Practically Accomplishing Participation

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Abstract

With the emergence of technologies designed to support social activities online, it is beneficial to explore their potential in novel application areas. These studies, in the research tradition of Bowers et al. (1996), can be used to evaluate and develop technologies while providing the opportunity to study the social practices that develop around their use. We examine the use of online seminar technologies in a new situation of rising interest – networking events - in six exploratory studies. These events encouraged 'networking' interaction between guests. Evaluation was conducted through ethnomethodological analysis of recordings of text and audio interaction. We present findings of dual technical and social interest. Socially, we reveal practises employed by participants in achieving *taking-part-in-these-events.* Participants employ everyday interactional competencies and develop them for the situational specifics. Technically, we evaluate the applications for the purposes of networking events. Through locating the difficulties participants exhibit and highlighting their interactional practises we provide a design resource. The central focus is on the ***practical accomplishment of participation***. Much of the activity concerns its achievement and maintenance. Participation is *a mutually accomplished social interactional activity* founded on *presence,* which involves *constructing shared understandings for all practical purposes.* Where understandings deteriorate participants 'work' to re-establish participation. Troubles arise and participants engage in interactional practices to *work out what is going on* and *identify* and *resolve* problems. The work involved in and the fragility of participation is demonstrated. We highlight how this *pre-work*, which is foundational to networking, occupies much of the interaction before offering ideas aimed at reducing this burden.

Introduction and Background

During the last fifteen or so years studies of a broadly ethnomethodological tradition (ethnographic, conversation analytic (CA) and interaction analytic studies) have been presented and increasingly established, in the literature of some specialised areas of computer science (for a review see Luff et al., 2000). This is particularly noticeable in the disciplines of computer supported cooperative work (CSCW) and human computer interaction (HCI). The mutual attraction, and fruitful partnership, between specialised areas of sociology and computer science can be roughly characterised as follows. Studies of the organisation of work have been an important strand of ethnomethodology (Garfinkel, 1986) and with the increasing prevalence of computer systems in the workplace, studies that deal with action and interaction with and around technologies have become increasingly commonplace. When this is coupled with the fact that computer science departments now offer a new opportunity for sociologists to pursue their research, one can see the attraction from the perspective of the ethnomethodologist. On the part of the computer scientist, ethnomethodology has been shown to be useful in a number of ways. Ethnomethodology can provide the type of detailed description of how work is achieved as a situated activity that is not captured by the conventional, information centred, abstracted descriptions of work processes used in the mainstream of systems design. Many working within computer science now acknowledge, that while such conventional descriptions are useful and necessary, the paucity of description they provide for systems which are thoroughly socio-technical can lead to problems. For

example, where important aspects of how the work is achieved are omitted in considerations of system redesign. Such omissions have been shown to be implicated in the failure or 'bad fit' of new technologies. As well as dealing with how ethnomethodological studies can augment conventional system description and design (e.g. Hughes et al. 1994; Martin, 2000) the research has furnished those within CSCW and HCI with new sensitivities (Button and Dourish, 1996). This can be seen in the commonplace use of terms such as coordination, awareness, and affordances in the literature[1]. It is studies in this tradition that form the main corpus of *ethnomethodological studies of work and technology*.

In terms of the system life-cycle and development process ethnomethodological studies have generally been conceived of as being most appropriate and of most use when carried out *prior to* or *accompanying* work redesign or the development of a new technology, or *post-implementation*. Many projects that involve work redesign and/or the development or evolution of technologies utilise a description of the current system as a resource for design. Ethnomethodological studies have been deployed to augment this in a number of ways. For example, through enhancing the system description with 'real world real-time details of work', or providing some form of assessment of how a new design might impact on current practice, or by even contributing some form of requirements for a new system to support aspects of existing activity (Martin, 2000). Post-implementation studies are generally evaluative in nature and often draw attention to problems that arise from new systems. Particularly where these systems fail to support important aspects of how work was previously organised (e.g. Bowers et al., 1995). Such studies may be used as a resource for further systems design or refinement. As with the programme of ethnomethodology, the focus has been on studying 'naturally occurring' everyday action. Clearly when we move into the domain of design we are moving away from ethnomethodology into a more creative pursuit in which some form of translation must apply. However, most ethnomethodologists working in this area are willing to draw a separation between the integrity of the study itself and the need for design to perform this rendering, if it is done with the right sensitivity. However, such a framework necessarily limits the relevance and application of ethnomethodology in design. What of situations where technology development is not clearly tied to a redesign of current practice, where the situation is technology-led and new areas of application are sought, and so forth? Such situations are commonplace in technology development, particularly with the current expansion of web-based applications, virtual environments (VE's) and mobile computing. Does ethnomethodology have nothing to contribute? Here we are in a situation where, for example, there is a need to ***think more creatively*** about how ethnomethodological studies of work and technology may contribute to design (e.g. see Bowers and Martin, 1999). Alternatively, we need to consider whether ethnomethodological principles can influence other traditional systems design areas such as ***application testing***.

[1] Ethnomethodological studies have drawn particular attention to the practices by which workers *coordinate* with each other, how they make and are made *aware* of aspects one another's work and how activity, artifacts and aspects of the workplace layout *afford* information to competent members about the status of work (see Hughes et al., 1997; Martin et al. 1997)

When new technologies are developed, in both academic and industrial settings, practitioners will often conduct studies aimed at evaluating the utility of the technologies for novel application areas or potential scenarios of use. Of course, one could legitimately study situations where the current practice one is seeking to support pre-exists and evaluate the technology on the basis of whether and where it supports current activity. However, as is well known, the introduction of a new technology will necessarily lead to the development of new practices. Surely, if one accepts the utility of the ethnomethodological approach in this field, it is possible to see how it may provide a useful orientation for testing applications in new potential situations of use even though they are *constructed for this purpose rather than found*. Application testing is routinely carried out using ***constructed situations*** or ***research lab-based implementations*** (see for e.g. Erickson et al. (e.g. 1999) and some of these studies have an ethnomethodological flavour providing a richness of detail and new understanding of the practices users employ when interacting with the technology and one another both beyond and through the technology (e.g. Bowers et al. (1996 a & b).

The study presented in this paper follows in the research tradition exemplified by Bowers and colleagues in conducting ethnomethodological studies of the exploratory use of collaborative virtual environments ((CVE's) 1996a & b). We detail findings achieved through ethnomethodological analyses of a series of exploratory, on-line networking events conducted using a variety of commercially available web-based seminar technologies. These technologies incorporate, for example, text chat, live streaming audio, shared presentation mechanisms and other collaborative features and are designed to support on-line presentations in which talks may be given and received in real-time and interaction supported via the communication channels. Such technologies offer promise for supporting ***event based, distributed networking*** in that they could allow previously unacquainted and acquainted, geographically distributed persons to 'congregate' to listen to a relevant presentation and interact with the presenter and each other as a way of making and re-affirming contacts. This however is a different use from that for which the systems were designed[2] and so a series of events was held. The events being designed to explore the use of such technologies for networking events.

We were interested in analysing the action and interaction taking place, both as a resource for design and also from a more sociological perspective. That is, we were interested in detailing the practices employed by participants in taking part in these events. What was clear was that much of the activity we observed was to do with the ***achievement and maintenance of participation itself***; individual and group ***presence***, ***making sense*** of what was occurring and ***creating mutual understandings for all practical purposes***. Of course, this is what we are inevitably engaged in whenever we interact, but what was perspicuous about these settings was the pre-occupation with this foundational activity over any discussions of presentation topic, networking activity (e.g. exchange of personal/work details, commitments to future contacts, etc.). In face-to-face situations participation does not usually require such extensive or explicit work and the

[2] The primary concern of on-line presentations is to get the presentation across to the audience and allow the audience to ask questions of the presenter, thus interaction in presentations is primarily one-to-many. The primary communication in networking events, is by its nature guest-guest communication.

business in hand can be got to and focused on relatively easily. Doubtless the pre-occupation with this foundational work in these situations is partly to do with badly performing technology but our contention would also be that people are also deploying and adapting their interactional competencies for this more problematic novel situation. It is clearly of sociological interest to document this but also importantly it suggests that if these technologies are to be used for event based, distributed networking they need to be developed to better support the achievement and maintenance of participation. This paper aims to contribute to both these agendas.

The Events And The Technologies

In all six events were held. Each event consisted of a short presentation, which was used as a draw to attract guests to the event, a short question and answer session and a discussion session. It was hoped that the pre-presentation period and the discussion session would provide the opportunities for guests to interact and this format was inspired by the format of current face-to-face networking events held by Manchester Chamber of Commerce, which involve a reception period, lunch or breakfast and a short presentation. Each on-line event was attended by a presenter, a facilitator and a small number of guests (between 4 and 8). The guests attended from all over the world, were mainly business people, although a few worked in an academic environment and were mostly unacquainted with one another. Profiles of each of the participants were provided on an event web sit, which also provided log on details, etc.

The systems used for each event were;

Event 1 : PlaceWare with RealAudio
Event 2 : Net2gether (N2g) with Firetalk
Event 3 : PlaceWare with Firetalk
Event 4 : WebEx
Event 5 : Centra
Event 6 : PlaceWare with RealAudio.

Firetalk and RealAudio were used to provide audio where none was provided by the system. Screen shots showing PlaceWare, WebEx and Centra are provided at the end of the paper.

Data consists of recorded text chats between the participants, transcribed audio and field notes from observation of certain participants in certain events which serve to augment some of the text and audio chat with details of the wider context within which some of interaction took place. The following sections will provide examples from the events illustrating how participants worked around the social and technical limitations of the systems to practically accomplish participation in these events.

Practically Accomplishing Participation

What is participation[3]? Clearly in one sense this is not a question that can be exhaustively answered. Is just 'being there' participation or must one speak to others, set up new partnerships, business deals, future meetings and so forth? At a basic level we consider

[3] In a networking event.

participation as 'being there' in the shared on-line situation and as having the ability to receive and send communications (i.e. interact with others), as well as to see and hear what is meant to be shared. Basically, that one has a recognisable presence and an ability to communicate in a shared situation. As background to the project we conducted an ethnographic study of current networking events. These events were characterised by talk - talk about many topics - chat, personal details, business, the event itself. Contacts were made, retrospective meetings revisited, prospective contacts projected. Becoming acquainted, renewing contacts and talk about business seem to be activities that characterise networking and networking events provided a situation in which such activities were facilitated[4]

How should participation be dealt with in these *trial* situations? In these, if contacts were made, business set up and so forth, all well and good. However, this being a trial situation we were fundamentally concerned with whether the participants could achieve a satisfactory level of participation in the business-at-hand – which in this case is the business of participating in a trial networking event. Could participants successfully meet and greet one another, listen to a talk, ask questions, chat to one another? If they could do this, it would suggest that it would be possible to use similar technologies and events for networking purposes. But instead most of the actual work-at-hand involved achieving a basic level of participation – being there, in the same situation as everyone else, seeing and hearing the same things and knowing, for all practical purposes, that this is the case. This is of prior concern to being able to participate in the events as 'doing being a networking participant' – or even 'doing being a participant in a networking trial'. This is, of course, completely different than making any judgement as to the quality of the participation offered by individual participants, we are not making any assessment about whether people participate more, better, or whatever. Instead we are looking at what makes them ***able*** to participate in the first place and the practices they use in order to achieve and maintain this. Of course, the work of constructing, reconstructing and repairing a shared view and understanding (for all practical purposes) involves on-going interaction. However, because here such work is actually the central focus of interaction, this necessarily precludes chatting about other things, i.e. attending to the intended business at hand. In the following sections we will look at how participation is achieved, maintained, downgraded, broken and repaired.

Presence As A Participatory Achievement

Presence in these systems is a collaborative activity, achieved through a combination of systems and interactional resources. All of the systems used for the events provide some presence indicators:

> All systems provide a participants list (listing log on names) showing all the people who are logged onto the system.
>
> PlaceWare, Firetalk and N2g all produce an automated joining event (AJE) when participants log on to the system. An AJE is a text chat notification, displayed in the chat window.

[4] For example, through artefacts such as the delegates list, the organisation of and conventions of the sit-down meal, etc.

Participants use these systems indications of presence as one means of establishing who is present at an event. For example, in PlaceWare the AJE is often followed by greeting exchanges **(e.g. Extract 1)**.

Extract 1 : Event 1 PlaceWare text chat

64 *(unknown) enters Section B, Row 1.*
65 *(unknown) changes name to Guest 41.*
66 *Guest 41 changes name to Majed.*
67 ***Evan* : Hi Majed**

However, these systems indicators of presence indicate merely who is logged onto the system, not whether they are actually present in terms of attending to the system or being available for chat. Participants demonstrate through their interactions that they are aware that the systems indications of presence are not always reliable. For example in Event 1 Roberts first line of chat is 'anyone there?' **(20, Extract 2)**.

Extract 2 : Event 1 PlaceWare text chat

17 *(unknown) enters Section B, Row 1.*
18 *(unknown) changes name to Guest 32.*
19 *Guest 32 changes name to Robert.*
20 ***Robert* : anyone there?**

This talk occurred when the row window showed that Evan was in the row, so the question might seem somewhat incongruous, except that this occurs about 30 minutes prior to the official start of the event. Thus although the awareness indicators (i.e. names in the row window) showed people were present, Robert's question demonstrates that he is aware that this means only that they were logged on, rather than present in terms of attending to the chat. Indeed he receives no reply, suggesting that no one else is actually present and he logs off.

In another example, also from Event 1, Evan greets Dr. Dan, the presenter when he is not actually present in the row. Evan, who has just arrived is involved in greeting sequences with the facilitator (jackio) and Robert, another participant. At the time of these greetings the slides are changing in the presentation window for all participants as Dan runs through his presentation. Jackio informs the participants of what is going on **(40, Extract 3)** and this is clarified by Evan's question **(42)** and jackio's answer **(45)**. Evan then greets Dan **(46)**, however Dan can not actually see this greeting. This is because of the way PlaceWare separates participants into different 'rows' of chat, with the participants list showing only those in the row. Thus although the systems indicator shows that Dan is not present in the row, Evan greets him anyway, presumably because of his noticeable activity on the system.

Extract 3 : Event 1 PlaceWare text chat

35 *(unknown) enters Section B, Row 1.*
36 *(unknown) changes name to Evan.*
37 ***jackio* : hi Evan**
38 ***Evan* : Hi there**
39 ***Evan* : Hi Robert**
40 ***jackio* : Dan has had to change his presentation**
41 ***Robert* : Hello**

42 ***Evan* : I hope he's just practicing?**
43 *(unknown) enters Section B, Row 1.*
44 *(unknown) changes name to Guest 40.*
45 ***jackio* : yes he is**
46 ***Evan* : Hi Dr. Dan!**

Participants, therefore, engage in interactional practices to determine presence in addition to using the systems indicators. Establishing presence centers around ***noticeable activity on the system***, or lack of it. Participants use the context of the event to inform their attempts at establishing presence. For example, in Event 1 when Robert attempted to establish presence it was well before the event was due to start, he therefore used a pre-greeting, suggesting an expectation that there was no-one there. Whereas Evan's greeting in Event 6 came during the event, after interaction by the participants that he was greeting, he therefore launched straight into a greeting **(35, Extract 4)** and only after non-response did he engage in work to establish presence **(39)**. Systems indicators do, however, serve as the baseline context for presence.

Extract 4 : Event 6 PlaceWare text chat

35 Evan *:* **Hi Jacki, Jonathan**
36 *Jonathan Shuval leaves Section A, Row 1.*
37 *Evan leaves Section A, Row 1.*
38 *Evan enters Section A, Row 1.*
39 ***Evan :* Jacki???**
40 ***Jacki ONeill :* hi Evan**

To participants, then, presence is collaboratively achieved. A participant is present if they are attending, responding, available for chat or presenting, etc. when this activity is available to others. If a participant is not demonstrably attending to the system then *for all practical purposes* that participant is not present. Over and above the systems indicators, presence in the events was **a practical accomplishment achieved by the participants in-and-through their noticeable activity on and through the system**[5].

Constructing Shared Understandings

Constructing shared understandings is of primary importance to participation in the event. Participants are, of course, involved in constructing shared understandings and creating and maintaining a shared situation throughout the events. There are many situations in which participation is achieved unproblematically. Whenever participants are interacting, they are to some extent participating in the event. However, in these events much of the interaction was not centred around the event as a trial networking event, or even as a basic seminar, that is their interaction was not centred directly around achieving the work-at-hand. Rather it centred around actually ***being able*** to participate in the events, that is it was concerned with the **pre-work** necessary before participation in these events, as trial networking events, could take place. That is much of the work involved establishing if '***what-I-see-is-what-everybody-else-is-seeing***', this work centred around whether the system was working properly and working out if what was going on was what should have been going on, and if not where was the problem located. This work

[5] Noticeable activity on the system, in these events, for most participants, involved their participation in the text chat or audio conversation.

centres around creating understandings in partially shared but also potentially different environments. That is, as will be illustrated below, as well as having differing local environments, participants to some extent have to take on 'trust' that what they are seeing is what everyone else is seeing. This will be illustrated in the following examples, beginning with an example of where the participants were noticeably participating in a shared experience.

Often creating shared understandings about the shared situation of the event is easily and routinely achieved. For example, in **Extract 5** the participants are discussing the size of the slides **(165-172)**, although the referent is not explicitly labelled in the first three comments it is clear that all the participants are talking about the same thing. That is, the participants were able to establish the referents with minimal information. When this happens the system is working at its best in the expected manner, creating a shared environment that enables shared understandings to be established between participants with ease. In these situations the participants are noticeably participating in the event.

Extract 5 : Event 1 PlaceWare text chat

165 ***Evan*** **: Too small. I have a 17" screen and I can't read it.**
166 ***Majed*** **: Too small**
167 ***Evan*** **: Can you zoom in???**
168 ***Guest 40*** **: it would be good to be able to enlarge the slide**
169 **area on the screen**
170 ***Robert*** **: It does seem a bit of a waste of space – is this a**
171 **communications issue**
172 **G*uest 40* : certainly**
173 ***Robert*** **: I can't see the pointer – that would be good as well**
174 ***Jackio*** **: can you not?**
175 ***Majed*** **: Robert is right there should be a pointer**
176 ***Guest 40*** **: I didn't know a pointer was in use – I too can't see it**
177 ***Evan*** **: Pointer… What pointer?**
178 ***Robert*** **: I can see my pointer, but not another one that Daniel**
179 **is controlling**
180 ***Jackio*** **: there is a pointer but I don't think it is being used**
181 ***Robert*** **: Daniel said he was – maybe not – I don't know**

Other situations might require slightly more conversational work to make sense of the situation. For example, in contrast to the slides example, was the discussion of the pointer **(same Extract 5, but lines 173-181)**. Whereas with the slides there was minimal talk required to establish understanding because of the assumption of a shared view, here participants are talking about something that cannot be seen. This resulted in confusion over the existence of the pointer and only at the end of the topic was the reason for it being raised in the first place explained. However, this situation was also resolved with relative ease.

In other situations making sense of what is going on is more problematic and participants have to work explicitly to establish shared understandings. Trouble making sense of what was happening tends to occur at certain points during the events, related to what is happening on the interface. These are; when things go wrong, when things happen unexpectedly and when nothing is happening. Interactions during such times tended to

centre on establishing what is and/or should be going on and locating and resolving problems.

When Things Go Wrong

Rather unsurprisingly a major source of trouble occurs when things go wrong in the events, that is when there are problems with the audio or the system. Systems crashes, which affected all participants occurred in Event 2 and 4, some participants in events 2 and 4 also had audio problems. In these cases there were repeated attempts by the participants to locate the source of the problem. Taking the problems of Event 4 as an example, Janet, the videoed participant has no audio when she logs on. She attempts to fix the problem by going through the actions that should have resulted in audio, with no success. Janet and Frankie, an acquaintance also participating, discuss the problem using the telephone and whilst doing so the system crashes - with windows opening and closing spontaneously on screen before the application disappears. Janet reports this to Frankie as *'oh gosh something bizarre just happened there'* followed by *'yeah it has hasn't it'* which suggests that the problem is mutual, then *'oh no what's going on'* as a browser window opens spontaneously on her screen. The system is behaving in an unexpected manner, which they have no control over and Janet and Frankie, through *reporting of the problem*, *begin to establish some mutuality*.

This issue of the application behaving in an unexpected way, with windows opening and closing on participants' screens, happens on several occasions during the event and was brought up as a concern during the question and answer session. The design of the system contributes to this, since several of the shared tools involve opening additional windows on users' screens.

Whilst the system is behaving 'madly', Janet is still trying to solve her audio problem, by talking with other participants. She does this using a number of technologies available to her; the text chat of WebEx, an Instant Messenger system to talk to the facilitator and the telephone to talk to Frankie. The latter two technologies are used with acquaintances, although Hank, the WebEx representative, suggests at one point that he phones Janet, asking for her number. Both the latter two technologies allow audio, suggesting a *preference (also seen elsewhere) for audio communication when trying to solve more complex problems*. Through use of WebEx text chat the participants establish that the problem is local to Janet, by getting someone to talk over the audio then reporting that they can hear sound, whereas Janet still cannot.

Multiple reporting located the systems problems as common, whereas the audio problems were located as ***local*** once other participants had reported that they *could* hear audio. At a later stage during Event 4, when the system again crashed, this time during the presentation, one participant, Tim, clearly expressed this concern with whether the problems are common or local in the text chat. First asking *'*`Anyone know what's happening?`*'*. Janet replies that she does not and asks Haman, who then asks whether everyone's audio is working. Tim then responds `'OK so it's not just me then?'`. In this instance Tim has established that it is a general problem with the system and not a local one through public questioning/reporting of trouble. Tim's comment

demonstrates how participants can be uncertain about the **location of problems**, that is whether problems are occurring just with their own system or with everyone's system. This is compounded since the system with the problem is generally also the communication system with which the participants can interact, however in this case the group audio remained connected for most participants and in the previous situation participants used other communication tools where they were available.

When Things Happen Unexpectedly

Sometimes the system behaves unexpectedly (as exhibited through the participants talk), and this also can cause trouble for the participants in making sense of what is happening. For example, in Event 1, during the question and answer session the slides began to change and one participant expressed confusion at what was happening. In Event 4, the chat view sometimes changed unexpectedly to show the video of the presenter, causing participants to loose the chat they were entering. Also sometimes windows opened unexpectedly on participants' screens.

Many of the situations where things happen unexpectedly raise issues of **control of the interface**, such as slides changing unexpectedly, in PlaceWare or windows opening on screen unexpectedly in WebEx. Such lack of control also occurs with the pop-up windows for one-to-one chat in PlaceWare appearing unexpectedly on screen beyond the recipients' control. It seems then that where control can be given to the participants it should be. For example, self-navigation of slides is an option on PlaceWare however it was disabled in Event 1 and 3. In Event 6 where it was enabled it was appreciated by the participants (particularly to aid the synchronisation problems where there was a delay between audio and slides). For the video on WebEx a solution would be to indicate that there is a video but allow the participants to choose whether and when they would look at it (for example, changes in the other views could be indicated by causing their relative navigation buttons to flash). Where control can not be given, for example the opening up of new applications by the presenter then if they opened up in the slide window, this could reduce confusion. That is, an **integrated interface** might help participants better to understand what is going on (that is rather than a window opening unexpectedly, there is a change in the slide window which is known to be controlled by the presenter).

When Nothing Is Happening

In some situations where nothing is happening participants exhibit concern that they do not know what is going on, even though *nothing is in fact going on.* It seems likely that this arises because when nothing is happening on the interface participants do not have any interactional indications to tell them if the system is working or not.

Such situations can arise even where systems were previously working, for example, it is interesting to note that Frankie becomes concerned that her audio was not working, typing `'Should I be hearing audio?'` even though it was working before[6]. Her

[6] It is interesting to note that there seems to be an expectation that there will be trouble with the system, for example reporting of trouble may cause others to think they also have a problem and when nothing is happening participants may assume there is a problem, that is only when the system is noticeably working

audio turned out to be working, but her concern arose because she was not hearing audio and did not know if she should have been. Such trouble may also arise during the transitions between the stages of the event particularly where these do not run smoothly, such as the transition between the presentation and the question and answer session in Event 1. At that point nothing was noticeably happening and one participant clearly and repeatedly demonstrated through his talk that he was wondering what is going on. One solution to this would be to provide participants with ***information on the status of their system***, that is whether all the different parts of it, such as the audio, slides, text chat, etc. are working correctly. For this to be successful however such information would have to be trustworthy as far as the participants were concerned.

It seems then that *participants have problems establishing what is happening when the system behaves unexpectedly, crashes or when nothing is going on*. One of the methods they seem to employ for resolving this is to publicly report trouble and question the other participants. This helps them to establish the location of the problem (if a technical problem exists) - locally with them and thus perhaps requiring some action; centrally, with the system, or indeed no problem. Thus participants spend much time working at achieving even the most basic level of participation in the event. They do this through work to establish whether the technology is working as it should be and this work makes up much of the interaction at these events.

Discussion

In this paper we have sought to bring to light the interactional practices through which participants in a series of exploratory on-line networking events work to achieve presence and participation as an on-going accomplishment. Of course (as Sharrock and Anderson (1986) point out) making sense and constructing shared understandings for all practical purposes is an incarnate and inevitable feature of all human interaction. However, in face-to-face situations, in a shared locale, that you can hear me, that you can see the artefact I see, I point to, that we are both hearing the same talk, looking at the same slides is something that is readily and easily seen, accepted and repaired. In face-to-face situations, talk and action as interaction is founded on participants' presumption of a shared objective reality. For instance, I point to the slide, saying it says '*notworking instead of networking*' which assumes you see the slide in reference to my pointing and that you can see the text I refer to and read it as I do. Of course such actions are open to refinement on response, such as, 'bullet point three, near the bottom of the slide', but not *normally* on a fundamental level. As Garfinkel (1963) demonstrated in his breaching experiments, a nonsensical answer, or an answer endlessly seeking further clarification beyond what was seen as reasonable (e.g. 'what is a slide', 'bullet point', 'how far *exactly* from the bottom of the slide'?), break the '*moral order*' implicit and foundational to getting things done. This moral order assumes the existence of an objective reality and a sharedness of experience that can easily be worked out.

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is the assumption of a shared situation most likely. This suggests that the participants are aware of the fragility of the system.

Where we have to draw our contrast here, is that what marks this situation out, and constitutes more work for the participants is that, as their actions display, the sharedness, the objectivity, of the reality is up for grabs. Working on a basis of economy, what-I-see-is-what-you-see, what-I-hear-is-what-you-hear, may well be the baseline assumption and may serve well for parts of all the events. However, what we have tried to make explicit through our examples, is that contextual elements may lead to participants' concerns over whether they are participating in something that is shared, whether what they see represents what they think it does, whether they are seeing what they should be seeing, and so forth. Our contention is that such pre-occupations are the product of mutual embodiment in a situation that is defined in and through the technology itself. Particularly when the technology (the apparatus of mutual embodiment) itself is prone to on-going blips and breakdowns, variously local and general. The work, therefore created at this foundational level of interaction precludes for major parts of the events the possibility of other topics of talk.

When we extrapolate these findings for considering technological support for on-line networking events (of course we are careful in what can be said) we can clearly say that if actual networking events encountered similar problems and were characterised with similar talk and concerns, the ability to do the business of networking would be severely impaired. In these trials it is clear that participants appear strongly enjoined towards making participation work. They keep trying to get things working, repair problems and establish mutuality. Would (possibly paying) business customers do so? Would even this level of participation be achieved? This is a key consideration when considering any migration of these events, or commercial use of these technologies. Furthermore, we can assume that they would be even more problematic with more participants. In this paper we want to suggest that this type of failures or failures of some sort will be a mundane or everyday feature of interaction with these technologies (just look at the continued problems with well-established and well-used technologies such as PowerPoint and corporate videoconferencing). Although the technology is likely to improve, for the foreseeable future it is likely to be temperamental in a number ways. Throughout the examples we provided suggestions of technical reasons and solutions for the problems encountered, however, more generally this suggests that a re-specification of design is required to support problem identification and rectification/remedy. For example, by helping users out at the interface level – with messages (e.g. you've lost contact with server you need to reboot). Furthermore, by having some sort of overseer role – unlike the facilitator, who only knows what is going on with others' systems by what they tell him – provided with some kind of central technical information on peoples statuses, or general support by a persistent communication tool, something robust, separate, small, that is likely to keep running if system crashes.

Thus current online systems do not appear to give adequate support to their users to make participation for all practical purposes an easy and unproblematic achievement. Changes in systems design as well as increases in systems stability are needed to ease the burden of participation, allowing users greater opportunity to focus on the business at hand rather than on the technology through which they are meant to achieve that business.

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