

# THREADS OF CONVERSATION: THE LIFE OF A PUBLIC ELECTRONIC MAIL CONFERENCE

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## **ABSTRACT**

*The use of e-mail as a conferencing medium is explored through the analysis of an online conference conducted by the UK Science Museum in September 1996. A panel of experts exchanged views with students in nine schools on the subject 'Is IT helping us?'. The paper follows the progression of the conference over eleven days. Three themes are drawn out from the analysis. Firstly, the effect of reduced social presence is explored. Secondly, the way in which participants establish social identity and social groupings is discussed. Thirdly, reasons for the complexity of the threads of conversation are discussed. It is suggested that the ad-hoc way in which participants entered discussions, the ability provided by e-mail to review and comment on past discussion and the preference for short messages all contributed to thread complexity. Participants were aware of the social dimensions of e-mail and adapted their behaviour to suit the medium.*

## 1. INTRODUCTION

Electronic mail is rapidly becoming a standard communications medium within many organisations. The spread of Internet services and the increasing presence of the public on computer networks are resulting in electronic mail becoming an accepted means of business and private communication for many people. It offers groups of people a mode of communication that is suitable for participative conferencing in a way that telephone, television and printed media cannot provide. It combines the immediacy of the telephone with the permanence of printed media. It overcomes the problems of physical distance and does not require the physical presence of the participant.

E-mail conferencing offers several advantages over face-to-face conference beyond its ability to cover large geographical distances. Discussion occurs asynchronously. There is no need for participants to be present at the same time. They can follow the conference proceedings at convenient points during the day, and still continue with other work. Discussions are recorded: conference participants can build up a file of messages and can review the progression of discussions by reading previous messages. The availability of a permanent record and the asynchronous nature of proceedings enables participants to take time to make considered, well-thought out contributions. An instant reply to a question posed by a participant is not demanded and yet the medium retains a sense of immediacy which is denied in discussions which take place through the pages of journals and magazines.

E-mail conferences can be further contrasted with virtual conferences which also use electronic media. In virtual conferencing, all participants are connected to the network at the same time. Such on-line conferences attempt to mimic face-to-face conferences, using a metaphor of a conference lecture hall to register people's presence in the conference. In virtual conferences a moderator invites participants to comment and endeavours to lead the discussion (Skipper and Hand, 1995). Virtual conferences exhibit some of the behaviour of e-mail conferences; for example a number of different threads of conversation may occur close together in a manner which tends not to happen in face-to-face conferences. While virtual conferences have a greater sense of immediacy than e-mail conferences, there is no time for reflection or preparation of comments. Furthermore, the nature of the medium inhibits extended answers which may explore issues in more depth. Exchanges are limited to one or two sentences which can give the proceedings a superficial nature.

Research on the use of e-mail within organisations has been critically reviewed by Rudy (1996). This review showed that, while some significant work has been done using laboratory experiments to study the effect of e-mail on personal interactions in a conference situation, little attention has been given to case studies in organisations or public networks. Markus (1994) investigated e-mail exchanges within an organisation and showed how conflict and controversy were more acceptable over e-mail than in face-to-face communications. E-mail tended to have a negative effect on the organisation in that people withdrew from each other and communicated formally over e-mail rather than resolving conflicts face to face. It was clear that people felt that social distance was increased through the use of e-mail. Reynolds' study of computer conferencing within a management department (Reynolds, 1994) identified the importance of power exerted by existing organisational culture and managerial structures on the progression of computer conferencing. The reduced efficacy of decision making while running departmental meetings as asynchronous computer conferences resulted in the reinstatement of face-to-face meetings to supplement the computer conferencing.

It is suggested that such rich insights would not emerge from laboratory experiments in controlled conditions. Laboratory experiments, often with students, result in behaviour which is different from that which might be expected within organisations or within public conferences. However, this is not to suggest that such experiments are not of value within 'live' situations. Laboratory experiments can identify useful, significant variables which can subsequently be monitored in the field. For example, McCarthy and Monk (1994) identify the measurement of the distance between references to the same topic in a conversation thread as a valid measure of the quality of computer-mediated communication. However, they conclude that there is a need to support such quantitative approaches with qualitative approaches. Rudy (1996) also comments on the value and need for interpretive studies of computer-mediated communications. This paper endeavours to contribute to the interpretive study of computer-mediated communications through the presentation of a case study of an educational conference run by the Science Museum using e-mail. The paper describes the conference, tracks the progression of the

conference over a period of seven days, and offers some analysis of the conversations and of questionnaires returned by fifteen of the participants at the end of the conference.

The Science Museum's third e-mail conference ran between the 17th and the 27th of September, 1996. Students from schools in the United Kingdom and Australia entered into discussion with a panel of experts on the theme of '*Is IT helping or hindering mankind?*' The conference was hosted by Research Machines Plc using Majordomo software on a server at Internet for Learning.

This case study illustrates some of the problems associated with computer-mediated communication. The presence of two distinct social groups highlights the contrast between experienced computer users with high social interaction ability and young computer users lacking in experience of computer-mediated communication. The conference setting differs from organisational e-mail case studies (Markus, 1994; Reynolds, 1994) in which participants knew each other before communicating by e-mail. In this case study some relationships have to be developed from scratch over the course of the conference.

## **2. PREPARATION FOR THE CONFERENCE**

Experts were recruited by posting messages to a wide variety of e-mail lists in management, education and information technology. More than 120 experts responded. Thirteen experts were selected. The experts came from universities, libraries, further education colleges and industry. Three experts were from outside the UK, one from the US, one from Germany and one from the Netherlands. The disciplines represented were information systems, communication and media, education, applied social sciences, statistics, psychology and information science. Two experts pulled out after day one of the conference because of work pressures.

Participating schools were selected by searching the Internet. Schools with a presence on the Internet would have the technological base to participate and would be more likely to have Internet-active staff and students with views on the question, '*Is IT helping or hindering?*' Over 60 schools were individually e-mailed. However only four responded. Other schools were recruited through contacts within a computer manufacturer. Difficulty has been experienced in recruiting schools for previous Science Museum conferences. The problem was made more difficult by the proximity of the conference to the start of term. Nine schools were recruited, of which two were in Australia. Each school had a contact teacher who supervised the involvement of groups of students. There were approximately 195 student participants divided into fourteen groups. However, it should be noted that only one of these schools, a school in Tasmania, Australia, was every student provided with a personal e-mail address.

## **3. JOINING THE CONFERENCE**

Participants were e-mailed joining instructions. Joining the conference involved simply subscribing to a e-mail discussion list called 'conf-it', hosted by Research Machines Plc. Conference delegates received an introductory file which listed all participants. The file also contained notes on how to send a message, how to retrieve daily archives and how to obtain an updated participant list. It further contained guidelines for contributions. These guidelines were aimed at the students rather than the experts. They encouraged students to:

*Think before asking: Make sure the question asked is the one you meant to ask and make it clear whether it's a question for a specific expert or a question for all participants.*

*Think whether the question has already been asked: Search to see whether the question has been asked and see if there is a good discussion going which you could join rather than starting from scratch. Look at other threads of discussion to see what you think of what other participants have said.*

*Identify themselves: A formal identifier of the student and the school was suggested. It was also suggested that a title identifying the thread of conversation was used.*

## 4. CONFERENCE PROCEEDINGS

### 4.1. Day One

The conference was scheduled to start on 17th September 1996, but there was no discussion via the list at all on this day. While it could be suggested that participants were still joining on this day, the lack of discussion could also suggest that the provision of a title and joining instructions was not enough to generate discussion.

### 4.2. Day Two

In an effort to overcome the inertia, the conference convenor sent the first message. He suggested that answers to the question, 'Is IT helping us?' were too obvious. He emphasised the question 'Is IT hindering us?' This resulted in the forming of a new thread of conversation. This was one of many new threads of conversation generated by experts during the conference.

The second message of the day was from an expert who would be very active in the conference to the extent that he was criticised by a respondent to the questionnaire for 'too many posts with long words.' This expert set up a new thread concerning the exclusion of unskilled people from an increasingly technological workplace.

### 4.3. Day Three

The two e-mails of day two generated increased traffic on day three. Twelve experts contributed to the discussion, but only two sent more than one message. The perception of respondents to the questionnaire was of a greater level of traffic than actually occurred. There were requests for participants to be limited to one message a day. At this stage of the conference that was actually the case. Experts sought to use the threads of conversation to generate new themes. Some were generated in response in existing threads, others were added in order to establish new threads from scratch. Threads were generated concerning information overload, IT and gender, reining in technology, the quality of life and the effect of IT on the third world. Some threads did not continue - for example information overload. Others generated further discussion. Figure 1 illustrates the thread structure on days two to four.

At this point there was no contributions from schools. The culture of the experts, mostly academic, came across as being fairly uniform. Fafchamps et al (1989) divide up e-mail discussion into islands, dialogues and webs of communication. On day two discussion was primarily web-like, with the exception of the unanswered thread concerning information overload. Messages consisted of one or more paragraphs. Some messages were long and some contained references. Some experts endeavoured to direct their questions towards the schools, for example:

*Dear All*

*There is an interesting article in this morning's Guardian OnLine section*

*about Computer Associates (the world's third largest software company) and*

*their policy on e-mail.*

*They have limited their employees' access to e-mail to three predefined*

*times during each day, just like first, second and third deliveries of*

*post. The reasoning is that people were spending too much time responding*

*to inconsequential e-mails. As the article ('Postal Codes' page 4) points*

*out, it is a relatively "unusual IT solution ..to use less technology, not more."*

*Do you know of other examples where organisations/individuals are 'reining themselves in' technologically?*

At the end of the day, one participant, of his own volition, attempted to sum up the day, replying to various comments in one long e-mail. It could be suggested that, despite coming from many institutes and not having met outside the e-mail conference, the expert participants quickly formed a social network. Furthermore, the experts, while knowing how to respond to one another, were unsure of how to respond to the schools audience which had yet to make its presence known. The questions posed by expert participants on day two were not as complex as would be expected from an academic conference. However, experts failed to guess the level at which questions should be pitched for the schools audience. Questionnaire responses suggested that the high level of debate inhibited the students, particularly the 12-14 year olds.

#### **4.4. Day Four**

Day four was Friday 20th September 1996. Only six messages were posted compared with sixteen on day three. However, day four saw the first responses from schools, for example:

*Is IT helping or hindering mankind?*

*Well, yes.*

*Is IT any good?*

*In my opinion, IT is the high point of technology, and so is*

*hindering mankind. Without technology people would be like animals, without*

*clothes we would act like monkeys. Science and technology is evil and*

*unnecessary. Animals live happier lives than humans and so it is evil and nasty.*

*BYE.*

*Group 2*

These messages referred to the original question and not the expert's discussion of the previous day. The first responses were from groups at a school and suggested that e-mails were being sent by a class without looking at previous discussion. While some of the experts may have thought about their responses before composing them, responses from schools and even experts were often composed 'on the fly', without prior thought. This suggests that, while e-mail offers the opportunity for considered responses, most users compose replies on-line and treat it in the same way as they would a face-to-face conversation or a telephone conversation.

Day four illustrated two further aspects. Firstly, comments could be picked up from one thread and used to generate new threads of conversation which may grow to dominate the conference. Here a theme of 'Is IT evil?' emerged which generated significant debate. Secondly, an e-mail conference can work at two levels: the public and the private. A majority of the conversation occurred in public. However, eight out of sixteen respondents to the questionnaire said that they had sent e-mail concerning the conference privately to other respondents. Some did this to prevent embarrassment of looking silly in the conference. Recipients of private messages have the opportunity to place them in

the public domain. On day four the conference convenor forwarded a discussion between himself and a colleague to the conference. In order for the division between private and public conversation to be effective, participants must have a shared understanding of social conventions as to what can and cannot be said publicly. It became clear later in the conference that students did not share the same social conventions as the experts.

#### 4.5. Day Five

On day five there was increasing participation from students. Some 12 messages were posted, starting with a re-posting of the participants list. One expert posted a series of questions on IT and education. Messages appeared from students. These might be typed in directly by the student. Alternatively they were selected by teachers acting as gatekeepers to the conference. Experts were spending more message space responding to student-generated issues, although they continued to raise new issues and questions. Students raised the importance of computers in medicine, police and ambulance services. An expert replied by raising the issue of privacy and asking, '*Should computers be able to forget?*'.

At this point in the conference two new trends emerged. Firstly, dialogues began to appear in which two participants conducted an extended exchange of messages within the conference. A private exchange between a school and an expert concerning the issue of gender and IT was posted on the conference. The issue of whether a poor Muslim woman living in inner city Birmingham can realistically have the same opportunity to use IT as a white middle class public school educated man living in suburbia was picked up in an exchange between two experts. A second trend concerned the increasing aggressiveness of the conference. Messages, particularly from students, took on an aggressive tone, undermining the polite debating style established by the academics.

#### 4.6. Day Six

On day six a group of students from a college in Tasmania joined the conference. This group further altered the tone of the conference and came to dominate the proceedings. The day opened with comments from the teacher of the Tasmanian group on the questions posed by the education expert in day five. There followed eleven messages from members of the Tasmanian group. Messages tackled a range of issues raised in previous days.

Several changes occurred in the nature of the conversation. The messages written by the students were shorter than those of the experts, often being one sentence or one question. There was also a tendency to copy a previous message or thread and add a comment to it before posting it to the conference. Students often addressed their comments or questions to specific experts. Students were less sure of the effect of their messages and sometimes doubted whether the tone of their comments or the exact meaning of their message had been adequately communicated over e-mail. For example, one student re-posted his message with an clarifying comment. This included copying an entire thread and adding:

*Please note that I Student R who wrote the question about the lowering  
of the barriers did not mean to sound like a caveman. The "Sure,woman....",  
should have been "Sure, womEn..", sorry for my stupidity.  
yours with regret,*

*Student R(a fellow Smart-arse)*

The messages from the Tasmanian college elicited a flurry of replies from experts, commenting on gender, IT and the third world, and computer-written letters versus hand-written letters. For example:

*Dear Amanda &co, dear all,*

*Computer-written letters versus handwritten ones, with people sometimes*

*losing their ability to write legibly by hand but so be it, differ mainly in the amount of consideration before putting down your thoughts - crossing out is so much easier on a computer. It has been shown that people are much less critical of their own products when computer-written, it too easily looks like the finished product. Good or bad, I don't know, probably both. E-mail written messages are different again: one hardly seems to think deeply at all, just types on and sends the result without reading back. Have you noticed how easy it is to call someone names through this medium, preferably someone you don't know? Anonymous and safe. Relationships have been established and broken via e-mail! No context, no intonation, no explanation of shades of meaning, direct, like a one-way telephone, no feedback (now you're going too far; exactly what are you saying now, etc.). A whole new channel of communication, and/but one which does allow me to have this direct contact with the other side of the earth (and my colleague next door who I'd rather avoid to meet in person).*

*Yours,*

*Cilia Witteman, Utrecht University, The Netherlands*

At this point the conversations were heavily biased towards gender. Several experts attempted to steer the conversation into new avenues concerning health and IT, the Year 2000 problem and productivity and IT. These threads were picked up primarily by other experts. Students subsequently asked a couple of questions, but preferred conversations on gender and computer games.

Tasmanian students were subject to some coercion since classes were set aside for the express purpose of participating in this conference and students were to be assessed on the quality of their contributions. The group was close-knit. This resulted in some messages appearing which did not make sense to those outside the group, or concerned other students who were unknown to the conference.

#### **4.7. Day Seven**

The Tasmanian contribution continued, accounting for 8 out of 14 messages on day seven. The students commented on computer games. They also responded to messages from other schools rather than those of experts. Comments from experts continued on the IT and Health thread which elicited few comments from students. An expert set up a new thread on IT and privacy. The Year 13 Physics Group at one school contributed a thread on whether artificial intelligence would eliminate white collar jobs. This received a quick reply from an expert.

A particular problem emerged concerning humour and understanding jokes over e-mail. One student thought that he had been taken too seriously:

*Dear All,*

*I have received many replies, most from people who are drinking too much coffee. Please chill out, relax and stop jumping down my throat every time I make a joke that goes over your head.*

*:^< E-<*

*Tom.*

The student was gently chided by an expert who added to the message:

*Hmmmmmm, perhaps it is time for the people's court to decide?*

*What say you all, guilty or not guilty?*

The conversation suggested that it is difficult to exchange humorous responses over e-mail since so much of the humour is transmitted by intonation and facial expression. The same student picked up this issue on day eight. He felt that when he sent a serious message he got no response and when he sent a lighter message with a joke he got angry replies.

#### **4.8. Day Eight**

Of 39 messages posted on day eight, 31 were posted by the Tasmanian group. One student asked a question and added '*PLEASE REPLY!!!!!!!*' in an attempt to elicit a response. Students responded to expert's threads and those of other schools, often in single sentences attached to a re-posting of the entire thread. A group-specific thread developed in which the students followed their own conversation which did not draw in experts or other schools. Comments covered threads developed by experts as well as other schools. Students again re-posted their own messages with clarifying comments, unsure whether they had communicated adequately. Following the Tasmanian group's discussion, there were three responses by experts, two on IT and health. Finally, messages were sent to the conference by the teacher at a school that had not yet participated. The teacher acted as a postmaster, passing on messages about IT causing stress at work and IT reducing social contact between people.

#### **4.9. Day Nine**

Day nine was 27th September 1996, the last day of the conference. Only five messages were posted. One expert responded individually to a student on the Year 2000 problem, copying the message to the conference. Another expert, who had been very active and had started one of the two threads on day two, did a summing up. He suggested that there was an oversimplification of ideas, perhaps due to the need to keep e-mail messages short. A second expert responded to a student concerning the Year 2000 problem. Finally the conference convenor suggested extending the conference and sent out a questionnaire.

#### **4.10. Day Ten**

The response to continuing the conference was patchy. The Tasmanian students were enthusiastic. Two experts were unable to continue because of it was the start of the academic term. Another expert felt that the conference had been different from what he had expected and disliked the free-for-all discussion. He did not wish to continue his involvement.

Activity on day ten consisted of three postings from one student in Tasmania on IT assisting the disadvantaged, smart cards, and a posting of a private discussion between herself and a student in the UK on whether IT is for keeping nerds happy. There was a message from a further Tasmanian student

on why he was a support of IT. Finally there were three messages from experts responding to student comments and an attempt to bolster the conversation by an expert commenting on managing IT at the government level and the need for everyone to have basic IT skills.

#### **4.11. Day Eleven**

Despite some enthusiasm from students, it was clear that the conference was coming to a close. Day Eleven brought only two messages from students in Tasmania. These messages attempted to elicit conversation about the impact of IT and the possible downsizing of employment by the growth of IT. Neither of these messages received any response.

After day eleven there was no further conversation. A couple of brief student messages were posted saying 'Is anybody out there?' and 'Please talk to me.' It was clear that the conference had naturally come to an end without intervention from the convenor.

### **5. THEMES**

#### **5.1. Social Presence**

Social presence concerns the extent to which one feels aware of the person one is communicating with (Rudy, 1996). Comments from students such as '*Please write to me*' and '*PLEASE REPLY!!!!!!!!*' illustrate the reduced social presence here compared with that in video conferencing or face-to-face conferences. As with radio, the voices in e-mail are detached from the people. Without frequent communication which establishes a presence, the person ceases to exist in the medium and is forgotten. If a message is unanswered, it is difficult to know whether the recipient has read it and is not prepared to answer, or has gone away and is not examining his or her e-mail.

It may be suggested that people adapt to the low social presence involved in using e-mail by forming mental models of participants and their environments. Since the number of cues as to the characteristics of people is reduced, participants may put more weight on the information gleaned from messages. A similar effect is found in mailing list conversations on the Internet, for example, Internet Relay Chat. Reduced social presence on Internet chat lines results in the stereotyping of participants. Furthermore, participants try to establish their own identities through the use of nicknames, signature lines and other identifying characteristics in their conversation (Becha-Israeli, 1995).

Characteristics of the participants did come over from the messages. Some experts were verbose and intellectual, some students were flippant and immature. In the absence of subtle signals as to character and type, stereotypes may emerge and assumptions are made about people. That social presence was established was illustrated by one participant commenting that he 'enjoyed meeting different people'. Since no physical meeting occurred, a mental model using 'meeting' as a metaphor had been established.

Conducting the conference on e-mail also alters the dynamics by which participants establish positive social values through what they say and do within a social interaction. Participants did not wish to be seen as stupid or out-of-sync with the social environment. In the absence of social cues, they worried more about how their words had been taken and what impression they had given. This led to some participants replaying parts of the conversation (which was possible to do since the conversation is stored on the participant's computer), and adding comments to try to clarify their meaning or to save face.

It can further be suggested that reduced social presence is advantageous in that the normal social cues that might inhibit conversation are absent. Participants in a face-to-face conference may be inhibited by the physical presence of others (height, age, dress, for example) and by the social environment of the conference (numbers present in a lecture theatre, the power given to the speaker and chairman, the level of social skill needed to interrupt or ask questions in front of a large audience). We doubt whether the students would have been so forthcoming in a formal, face-to-face conference environment.

## 5.2. Social Identity

Participants will seek to establish social identity through alliances with existing or emerging social groupings. At the start of the conference there were two social groupings: the experts and the students. These groupings expressed clear differences in the way they interacted and their attitudes to the conference. Messages from the experts were generally longer than those of the students. The nature of the comments and the language differed. Experts emphasised different subjects.

As the conference progressed, further groupings and sub-groupings emerged. Baym (1995) suggested that group identity and the sense of solidarity are influenced by the topic under discussion. Furthermore, the topics selected and discussed will reflect the group's identity. In this conference, for example, threads of conversation on IT and health, and IT and gender, produced subgroups and alliances between experts and students. Dialogues between experts and between student groups in Australia and the UK produced new social connections. New groupings were strengthened by individuals quoting or incorporating each other's messages in their own.

While it can be suggested that the dynamics of the conference produced new social groups as a result of the identification of similar interests, it is equally true that existing social groupings stamped their signature on the conference and were strengthened rather than weakened by conference participation. This was true of the Tasmanian Information Systems class which joined the conference in the second week. This close-knit group conducted internal conversations within the conference and, through their sheer volume of messages, dominated the conference. The group's style changed the direction of the conference and made it appear more aggressive. This negative consequence may be a result of the undeveloped social skills of the young students whose age and experience contrasts starkly with the experts. The use of e-mail as a communication medium does not hide inadequacies in social interaction. It may actually accentuate them. The questionnaire suggested that the experts perceived the conference as being more aggressive than did the students. While students may not have felt inhibited by the aggressive tone, some experts did. One expert perceived the conference as inhibiting and aggressive.

Despite the reduced social cues, individuals were still very aware of the social dimension to the conference. Social groupings were to some extent dynamic and emerging as well as existing before the conference. There was a constant tension between personal identity and social identity. Some participants aligned themselves with social groups such as the Tasmanian Information Systems class or the experts which then became salient (Rudy, 1996). Others, particularly students, through more aggressive messages, sought to establish their personal identity in contrast to the emerging social identities. This could be done, in addition to the body of the message, through comments and quotes appearing the signature line of the message. Some experts sought to establish personal identity through starting new threads of conversation. One expert sought to establish his personal identity by taking on the role of conference commentator and summing up conference proceedings at various points.

## 5.3. Threads of Conversation

The thread structure of the conference was complex. Several subjects were concurrently active and threads interwove. This did not pose a problem for most participants who thought it was fairly easy to follow the threads. Only six participants, three experts and three students, experienced difficulty. Difficulty was expressed about 'working out whether a message was a response to another, triggered by another or spontaneously arrived in a similar time frame a la Sheldrake'.

E-mail offers participants time to think about their replies. Evidence suggested that participants did not especially prepare their replies, but treated e-mail in the same way as a face-to-face conversation. This meant that replies were often unstructured.

E-mail offers the opportunity to review and replay past conversations. Many participants took advantage of this, editing and commenting on past threads and embedding their own comments. This increased the thread complexity. Conversations could back-track. Indeed such feed-back could lock a conversation into a particular theme and idea as further participants analysed a piece of past conversation. Some experts expressed frustration with the failure of participants to move the

conversation forward and attempted to change the topic, or comment in such a way as to break up a circular thread. This was particularly the case with a 'gender and IT' thread.

E-mail encourages short messages. It could be suggested that long e-mails may not get read by the recipient, or at least are glanced at in a cursory manner. Long talks cannot be given in the way that they might in a face-to-face conference. E-mails of this kind can be ignored. Since people feel less bound to respond to an e-mail message than a face-to-face request (Introna and Whitley, 1996), long pieces tend to be ignored and become islands in the thread of conversation. Participants want to be taken note of and feel that their messages are not wasted and unnoticed. There is therefore a social pressure to keep messages short. This may make the e-mail conference conversation more lively and participative than a face-to-face conference, but it also leads to superficiality, arguments that are not well-constructed and a lack of forward momentum.

## 6. CONCLUSIONS

E-mail provides an interesting alternative medium for conducting conferences. New opportunities for participation are accompanied by new communication problems. A conference can be conducted over several days and spread internationally. Participants are aware of the social dimensions of e-mail and adapt their behaviour to suit the medium. Social relationships can develop and it is not difficult for a conference to gel. However, the nature of an e-mail conference is distinctly different from a face-to-face conference as has been illustrated by this case study.

The conference described here was unstructured, with a minimal of guidance and direction offered to the participants. The problems associated with this suggested that e-mail conferences should be well-structured. In particular the metaphor of a face-to-face conference should be applied in more depth. For example, a time-frame should be established, with a start of day message, keynote messages from experts and the active intervention of a chairperson or monitor to try to keep conversation moving forward. In the Science Museum conference, it would have helped to have experts make brief statements to establish themes at the start of the conference.

The fact that participants generally compose messages on-the-fly, while encouraging participation, reduced the quality of discussions. Participants need to be encouraged to formulate their thoughts prior to sending them. However, it is not clear how that might be done without inhibiting lively and dynamic discussion.

Threads should be clearly identified and treated as tracks or separate sessions in the conference. A web-based presentation of messages may make the threads easier to follow and encourage a more directed conversation. There is, however, a difficult balance to be attained between directing the conference and inhibiting conversation. In this conference, where teachers acted as gatekeepers the amount of conversation was much reduced. In some cases the contribution from the school amounted to no more than a couple of messages posted by the teacher which summarised the class's conversation and was edited by the teacher. In one case the teacher pointed out that the school had only one Internet terminal. Students communicating via a gatekeeper could not be described as full participants in the conference.

The use of e-mail as a conferencing medium is growing as e-mail usage proliferates. It provides a good medium for the exchange of view within an organisation and internationally between experts. This case study illustrates the need for rigorous planning and design of e-mail conferences. The organisation of the conference needs to be carefully thought through and the way participants adapt socially to the medium taken into account.

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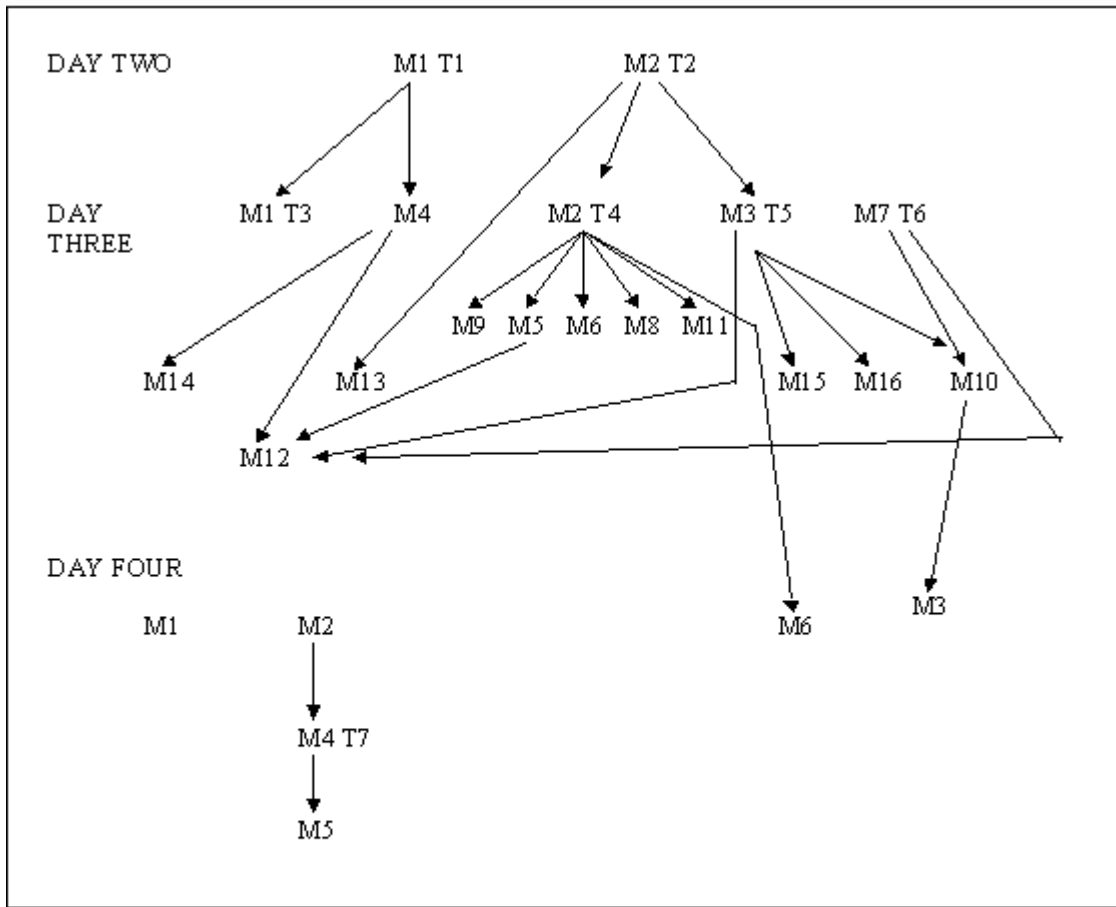


Figure 1. Thread structure for days two to four of conference. ( *T* indicates start of new thread topic.)