Decision Making in IS: Conversations on Requirements Gathering of the Project Board Meeting on the 02-11-01

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Introduction:

Requirements specification is a notoriously difficult subject area for Information Systems (IS) development. Conventional successful software building relies on having correctly first answered the question of 'what to build'. The decision making process of the 'what to build' question has underlying assumptions that need to be examined if we are to build IS systems that 'integrate' into social working practice. Using Conversational Analysis (CA) and Ethnomethodology (EM) we examine the decision making process of participants in a meeting where they are making sense of project plans and specifications in the initial stages of the scoping and defining of an IS system. The findings here present an initial 'rough cut' of making decisions in this case study and offers identification of the interactional sequences that can be recognised as 'decision-making'.

The Ethnomethodological Approach

The current 'requirements gathering phase' in scoping and defining IS starts by recognising that the real world is a messy place; it is a stochastically complex world of poorly understood processes, and system designers have to acknowledge the ever present uncertainty of it. The aim of the initial phase is to abstract, codify and construct business rules and procedures into an abstract system structure. Decisions, as such, are analysed, rationalised and systematised, while accepting those constraints and qualities that are measurable, and rejecting the apparent messy tacit aspects.

The ethnomethodologist, on the other hand, understands that social structure can be conceptualised as a moment-to-moment accomplishment and that meanings can be analysed as 'emergent' properties of human interaction. Decision-making for the interactionist is not an isolated entity, but is always situated and interrelated to context. CA has been aptly termed the study of talk-in-interaction (Schegloff 1987; Psathas 1995; Hutchby and Woolffitt 1998). CA's use here is to uncover and analyse the *machinery,* the *rules* and the *structures* that produce and constitute the orderliness of the natural organization to decision making (Psathas 1995).

The case study

This paper is one of a series in an ongoing research project that investigates the requirements gathering and implementation of a Web based system in a local government organisation called Metropolis (a pseudonym) as it seeks to develop and extend IS functionality into a web based resource.

The study focuses on the actions and meetings of a project board, specifically created by the chief executive and leader of the council. The project board was set up in response to a request and a vision statement (text box 1) to enable councillors to do their work in locations

other than the council offices.

The IS scoping requirements empathises with a number of internal strategic reviews and with a recent council wide IT reorganisation towards servicing the national governments e-government strategy. The project presents a challenge of not just the why, how and by whom a service is being provided for, and but more importantly, the project potentially represents a 'change' in Metropolis IT department's strategy approach in addressing the business needs of the organisation.

The data collection

The research approach and method uses transcribed tape recordings of actual 'naturally occurring' interactions of talk and utterances between the six people in a meeting room in Metropolis's Town Hall.

This paper has focused upon the sequence and structure of decision-making. The text selections were chosen for a closer examination because interesting transitions points were observed, after which subtle changes to the project were noticeable. The original text transcripts data is reproduced in text, box 3 and 4 with relevant lines highlighted with a '→'

The Project Board Meeting of 02-11-01

This meeting represents the mid way point of the project; and some concerns and doubts about the feasibility and delivery aspects of the project are beginning to emerge; these issues mainly revolve around the technical issues, and the security (lack of) aspects of the internet/Intranet.

The first analysis, text box 2, occurs just after twelve minutes from the start of the meeting. 'M' the project lead officer, who works in the chief executive's office and is head of democratic services, is a self confessed 'techno novice' when it comes to computers. She has asked one of her assistants to go and photocopy the project plan that she had just managed to obtain from 'P' a few minutes earlier. 'P' is a lead officer, and the project manager, in the newly formed 'IT Strategy and E-Government department' and he is somewhat reluctant to give the plan away, and he now downgrades the importance of the plan.

> P ((the project manager)) >"essentially it takes the major promises or things that we've told the leader that we're going to do for members and puts a bit of flesh on those broad undertakings, particularly in the area of the technical aspects of providing secure access for members to a private part of the website" (P, 12.42 minutes in, Meeting 02-11-01)

The plan presented at this meeting by 'P' unenthusiastically gave (intentionally) a very broad categorisation identifying: 1. Who is going to do 'some' work 2. The project management

aspects of some of the key dates for the purposes of covering the tracking and accountability. 3. Progress of the project and 4. The identification of some of the activities that needed to happen ((The project board were still waiting at the end of text box 3 for their own photocopies)). The use of the (as interpreted) word *unenthusiastically*, is suggested here (as a marker which is subsequently substantiated in subsequent individual interviews), as it sets the tone and features as a major discussion point to this meeting. This also substantiates the background to the subsequent key analysis, found later in this paper.

The decision making phenomenon (text box 2 and 3) reflects a mild disagreement in approach between the then project manager; (P), who essentially thought that there were many issues uncovered already that needed further discussions, exploration and clarification before 'freezing' the requirements. His actions and approach reflected a position in which he wanted to delay, or defer, making the decision in order to avoid, as he saw it, a greater potential risk later on. Conversely, person (A) saw the project from a client's perspective, having previously recognised the project as 'risky' (in the sense of "cutting edge"). 'A' is the person whose title position 'Data Administration, Quality & Security' wanted to ensure that a stricter project plan was instigated (Line 1-2, text box 2) against which valuations and metrics could be measured. Text box 3, occurs approximately 20 minutes later, (Whole meeting was approximately 53 min long) which returns again to another aspect and issue of requirements.

Analysis of decision-making

This section offers the 'preliminary' analysis and identification of the interactional sequences that take place leading to that which can be recognised as a 'decision-making point' in a self-selected category. Although this text only reproduces two transcripts, 'systematically ordered features' (Schegloff 1979) are beginning to emerge. The sequence itself, Table 1, highlights the process:

Systematically ordered features	Extracts from Text Box 2	Extracts from Text Box 3
1. Identification - Self selection and category selection	Line 1 […. I really think we need a requirement spec ..]	Line 1 [..There is a piece of work to be done isn't there in terms of spec…]
2. Negotiation – (Create- maintain – renew)	Line 7 […we] can certainly produce one, although all it will be will be herrr (.)…]	Lines 14 [M: O::k well //
3. Resolution – Mutual understanding	Line 15 [P: We] can do something to make it crystal clear (0.3) you know //]	Line 27 [M: Ok]
4. Outcome - Closure	Line 19 [O::K (0.5)]	Line 31 [M: Great, OK, let's put that down then and come to this project plan (.) yerr]

Table 1: Systematically ordered features of decision making

From this case study the research there appears to be four distinct recognisable features in decision making:

Stage one is; Identification of the topic and self-selection of the category upon which the instigator of the topic selection requests a decision to be made. There is also the responsibility of 'who' is initiating the call for the start of decision-making process. In Text Box 2 'A' selected himself to be the initiator Line 1. He saw himself as the client with extended technical knowledge and interjected before the Project leader to say that he saw the need for a tightening up of the project plan to control the technical aspects. In Text box 3 'M' the project leader started the process, having herself selected a topic where she had identified a gap in the work.

Stage 2: Characteristics are typified by explanations and opening of negotiations by either by a self-selected respondent or one selected by the initiator. This stage appears to follow Sacks' proposal of turn-taking system and rules. The sequence has the possibility of extension, also following the CA tradition. This negotiation stage draws on the features of Structuration (Giddens 1979) and is self-organising according to the modalities of interaction. Substantiating Zimmerman's parallel CA research remarks "The implementation of organizational policies and objectives are unavoidably undertaken in actual, situated encounters between participants using the machinery of conversational organization to do the interactional work that the organization's aims require" (Zimmerman 1992 pg, 460)

Stage 3: The decision point, of mutual agreement about the topic; reticulation of the issue with agreement upon the discussion topic from stage two, or alternatively, 'we agree to disagree', and either defer the decision point or return to stage two. The decisions resolution is the point at which mutual understanding occurs.

Stage 4: Closure, terminating the sequence, explicitly noting the decision as a decision and acceptance for referral or deferment.

Conclusion and Discussion

What this paper seeks to recognize is the understanding of the process by which the participants of a meeting make decisions for the scoping and requirements gathering of an IS. This tentative research suggests that there is another interpretation to the traditional decision making approach, potentially offering a better 'fit', based upon alternative theories of sense-making, gained by the application of CA and EM.

The project team's decision process followed a pattern, rather than a traditional rational strategy. The participants understood and used the pattern maker as in repertory or performance, the characteristics of which were emergent, contingent, contextualised and most importantly 'negotiated' through inter-personal relationships.

"Our vision is that by June 2002, all Metropolis Council members will be able to access their Metropolis Council e-mail, and the Council's intranet, from any location in the world. There will be a single, fully wired members' enquiries system which will be easier for the Council and for members, and will provide enhanced facilities for members in their management of casework. Furthermore, members will be fully trained, and have full ongoing support, and there will be constant review of members' IT needs"

The vision statement continues - Fully wired members will:

1. Be able to communicate with e-mail from their offices, homes and any other location in the world (using hotmail technology)

2. Require the necessary equipment, training and ongoing support

3. Have intranet access from various locations

4. Have an effective electronic casework management system

5. Have full access to electronic diary facilities

Text Box 1: The vision statement

1	→	A:	…. I really think we need a requirement spec and that in essence is a contract
2			between us (0.5) and er Metropolis IT to say where (0.1) where we're going.
3		M:	Right, who is the person that can help us do this then? (1.2)
4		P:	Well we can certainly(0.3) [er..
5		A:	Its](.) I mean the ball's in Pxxx's // [court.
6		M:	// yer
7	→	P:	Er we] can certainly produce one, although all it will be will be herrr (.)
8			essentially (0.2) err (0.3) a re jigging of that document that exists
9		M:	Yer that's fine (.) // er right
10		P:	because we're // certainly not going to go back and revise what we've said
11			we'll // provide.
12		A:	I // think you may have done quite a bit of it in your mind when >you're
13			doing the project plan>(0.1) but we don't see it (0.2) and we haven't got it to
14			measure progress again[st
15	→	P:	We] can do something to make it crystal clear (0.3) you know //
16		B:	// I think from the customer service mentality and from a member's point of
17			view that's all I'm coming from.
18		P:	Yes, that's (0.2) that's fine, there's no reason why we can't do that.(0.3)
19	→	M:	O::K (0.5) so is that the only area we need a spec around, which is where
20			we'll have the ongoing commitment? The rest is a technical spec isn't it that
21			you need to sort out.
22		P:	There is yes, there is (.) there is (.) still the actual requirements spec for the
23			casework management system, work on that has started (0.4) but that's a
24			different issue, that's just spacing a piece of software.//
25		M:	// That's good (0.3) we'll look at the project plan when it actually arrives, that
26			should be any minute now depending on whether the photocopying machine
27			was switched on or off. (0.2) So shall we look at Axxx's report while we're
28			waiting for that.

Text Box 2: scoping the requirements

1	→	M:	There is a piece of work to be done isn't there in terms of spec, just like we
2			had the early conversation about the kind of advice we're going to give
3			them, the kind of spec they//
4		P:	//Yerr//
5		M:	//should go for to be able to use what we've got. The other bit is about if
6			they are going out to buy new stuff then these are the kind of things we'd
7			recommend=
8		P:	=Yes, I mean we will tell them that, they will know exactly what we're
9			advising to get in order to do business with the rest of the council from
10			home (.) They will have that information, so it it it will only be for people
11			that probably have existing (.) existing equipment really and existing
12			software. (0.1) mmm I'll speak to Dxxx, we'll talk about it again, but
13			certainly I don't want to open up that area (0.2) because its (0.3) umm its [
14	→	M:	O::k well //
15		B:	// [I can just see it from a member's point of view.
16		A:	yes, so [can I.
17		P:	I know] what you're saying//
18		A:	// there would be some muttering if they couldn't buy them from the
19			council//
20		P:	// if there's no problems with that then that's fine.
21		A:	could I suggest that there is a sister sheet to this which is headed
22			Metropolis's IT commitment to you, (0.1) it sort of relates to the
23			requirements spec business earlier //
24		M:	// yes
25		A:	//but we ought to state what the council is giving them in a succinct
26			manner.
27	→	M:	Ok
28		J:	Yes.
29		M:	Who's going to do that?
30		P:	I'll do that as part of the requirement spec.
31	→	M:	Great, OK, let's put that down then and come to this project plan (.) yerr

Text Box 3: Specification who is doing that

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