both
[A]: mm
[B]: and as a user now you are responsible to select the right record (.)
you should not end up setting target for current es-tee-pee when you are aiming to set
target for [next es-tee-pee (.)
[A]: [mm
[B]: just because you didn't read H-two (.)
two-thousand-eight and H-two two-thousand-[seven
[A]: [mm
[B]: .hhh in order that we take kind of decision making out of users hand we thought we'll (.)
provide this separate views (.)
so if you want to set targets for current es-tee-pee (.)
or anything that you ha- or want to do regarding current es-tee-pee setting targets,
updating actuals, submitting (.)
.h anything that relates to current es-tee-pee go to current es-tee-pee view,
anything that relates to future es-tee-pee, go to future es-tee-pee view (.)
and by any matter of chance you've missed out something and (.)
things have gone in past then you can go to past [ACRONYM]s view (.)
.h that was the: thing (.) but then it obviously: has [downside
[A]: [yes
[B]: which is that it complicat[es (.) uh let's say training (and)
[A]: [it may may be complicat- yeah (0.5)
so the question is that is there an- any restrictions (.)
to have only one view then (.)
is there something that you are not able to do?
[B]: no it's not it's it's just about our feeling that when user hits on this add button
[A]: mm
[B]: user will need to be aware of which records to select (.)
as simple as that
[A]: so (.) meaning that uh (.)
needs to (.) know that which es-tee-pee (0.5)
[he's planning
[B]: [exactly exactly exactly (.) and I will assume that there would be exceptions always that I
selected a wrong es-tee-pee, I didn't realize it and I also fill the actuals, my (.)
on on [ACRONYM] report side (.)
my [ACRONYM] (.) records don't show this query will come to key user, key user will
again go back and say .h can you please check that you're defined (for the right) well
things like (that well) these will be exceptions
[A]: so do you think that it's it's (2) it might be like (.)
handled in a trainings
[B]: yes then it's a training issue if w- if we really sort of: rule this solution out
[A]: mm
[B]: then then it's a training issue (.)
.hh you only have one view and you might have different process practices or certain
circumstances leading to deviation from your (.)
[A]: mm
[B]: usual process practice
((discussion continues for ~4 minutes and the decision is to use just one view))

8.51 #12 [ACRONYM] process – part 2

((discussion has continued and the team is thinking about what the user needs to do, and they realize that s/he needs to handle past information, too))

[A]: so would (.) I'm still (.) thinking that would actually that help (.) would that be like more
more usable solution to have that kind of next (.) current

[B]: you mean three views? (.) if you will (have) take our recommendation I will say no .hh
 [A]: no? no three views
 [B]: yea it's it's better solution to have one view
 [A]: yea
 [R]: actually three views increases the configuration and (some) ()
 [B]: the three views we are also resulting because of the approval process (.)
 if you [take the approval process out
 [R]: [yea
 [B]: the need of three views actually goes away (.)
 [the reason was
 [A]: [yea the approval
 [B]: [yes
 [A]: [let's talk about [that because now now the business actually is saying that
 [B]: [(let's have that)
 [A]: yea there is not that clear reason to have the approval process because this is not basis
 for salary
 [B]: yes
 [A]: so so in that sense but in the future (.) it might be the case that [tool] is used for setting up
 the targets and then that's like linked (to sales () planning) so in that sense we already
 now need to have that kind of mode (.5) mode that there is approval process in place (.)
 that they will learn all the users will learn for that
 [B]: for approval
 [A]: for approval process
 [B]: okay so what is the business call like have develop approval functionality already now=
 [A]: =yes=
 [B]: =or? (1) okay
 Someone: oh
 [B]: if approval is required then three views
 ((general chuckling))
 [B]: because for users with approval it will be very confusing (.)
 at a given point in time (.) you are planning (.) so one set is new (.)
 and this is you you will (.) you are about to submit the others that you need to update so
 up for the status of that is approved or waiting approval .hh and so so in single view you
 you should be always clear about which records (.) are allowed to edit which are not
 allowed to edit and then it it actually complicates (the whole system) if you need approval
 have separate views (1) if you don't have approval have a single view that is the (.)
 recommendation here
 (([E] suggests a light version; discussion continues on various requirements and restrictions...and no easy
 solution is in sight; after some 3.5 minutes, [B] bursts to talking))
 [B]: and that was one reason I was sort of keen to get visibility of what actually this
 [ACRONYM] process is at the end of the day (.) cos I'm sure if if users are doing in some
 way in some system it is possible to model it here but we need to know what that process
 is (.) so far we have used imagination (4)
 and when you use imagination the only risk is you are sometimes able to be user
 sometimes you are also solutioning it so you .h are no more a user
 ((30 seconds goes with the participants discussing the current solution))
 [A]: this is really tricky
 [B]: this is really tricky yes yes yes
 (10)
 [A]: so no approval process without many views
 [B]: ah y:es yes if you want to (3)
 because I think process is something you cannot predict you can only model you cannot
 predict (business practice) () there can there can always be an exception so from that
 point of view (.) you want to (1) make it a (3) I would say already aligned to process rather
 than leaving it for users to figure out what's happening
 [A]: so we have only one option (1) kind of (.) more complex solution than before
 [E]: can I ask spend some more time on Monday
 [B]: let's follow it up I mean
 [E]: because this is () if you have three different view ((laughing))
 [A]: yea and approval process and then you have to think all the time that where you are (2) it
 kind of helps (.) to sort the [ACRONYM]s by eh (.) by period
 [E]: by period
 [A]: but at the same time it is kind of eh you need to click more and more to get it where you
 are (.) where you want to go (.)
 [E]: (I know you want an approval on the process)
 [B]: I'm in a difficult role these days
 [E]: ()

[A]: yea because we are actually (1) try to avoid the mistakes that (the they are [doing in the])
[B]: [how is the] experience with current process [A]
[A]: it's much more straightforward
[B]: it's quite straightforward
[A]: yeah and the tool is much more easier
[E]: ()
[B]: and that supports the [ACRONYM] framework
[A]: hm?
[B]: that supports this kind of [ACRONYM] framework (wherein you focus)
[A]: yes >yes yes yes< these are the same [ACRONYM]s
[B]: yea
[A]: so they are setting up the same [ACRONYM]s over there and then they come here and have this big process and (.) and ask that why do we need to set those [ACRONYM]s in here in the same even (.) because the way is actually the process is much more complex in here and actually this is not the basis for salary for paying salary
[E]: ()
[R]: [A] is [it possible]
[B]: [can we look at the]
[R]: yea can we look at the existing solution which is which the users are using so that (we can [try to])
[A]: [I have to ask a permission for doing it because it]
[R]: of course
[A]: might be confidential
[B]: yes yes
[A]: yes I would say
[B]: yes all of us are under en-dee-ai but eh you are saying is that this is eh a mission for two point one (1) I mean if we proceed with a simple solution and think about something like approval later
[A]: mm
[B]: would it be (.) would it harm the (1) we are not talking about dependency on compensation immediately
[A]: mm
[B]: see obviously this is something for which one needs to buy time we have spent so much time on this so eh to promise something to happen on Monday would be unfair thing to do (.) so eh (.) a possibility to have the simpler solution for now for this release (.) and then we think about it again when when when it's time to integrate with the compensation system (.) approval will not have any value from usage point of view until it is linked to eh compensation system
[A]: mm (.) that that was (.) actually something that I tried to say to them today but (4) but they seem to (think) that we should have it already now
[B]: and eh what kind of
[A]: can you give some kind of like cost estimate what is it to have it a system like that and what is like the () because then I can go with them and say that this is how much the way that you want to have it
((overlapping speech))

APPENDIX 11 – TAGGING IN THE MEETING HELD ON NOV. 28, 2007

Topic	Length	Temporal reference to an occasion, discussion, meeting, or similar other than the current one	Reference to a person/team who is never in these meetings	Reference to an absent team member	Reference to e-mail or tool/system
#1	00:15:40	Went through this yesterday with [Person_N]	[Person_Q] - in relation to color codes, multiple times - in relation to report name, multiple times [Person_N] (multiple times)		
#2	00:08:57	00:01:00 00:02:48			
#3	00:05:32	This was one discussion we had earlier , if you remember, [A] ([C])	Will this need to be captured in teams? ([C])		I can go to that application ([C], for indicating how it is in the app)
#4	00:04:11	This was one of the action points out of that meeting (not clear what meeting)		Parked against [F]	
#5	00:09:01	00:01:00 Call with [Person_M] ([H] + [D])	[Area_1] doesn't want [xx] data visible [Person_M], multiple times ([H], [D]) [Person_Q]'s opinion ([D])		
#6	00:01:01				
#7	00:03:08	Decided in the last meeting : ([C] explains...)		[F] had screen shots of displays where it might have an effect	
#8	00:06:24	Technical details need to be taken offline (05:08)			

#9	00:02:16		Discussed yesterday ([A])	[Person_S] (discussed with [F]) [ACR1] representatives	[F] (has had meeting with [Person_S])	
#10	00:02:39			Discussed with [Person_M] ([D])		
#11	00:10:18		Long discussion yesterday ([A], with them)	Them/they (not defined, [A])		Tool opened
#12	00:07:00		[D] and [C] had discussed this earlier in the morning	[Person_S] (discussed with [F])	[F] (has discussed this with [Person_S])	
#13	00:02:59	00:01:40		[Person_M] e-mailed... ([C]) [Country_1]'s requirement		E-mail
#14	00:02:09			[Person_T] ([D])		
#15	00:00:19			[Person_M] said this is not in scope ([H])		
#16	00:00:09					
#17	00:01:32			[Person_N]'s comment ([C]) Have you been in touch with [Area_1]? ([D])		
#18	00:01:04					
#19	00:04:50	00:01:48	Proposal to remove this in Friday's Core team meeting	Another comment from [Person_N] ([C]) Didn't [Person_M] say that... ([D])		
#20	00:01:25					
#21	00:06:55		I can say it today even, this afternoon that... ([A])	This came from [Person_V] ([C]) It's coming from [Person_M] ([A]) What is needed from the business side ([A])		E-mail needed to understand the CR ([H])

#22	00:03:11				[Person_P] came back saying it is not required ([H])		We decided this in 2.0 ([D])
#23	00:02:50	00:02:29					
#24	00:02:23						
#25	00:01:16				Should it go to business directly ([D]) [Person_Q] said... ([D])		
#26	00:09:00	00:03:30			We need to recheck with [ABC] if they can give us... ([C]) [Person_O] had this information that we would get it ([C]) Who will take the [team] interface? ([C])	[B] had some comment to that ([H])	Look at report and try to understand ([A])
#27	00:02:22				From [Person_Q] ([D]) Originally came from [stakeholder] group ([C]) That belongs to [Person_M] ([A])		
#28	00:03:07						
#29	00:02:38						
#30	00:00:17						
#31	00:00:30				From [Person_N] ([C]) Discussed a number of times with [team] ([C])		
#32	00:00:40						
#33	00:01:10			hierarchy that [D] discussed this morning ([C]) Should we take that up in a meeting on Friday ? ([D])			
#34	00:09:58						
Totals		02:16:51	00:14:15	13	33 (17 unique)	5	6

APPENDIX 12 – TAGGING IN THE MEETING HELD ON DEC. 4, 2007

Topic	Length	Transcribed	Temporal reference to an occasion, discussion, meeting, or similar other than the current one	Reference to a person/team who is never in these meetings	Reference to an absent team member	Reference to e-mail or tool/system
#1	00:05:05	00:01:03	Campaign process that we discussed last time (C)	[Country_1] still pending (C)		
			Call this morning (that [Country_1] could not participate)	[Country_1] could not participate		
#2	00:01:20					
#3	00:04:15			Frozen concept from [team] (D)		
#4	00:11:07	00:11:07				We can actually check the tool (A); check examples
#5	00:03:05			We have an open question with business about [ACR] (A)		
#6	00:05:22			[Person_M]'s suggestion		
#7	00:01:11			This is also from [Person_Q] (C)		
#8	00:05:34			This is from [Person_N] (C) Similar requirement came from [Country_1] also (D)		So if we go to this [xx] applet (A)
#9	00:08:05	00:08:05				
#10	00:03:14			Movin on to [Person_N]'s comment (B) More info from the business (A) [B]: can you have a quick word with [Person_M]		This is from first release (B) Need to see how this works in rel. 1 (A)

#11	00:04:24	00:04:24	We talked about this in [xx_meeting] yes ([D])	[Area_1] requirement		
#12	00:07:20			Is this from [Person_M]? I think it is from [Person_N]		From [xx_plan] Slide 29
#13	00:01:50			Same as we were referring with that [Person_N] ... ([A])		
#14	00:01:05			[team]		
#15	00:01:04			We can just answer the business that we are not allowed to change this		
#16	00:05:31	00:00:30		[team] is saying that we cannot have [ACR]		
#17	00:07:09					
#18	00:06:04			Specifics required from business show business reports ask also [team] if these are correct	From [H]	
#19	00:00:32			Got a reply from [Person_M] [Person_M] is saying [Info1] (not [Info0]) Calculated in [Area_1] Let's gather those items for [team] Let's clarify with business		
#20	00:04:01	00:00:59				

#21	00:22:20		There is a discussion that [A] has had about this requirement ([C])	[A] is referring to "them" and "they"		Can you show the IT environment You had an excel also
#22	00:00:58					
#23	00:17:45		Workshop next week (with biz representatives)	Maybe you can go through with [Person_Q] We have closed the discussion with business [Person_M] wanted one button		
#24	00:03:05					
#25	00:05:43			When business is doing validation (in terms of 'end-user')		
#26	00:03:40					
Totals	02:20:49	00:26:08	5	31 (8 unique)	1	8

APPENDIX 13 – TAGGING IN THE MEETING HELD ON DEC. 10, 2007

Topic	Length	Transcribed	Temporal or other reference to an occasion, discussion, meeting, or similar other than the current one	Reference to a person/team who is never in these meetings	Reference to an absent team member	Reference to e-mail or tool/system
# 1	00:08:15		Discussion we had with [A] last time ([C])	[Country_1] also wants [TOT]	Discussion we had with [A] last time	[Storage] has not been working today Set up a [virtual] meeting (because projector is not working properly)
#2	00:02:14		When is the core meeting? ([D]) => Wed-Thu ([G])	Explain to [Person_T] why [TOT] is removed ([D]) [Person_O] is coming to core meeting ([G])		[B] & [A] have exchanged mails on [ACR] process [B] opens a memo from previous session
#3	00:02:37			Formula for growth items need to be verified with business ([D])		[B] has sent the list of items to [A] by e-mail
#4	00:02:29		What we agreed last time ...	Need to discuss this with business		
#5	00:01:40			Need to discuss this with business [team] has approved that		version 2.0 of the tool
#6	00:01:27		Item to go through on Wed	More info needed from [Area_1] Had a chat with [Person_M] ([D])		[Person_M] sent e-mail to [D]

#14	00:02:56			It's only [Area_1]			
#15	00:05:22		When we have [XX_meeting], we can try to solve this				
#16	00:05:46			To be discussed with [team] [Person_P]'s observation Actually discussion with business at the same time [ABC] does not give figures			
#17	00:00:30						
#18	00:00:28		An action item during last call also (B)				
#19	00:03:31						Mockup review offline (via e-mail)
#20	00:00:49						
#21	00:04:48			Discussion with [Person_T] [Person_M] requires a new role: [xx] [Person_P] could help with this one			
#22	00:05:20	00:05:05		[Person_M]'s observation on where is [xx]?			[xx] plan as reference
#23	00:02:13			Comments from [Person_N]			
#24	00:00:26						
#25	00:00:59			Observation from [Person_Q] & [Person_T]			
#26	00:06:01	00:00:44		It's only [Person_Q] who said that it shouldn't be a plus (+)			[product] out-of-the-box functionality should be followed
#27	00:02:08						Can you show that [xx] screen

#28	00:01:36						
#29	00:01:05						
#30	00:01:48						
#31	00:17:20	00:01:50	I can go through the whole idea on Wednesday .	I could comment from [Person_M] 's side ([D]) Even [Person_Q] commented that [xx] should not be able to change anything Question as to the nature of revision should be addressed to business			Process flow prepared by [D] as base [A]'s mail about [xx] being able to change... [Person_M] said in one of his mails
#32	00:01:00						
Totals	01:58:01	00:24:45	11	40 (14 unique)	1	14	

APPENDIX 14 – TAGGING IN THE MEETING HELD ON DEC. 18, 2007

Topic	Length	Transcribed	Temporal or other reference to an occasion, discussion, meeting, or similar other than the current one	Reference to a person/team who is never in these meetings	Reference to an absent team member	Reference to e-mail or tool/system
#1	00:02:29					
#2	00:02:38		Validation already done once last Friday	[MA] formula needs to be validated with [team]		
#3	00:05:20		Most of the items [A] has debriefed on Friday	Ability to have multiple [TOT]s req. from [Country_1] Same req. from [Area_1] [Person_T] had this observation...		
#4	00:11:07			[Person_S] has validated the list which means it needs to be revalidated [Person_M] 's requirement to report the last successful load		
#5	00:01:46		We had a long discussion last week about this		[J], are you following up with [E] ? ([B])	[ACR2] related
#6	00:00:18					
#7	00:00:16					
#8	00:00:07					
#9	00:00:58		Share updated mockups later today			
#10	00:07:13	00:01:40				
#11a	00:01:01					
#11b	00:14:27	00:02:02				
#12	00:00:42		Last time we decided to bring this ([Unit]) into gap analysis			
#13	00:00:59					

#14	00:12:13			Question to [ABC] : would they have [xx] for a category called [Unit]? ([B])	I wish [E] was part of the discussion ([B] on [ABC] discussion)	
#15	00:01:12					
#16	00:01:12					
#17	00:02:58	00:01:45		Info on [Unit] fields needed from [ABC]		
#18	00:00:48			[team] might say that you should report operator group figures...		
#19	00:06:39					
#20	00:10:29					
#21	00:04:26					
#22	00:00:56					
#23	00:00:37				[E] is looking into that	
#24	00:01:59			Where ever we have doubts we need help either from [ABC] or...		
#25	00:02:39					
#26	00:08:07					We can maybe refer to [xx_plan] ([B])
#27	00:07:14					
#28	00:01:39					
#29	00:04:26					
Totals	01:55:57	00:05:27	5	10 (7 unique)	3	2

APPENDIX 15 – TAGGING IN THE MEETING HELD ON DEC. 28, 2007

Topic	Length	Transcribed	Temporal or other reference to an occasion, discussion, meeting, or similar other than the current one	Reference to a person/team who is never in these meetings	Reference to an absent team member	Reference to e-mail or tool/system
#1	00:03:23					
#2	00:01:41			Feedback from biz on [System_2] views		
#3	00:02:42	00:00:14		Problem biz was raising up...		
#4 + 5	00:18:42	00:18:42	Some people in [xx_meeting] are going to question the alignment			
#6	00:07:09	00:07:09	Caption harmonization session	[team]		How to report what you get from [ABC]
#7	00:00:08					
#8	00:00:47					
#9	00:02:12		Discussed separately during reporting guidelines session			
#10	00:00:14					
#11	00:01:52					
#12	00:05:42			[F] has tried to contact [Person_X] before christmas Question to [Person_M] about the scores (historic data)		Template (action plan) from [A]
#13	00:23:02	00:07:22 00:04:05	January first or second week first occasion to get info from [Country_1]	[Country_1] is sleeping ([A])		
#14	00:08:30					
#15	00:04:52		Visibility of tab was decided last time	[Area_1] info is different from [Country_1]		
#16	00:00:45					

#17	00:03:51									
#18	00:02:00									
#19	00:01:40									
#20	00:08:42									
#21	00:01:58									
#22	00:03:57									
#23	00:10:33	00:10:33								
#24	00:05:06									
Totals		01:59:28	00:48:05	6	12 (8 unique)		0	2		

APPENDIX 16 – TAGGING IN THE MEETING HELD ON JAN. 3, 2008

Topic	Length	Transcribed	Temporal or other reference to an occasion, discussion, meeting, or similar other than the current one	Reference to a person/team who is never in these meetings	Reference to an absent team member	Reference to e-mail or tool/system
#1	00:02:12					
#2	00:01:47			[Person_X] (info from [F])	[B] got e-mail from [F]	e-mail
#3	00:03:13		Last time we went through the [System_2] side on [ACR3] ([B]) Yesterday, [A] has shared info that there is more to come		Waiting for update from [F] on [ACR1] [G] had been hoping to join	
#4	00:03:30		Element of 'type' decided in previous session			
#5	00:01:05		Mockup shared last time [XX] has tried to create a mockup based on req. but then [A] has shared something with them yesterday	Person from [Country_1] is not available		
#6	00:11:36		Is there a need to discuss the details [A] shared yesterday ([B])	Send the mockups to [ACR3] conceiving team		
#7	00:14:34			Need to clarify with [ACR3] team		
				Defining the dashboards that [Person_Z] is going to need		
#8	00:04:39		[team] session to be held next Monday (14.1.)	Some things possibly needed from the [ACR2] team => decision was not to be dependent on them Any update on [team] who have not commented the ppt [XX] has prepared Approved by [Person_S] Approved by [Person_An]		

#9	00:20:05	00:01:44 00:04:10 00:00:11 00:01:48 00:00:40	Quite some time back we decided not to have drill-down here...	Business is requiring drill-down [Person_M] had this observation... Need to go through this with some other people		[ABC] does it that way
#10	00:01:52					
#11	00:10:02	00:00:53	In [xx_meeting] [Person_M] was saying that never show ...	In [xx_meeting] [Person_M] was saying that never show ...		
#12	00:00:18					
#13	00:03:33					
#14	00:00:15					
#15	00:03:11					
#16	00:00:24					
#17	00:00:30					
#18	00:00:17					
#19	00:05:35				[E]'s comment...	
Totals	01:28:38	00:09:26	9	13 (11 unique)	4	2

APPENDIX 17 – TAGGING IN THE MEETING HELD ON JAN. 7, 2008

Topic	Length	Transcribed	Temporal or other reference to an occasion, discussion, meeting, or similar other than the current one	Reference to a person/team who is never in these meetings	Reference to an absent team member	Reference to e-mail or tool/system
#1	00:18:55					
#2	00:02:54		If you recall what we discussed last time	Interfaces - opens dialogue with interface teams		
#3	00:08:24			We had an agreement with [ABC] on translation Question to ask from [team]		
#4	00:04:10					
#5	00:02:42			Those are questions we need to ask the [F_team]		
#6	00:00:47					
#7	00:01:55	00:01:53				
#8	00:01:39					
#9	00:04:21					
#10	00:03:40		[ABC] + [team] meeting in mid-February	Prepare questions for [ABC] [team] [F_team] s		
#11	00:02:23	00:00:57	[A] talking with [Person_M] this morning	[A] has been and will be talking with [Person_M] [Person_M] 's requirement on last successful load		
#12	00:03:25		and later in the afternoon meeting coming up hopefully next week	Question presented to [team] but no answer yet		
#13	00:01:30					
#14	00:05:43				[F] will be sent e-mail	E-mail
#15	00:02:21		[A] is not available for the gap analysis on Wednesday	Mockups to [ACR3] team?		
#16	00:03:07					

#17	00:13:25	00:01:15	we tried to explain you last time but decided to have mockups	No null targets as directed by [Person_M]		
#18	00:17:49					
#19	00:04:26					
Totals		01:43:36	00:04:05	7	12 (6 unique)	1

APPENDIX 18 – TAGGING IN THE MEETING HELD ON JAN. 16, 2008

Topic	Length	Transcribed	Temporal or other reference to an occasion, discussion, meeting, or similar other than the current one	Reference to a person/team who is never in these meetings	Reference to an absent team member	Reference to e-mail or tool/system
#1	00:03:22				[E] will be reviewing the design	
#2	00:01:30					
#3	00:14:38		Let's arrange a meeting to go through the issue	Business has approved the mockups Discussion on [Person_N] still likely to send comments It's actually [Person_An] who brought this up We should have a meeting with [ACR2] team What was [Person_M]'s opinion...	[E] is a key person	
#4	00:05:59					
#5	00:09:15	00:06:07	You ([A]) shared with us the [ABC] structure some time back			
#6	00:08:05			We haven't had confirmation from business yet		
#7	00:03:22			This is something [Area_1] is using in one-point-zero	Need to work with [D] in terms of detailing	
#8	00:01:09		[A] is going to have the answer as to who the [ACR3] users are today			
#9	00:00:52					
#10	00:10:43					
Totals	00:58:55	00:06:07	3	7 (7 unique)	3	0

APPENDIX 19 – TAGGING IN THE MEETING HELD ON JAN. 25, 2008

Topic	Length	Transcribed	Temporal or other reference to an occasion, discussion, meeting, or similar other than the current one	Reference to a person/team who is never in these meetings	Reference to an absent team member	Reference to e-mail or tool/system
#1	00:23:36			[Person_Ka] How was your meeting with [Person_Q]? ([B], from [A]) Cannot give approval on behalf of [team]		
#2	00:03:47			These are areas where business might be interested in		
#3	00:02:54		Remember the presentation from the beginning of January?			Implementation in 2.0
#4	00:07:31					
#5	00:04:04	00:01:13		This is high-lighted to [ABC] team If [Person_Ka] or [team] team cannot do it		
#6	00:11:33			Tried to get validation from [Person_Ma] during 2.0, but [F_team] [Person_AI] .. Can check if there is any change... Business needs to confirm the data to be included & excluded		
#7	00:01:35			Need to push the [ACR2] team to generate the kind of report needed Need to validate the way in which [xx] is calculated with business		
#8	00:19:28		an important topic next week			

#9	00:00:51				Any interface with [team] , take discussion up (prepare a list)		
#10	00:03:17						
#11	00:02:03						
#12	00:24:54	00:06:11	This is what we agreed () last time ([B])		Three views: business actually saying that now...		
#13	00:05:15		Going to be presented to [Person_Z] on Monday		[Person_Z]	Especially with [D] being away (time needed from [A])	
#14							
Totals		01:50:48	00:07:24	4	16 (10 unique)	1	1

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