Effective Communication in Video Conferencing


It is designed as a tool for videoconferencing skills training in both academic and professional contexts.

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For more information about the project and other materials see the project website at: http://invite.lingua.muni.cz
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Executive summary

This report provides an overview of the theoretical foundations of the Invite Project, undertaken over a two year period from 2006-2008. It focuses on how the project team engaged participants in the development of skills and strategies for effective communication in video conferencing. It identifies a theoretical gap in published research in this area and provides a framework for social communication in video conferencing.

By establishing a theory for video conferencing communication this report sets the groundwork for a proportional approach to syllabus or programme planning that gradually decreases facilitator control as it increases participant autonomy and expertise. Through participation in social, academic or professional projects, designs for communication activities are strategically planned. Participants evaluate these activities in peer groups towards the further development of meaningful communication.

The continuous exchange and development of project group communication results in the emergence of community groups, with new elements of shared obligations and identities. At this level of exchange and interaction, participants engage in meaningful social interaction where a sense of remoteness or distance is reduced. In some instances the limitations to social communication imposed by the video conferencing environment appear to be removed or lowered, to the extent that participants feel they are sharing the same physical space—a concept that is referred to in this project as social telepresence.

It is recommended that further research is conducted, especially at the levels of design, participation and evaluation, as it is at this level that social telepresence is enabled. At this stage it is not possible to say exactly how this happens as it may occur spontaneously or it may occur as a result of detailed planning.
1. Introduction

1.1 A difficult medium

The use of video conferencing as an effective communication environment is increasing in both educational and professional sectors, but not at rates that have generated significant research in what constitutes effective practices—and moreover how technically and socially flexible participants can be with those practices. Video conferencing has been used as a medium for administrative and professional meetings and discussions since the 1980s, but has largely been seen as a difficult medium through which to engage participants in appropriate, meaningful discussions. Difficulties include, for example:

- technical characteristics of picture and sound quality, relatively small bandwidth of connections and access to technical support;
- logistical characteristics of time management, especially in transnational settings across different time zones;
- how to communicate with people from other organisational, cultural or language backgrounds in a remote user environment;
- effectiveness of communication and what constitutes appropriate communication in professional, social or academic terms;
- how to manage work for equal input between individuals and groups.
1.2 Established guidelines for use

In relation to the non-technical points listed above, established guidelines for communication in video conferencing emphasise the need for formality as one of the main requisites for a successful conference.¹ This emerges primarily from the constraints of the setting where peripheral movement and superfluous noise can indeed interfere with proceedings. This was initially due to the contrast between the relatively poor image quality of the video connection in contrast to the sensitivity of the audio connection (which can pick up very small background noises that can cause significant interference). The fact that the connection linked two geographically remote sites, in which participants may also share very different social or cultural expectations, also meant that the video conference interface allowed little room for natural social interaction between users. As such the formality of initial guidelines provides a useful starting point for novice users of video conferences, but it can also set up an artificial barrier to spontaneous communication that can restrict communicative exchange to the extent of limiting expression and discussion.

1.3 Evolving patterns of appropriate communication

Baron (1998) argues that when faced with “any new means of communication”, users will go through a period of adaptation in which their communicative behaviour is marked by high levels of formality before they will settle into socio-culturally determined patterns of communication appropriate to the medium. Baron (1998: 134) identifies changes in communications technology, particularly in relation to the development of telephone and e-mail that “blend the presuppositions of spoken and written language”, which in turn have led to significant changes in “the rules of interlocutor engagement” (ibid: 133). As video conferencing is effectively an integration of telephone, computer and video technologies, users are facing a new, but relatively unresearched, multimodal social environment in which communication practices can open up to significant variability in what is considered appropriate among and between user groups.

1.4 Research aims

The aim of this report is to identify some of the developmental stages of how video conferencing participants adapt to socially negotiated settings in video conferences. In doing this the report will discuss a social and technological cycle that leads to effective participation in the development of remote community groups. The findings of this report can be used to develop effective training programmes in the use of video conferencing and also to inform academic and professional debates on what constitutes “best practice” in this area. The paradigm presented will finally argue that the notion of “best practice” can be very limiting as it restricts discussion on the more useful, realistic and usable notion of “developing practice”.
2. Communication and technologies

2.1 Communication practices

Oral communication in video conferencing is part of what is viewed in an educational setting as a literacy practice, which means that it forms part of an agreed pattern of communication between different users in which it is possible to recognise standards, patterns and styles for exchanging ideas and information. Within these phenomena it is possible to see different rules or codes for professional, social or academic engagement which vary according to different user groups.

Despite the fact that many organisations have easy access to video conferencing facilities, not many learning or training practitioners are engaged in the use of video conferencing as a creative or dynamic interactive environment; i.e. a large proportion of practitioners still use safe methods for communication which do result in exchange of ideas, but which may also limit the effectiveness of how the ideas are exchanged and received. It may also adversely effect motivation to use video conferencing on a more regular basis as many users will see its drawbacks before they consider its advantages.

To form a background study that will identify characteristics of video conferencing communication, it is necessary to focus more on the use of technologies in education. By identifying characteristics from published research in literacies and communication practices, it becomes possible to more clearly identify strategies that work as a link from academic to professional life, providing pathways into professional life for students and future generations who are completing their education and entering the job market. It also provides access to ways in which communication processes work that can be viewed from both sides of the dialogue between education and professional life, thus providing a strategy for lifelong learning and professional development.
2.2 Information technologies and communication: three parallel concepts

Snyder (2003: 263) supports initial research in the wider field of information technologies and its ability to “extend and enhance understanding of the ways in which the use of new technologies influences, shapes and even transforms, literacy practices.” In defending such research against criticisms of corporate or commercial interests in influencing the use of technology in education (cf. Robertson, 1998, in Snyder, 2003: 264), she argues that “teachers...” will redress the balance through research if they “…‘ensure that education remains the main game and that technologies, new or old, remain faithfully in the service of that main game’ (Lankshear and Snyder, 2000, xvi)” (in Snyder, 2003, p.264). In effect this claim asserts that it is necessary to design the use of technology to support the needs of training and communication and not for technology to be used for its own sake.

Likewise, Luke (2000: 71) argues for the development of “appropriate pedagogies” for the use of electronic and communicative media that reinforces the focus on “what constitutes literacy” and in turn, limits corporate or commercial perceptions on how people learn. In higher education, for example, the corporate effect can be felt through institutional views of learning and the use of new technologies, especially where institutions have invested heavily in technologies and need to carefully consider administration of use. With the emphasis on immediacy of use, manufacturers and retailers of such technology have a “new frontier for business activity and entrepreneurship” (Robertson, 1998, in Snyder, 2003: 264). The guidelines for video conferencing that emphasise formality predominantly originate from educational and professional network administration sources (cf. footnote 1). While these are useful for initial training, they work primarily with basic operating principles and useful methods of getting started, rather than the larger question of how people actually adapt themselves to work creatively or dynamically with these resources.

To begin with the idea that a meaningful technological learning environment should reflect “an ‘authentic’ context of situated social practice” (Lankshear and Snyder, 2000, in Snyder, 2003: 270), it will be useful to provide a comparative overview of the Digital Rhetorics project (Lankshear and Snyder, 2000, in Snyder, 2003). The project was carried out over a two year period in Australia and created a theoretical approach to literacy and technology that identified three technological dimensions (Snyder, 2003: 269). In the Invite Project the framework of the digital rhetorics project is mapped into a wider analytical framework that situates the specific aspects of video conferencing within the more widely researched area of information technologies and literacy practices.
The Digital Rhetorics project set out to study the relationship between literacy and technology and while the secondary school education sector setting and aims are significantly different to the setting and aims of the Invite Project, it draws a strong parallel for communications development. The tri-dimensional paradigm of the digital rhetorics project was identified as a possible basis for analysing communication prior to the start of the Invite Project. At that stage it had been used with a small number of video conferencing situations and proved to be accurate as an initial framework. This framework will be reassessed through this report in light of project findings, but from the outset the following descriptions were used:

The operational dimension looks at both language and technology. It assesses the type of language system that is needed to operate within communicative settings and how the technology itself operates. They argue here that in terms of language, choice is dependent on “learning how to make it work for individuals’ own meaning-making purposes” (Snyder, 2003: 270). In terms of technology, participants need to understand how it actually works, which compares directly with the institutional advice on basic issues in video conferencing.

The cultural dimension refers to an understanding of how language and technology are used to participate in the creation and development of social practices. In creating an authentic social context, emphasis is placed firmly on the meaning that students are creating in relation to their personal, shared and negotiated experiences and how they will be represented in other modalities.

The critical dimension refers to the need to be able to evaluate available tools, which here is interpreted not only through the use of the technology, but also through the use of emerging literacy practices and whether video conferencing discussions help with the critical development of communication practices.

(Adapted from Snyder, 2003: 270)
The three dimensions of the Digital Rhetorics project formed a foundation on which to base an analysis of comparative social factors that would inform motivation to participate and possibilities for creativity in organising and structuring communication activities. What became apparent from the outset with novice participants was that the lack of video conferencing experience accounted for an initial formality in behaviour. This may be reinforced by adherence to guidelines on good practice in video conferencing, but a need for formality was also suggested by many participants as a response to questions on effectiveness of initial video conferences where numerous mistakes were made. Feedback on initial conferences carried out within the INVITE project (http://invite.lingua.muni.cz/) also suggest a level of anxiety and unease with the environment, which was as much due to the unfamiliarity with the equipment being used as it was with the social environment where participants were meeting people from different countries and cultures for the first time. The first parallel was drawn between social formality (Baron, 1998) and the operational dimension (Snyder, 2003).

As we started to observe interaction in the cultural dimension, where language and technology is used in “participating in ‘authentic’ forms of social practice and meaning” (ibid: 270), it became possible to see how participants begin to experiment with the variable aspects of creating purposeful communication. With this experimentation a greater sense of playfulness emerges that can be compared with research in other areas of literacy studies (cf. Coles and Hall, 2001: 112). Playfulness in some cases bore its own cultural characteristics in that participants of some nationalities (mostly western European) were more spontaneously playful, whereas others were more traditionally formal (more common with East Asian participants) (see INVITE project, http://invite.lingua.muni.cz/). Despite these obviously generalised characteristics, feedback suggested that those who started in a formal manner often saw the need for greater flexibility or playfulness and those who started in a playful manner often saw the need for greater formality. Nevertheless, the relationship established the second parallel between social playfulness and the cultural dimension (Snyder, 2003).
What was beginning to emerge here was a complex cycle of interrelated characteristics that could not be directly separated or accounted for individually:

Social formality ↔ Operational dimension

Social Playfulness ↔ Cultural dimension

Both of these parallels required a more analytical framework or focus to be viewed as a dynamic cycle and this was first represented through the inclusion of the critical dimension (Snyder, 2003). This stage in the process is very much related to evaluation of the uses of technology, language and characteristics of social communication. What is needed for a clear, critical perspective is a framework for structuring communication, which is where the concept of design (Kress & Van Leeuwen, 2001) needs to be considered.

In the transformation from monomodal cultures of the past, where considerations for production or framing of language led to specific representations of either spoken or written discourse, the accession to multimodal cultures has seen a transition to wider considerations of which resources will be used for which representations. Kress and Van Leeuwen (2001: 50) refer to this process as design, in that the communicator takes on an “architectural” (ibid.) role in deciding which aspects of other modes of representation will be useful in the creation of a specific aspect of discourse. In a video conference for example, discussion can be based on individual, collaborative or cooperative tasks where the degree of negotiation depends very much on aspects of how a group of people determine what type of design would best represent their aims for communication. This can be influenced to a greater or lesser extent by teachers or trainers and in this case the influence depends heavily on participant awareness of the operational and cultural dimensions of video conferencing. The design can also be based on what is technologically possible as video conferencing has the potential to include a wide range of digital media, such as presentation of web-sites and PowerPoint slide shows.
At this stage the addition of a third parallel between socially negotiated design (ibid.) and the critical dimension (Snyder, 2003) provided a tangible framework through which it was possible to see the three dimensions of the Digital Rhetorics project. As Digital Rhetorics however, focused on technology based literacies, it did not necessarily need to include a parallel social strand that would explain aspects of face to face communication in a remote video conferencing environment. The social characteristics included in the framework for this study, though have provided a strong foundation for the planning stages among the project groups in remote locations.

Social formality ↔ Operational dimension

Social Playfulness ↔ Cultural dimension

Socially negotiated design ↔ Critical dimension

In comparing these operational, cultural and critical dimensions with the notions of formality, playfulness and design as processes that have the potential to inform and interpret each other, it is possible to see how they can be recycled and reconsidered at any stage of the communication process. What is particularly apparent though is how they can form a socially negotiated basis for participation in video conferencing. In defining participation in the terms of this project it is necessary to consider the “participation framework” of Goffman (1981, in Kress and Van Leeuwen, 2001: 86-87). Goffman has identified roles in participation that are particularly relevant in video conferencing situations, through observation of the characteristics of:

the principal, who establishes the position of the speakers;
the author, who encodes the message within specific aspects of language;
the animator, who transmits the message to others—in some cases this role is transposed to a technological device (e.g. a sound system used for a specific effect) by the principal and/or author.
While these roles for participation may be taken by a single person, they may also be shared by different members of a group at different stages of the discussion or presentation. Despite the need to analyse these aspects of participation in much more detail, I would argue at this stage for a greater community based focus for initial video conference communications, especially where non-professional student groups find it difficult to establish fixed team roles in short term projects. As a follow up to initial training and possibly from 3rd or 4th video conferences onwards, it is more likely to provide stronger facilitation for design and critical evaluation.

Despite the attractions of Goffman’s framework, there are underpinning cultural aspects in social groups that determine the roles that people play, which are not always directly observable. Mercer’s notion of collective thinking in a community (2000: 106) is particularly useful here, as we can see social groups emerging on the basis of shared history, collective identity, reciprocal obligations and as a result of the social forces at play in these three categories, a fourth category of discourse. The shaping and articulation of discourse is the point at which significant variations on patterns of speech, writing and their modality is represented by different social groups that emerge as individual communities of practice.

According to Mercer, Acceptance into a community of practice is established through the following social conditions:

a) **A history:** groups gather and share common experience that creates information and ways of doing things. This can be shared with newer group members.

b) **A collective identity:** through the history, people find a common purpose in what they do and they base many of the group’s ideals on this identity. There are often criteria for entrance to a group (academic or professional) or rites of passage (social) that permanently identify an individual as being a member of the group.

c) **Reciprocal obligations:** within each group responsibilities are created, but in the creation of responsibilities measures of trust are established. Standards of behaviour for the groups emerge at this stage.

d) **A discourse:** the language that is used to communicate within the group may be different within different groups. This is often related to family, social and professional characteristics of the group and will determine how members communicate. Identity within the group may be strongly related to the use of language.

*(based on Mercer, 2000: 106)*
Communities can be further interpreted in different ways, according to who is setting the reciprocal obligations. These can be very formal or they can be much more loosely interpreted. What becomes evident through the literature is that the two main ways of describing discourse emerge through a comparison between discourse communities and communities of practice. A discourse community shapes a socio-academic and professional view of communication that uses established and agreed standards of appropriacy as its measure. It works in a top down manner with specialist informing non-specialists. In an educational setting this is seen through the teacher - student hierarchy, where it is essential for the student to follow regulations and guidelines for how assignments must be completed. This level of working in accordance with systems is a used as a measure of gaining access to the professional community, largely through conformity to standards (cf. Johns, 1997: 57).

Communities of practice however, may evolve and exist within and across discourse communities (Johns, 1997: 57). Communities of practice can be viewed in formal academic or professional and social or informal ways. In formal academic or professional terms, these may be independent research or focus groups that set their own reciprocal obligations, but which are still very much based of formal patterns of communication and adherence to standards. In a social setting, communities can be based on family, friendship or mutual interest groups. Reciprocal obligations will vary significantly to the more formal settings described above, but will still adhere to some kind of rules for inclusion; rules that can be viewed as standards of appropriacy in communication and behaviour. The two concepts are interrelated as can be seen in *figure 1*. 
The emergence of new communities within this project is an indicator of a significant social bonding process, in that groups come together for the purposes of taking part in specific tasks of designing video conferences with limited direction from a group facilitator (teacher or trainer). In doing this they develop reciprocal obligations within the groups and reinforce the bonds that identify communities of practice. Considerations of appropriacy within and across these groups are in a constant state of evolution, and as such the theoretical foundations of this project emerge as the observation of a cycle rather than a process with a beginning and an end.

Fig. 1: Discourse communities and communities of practice
In *figure 2*, the three parallel strands that form social characteristics and technological dimensions are seen to work in a dynamic relationship where any can inform the others in any sequence according to the skills, abilities and relationships that exist within any given communication group. The social factors and technological dimensions are brought together in participation and through appraisal and reappraisal of levels of appropriacy. The groups identify with various levels of communities development, resulting in working teams and groups that emerge as communities of practice that develop characteristics that are both formal in rigour and informal in how ideas are created and shared within the groups.

**SOCIAL FACTORS** | **TECHNOLOGICAL DIMENSIONS**

*Social factors and technological dimensions are interrelated characteristics that vary from group to group*

- **Formality** 1  ↔  **Operational** 4
- **Playfulness** 2  ↔  **Cultural** 4
- **Design** 3  ↔  **Critical** 4

étr  ⇔  **Considerations of appropriacy**

(sociocultural factors, negotiation, discussion of style and content)

étr  ⇔  **Participation** 5

étr  ⇔  **Considerations of appropriacy**

(sociocultural factors, negotiation, discussion of style and content)

étr  ⇔  **Reappraisal of considerations of appropriacy**

**Community of practice** 6

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*Fig. 2: Social cycle of adaptation to video conferencing*
3. Programme planning from syllabus to materials

3.1 A proportional approach to programme design

For class groups observed within the Invite Project it has been important to recognise two factors from the beginning:

a) so far no participants have come to the groups with any experience of video conferencing;

b) due to lack of experience there are high levels of both enthusiasm and anxiety about what video conferencing is and how it works.

As a strategy to organise participants through basic training in a manner that would enhance the enthusiasm at the same time as reducing anxiety, it was evident that we would have to provide a structural framework that to a greater extent would induce formality and control operational difficulties. Ultimately this is what the project is advising against, but it works well as an opener when video conferences are being recorded. The end point in the first stage of the process is for participants to watch themselves in the recording and work through their own reactions, peer reactions and questions on how they would like to design future video conferences. This section of the study will identify a practical framework that has provided guidance to initial participant groups in one of our video conference courses throughout the project. In effect this section provides a working method in which we use a proportional approach to training (based on Yalden’s proportional approach to syllabus design for second or foreign language learning, 1987: 96).
Yalden’s proportional framework (figure 3) is used to inform strategies for starting with a high degree of structure and facilitator control. At this stage there is clear framing and instructing over requirements and possible roles for communicators. High levels of formality may be apparent amongst presentation groups and an equally high level of operational instruction is needed to ensure a successful first conference. Groups still provide input on the topics they will discuss and present, which gives them an immediate lead in to the communicative phase.

The communicative phase begins with high levels of formality in which participants are still exploring possibilities for the design of future video conferences and many of the decisions made in relation to observation of recordings of video conferences. Gradual exposure to the video conference environment combined with cultural exchange of information between participants in remote user groups (Aberystwyth and Brno) helps participants to socialise through the medium, giving rise to a natural increase in social communication. This will manifest in a number of ways in terms of formality and social acceptance, but it is common for participants to become less self-conscious and more playful in their interaction.

See appendix for sample recordings archived in the INVITE project database and on the streaming server at Aberystwyth University.
From this stage plans for video conferences take on a new perspective as the social component gradually takes over. There are no clear boundaries in the transition between the formal and social components and elements of each may be used at any stage of the communicative phase. In the social component though, there is a marked increase in critical awareness that informs the design of video conferences. Self esteem tends to increase at this stage, especially if there are no operational difficulties in the process.

The communicative phase does not necessarily end with the specialised phase and it is more accurate to say that they blend into one, especially as participants may have to move back to less secure territory when trying new operational ideas. In the specialised phase however, participants are confident with the design of what they plan and are comfortable opening their proposed topics to remote participants for critical discussion prior to designing actual video conferences. A simple methodological example is an exercise in which they will ask for suggestions on what audience participants want to know, see and hear in relation to the topics they have designed. At this stage, participants also feel more confident in what they are presenting and as audiences have a reciprocal stake in the other groups’ presentations we begin to see the stronger social ties (cf. Kraut et al., 1998) that emerge through meaningful social interaction that is based not only on what participants want to present, but also on what audiences want to receive and through which they want to interact.

Video conferencing creates dynamic affordances for the development of strong social ties through the visual and synchronous nature of the interaction that takes place. Through the HomeNet Project, Kraut et al. (1998) argued that the internet reduced the physical proximity that has always been at the heart of social bonding. It was argued that while it was possible to maintain or even enhance strong social ties in existing relationships, it was also possible to make new acquaintances through the medium itself; and that most of these relationships would be based on weak social ties. In a video conference environment we see the potential for what is initially weak social engagement, especially where issues of remote trust have not been established. Indeed in a shorter series of video conferences it is difficult to create strong social ties, however examples of physical bonding activities can be found that do bring groups closer together. One such example is in video conference S1-0708-VC3, where a presentation on Art Psychotherapy involved students in physical activities that used a virtual circle of participants between the two remote locations. The mimicking activity that followed proved so popular that a follow up conference was set up without much furniture in the room to continue the activities, but also to include new physical bonding activities.

3.2 Applying the proportional approach to video conference practice

To set up initial video conferences participants first need to be comfortable with the idea of a topic, theme or project that they will present or discuss. When topics have been established, a discussion of the basics of video conferencing is introduced as the start of the structural phase of the programme. This involves discussion of time management, time differences, logistical and technical requirements of video conferencing and communication in video conferencing.

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2 See appendix for a list of project topics discussed by video conference where the proportional approach to video conference development was used.
3.2.1 The structural phase

The materials used for the structural phase are included below.\(^5\) These are discussed in the session before the first video conference and they are reviewed in the video conference room as an introduction to VC1, so that both remote locations are working from the same materials.

Time management

Time management is very important in video conferencing. The suites must be booked in advance and the link depends on availability of rooms and technical support. Technical support is available on site, but also depends on the network being used, which in Aberystwyth is supported by the Welsh Video Network in Swansea and by UKERNA in Edinburgh.

The link also depends on punctuality at both ends as there may be time differences between the two locations. If you are late to a conference, interruptions are very uncomfortable and surprisingly noisy and disruptive. When people have settled into the beginning of a video conference they need to concentrate quite a lot on the communication for reasons we will discuss below.

Requirements of a video conference

People

- **Chairperson**: this person will chair the conference and organise the overall agenda.
- **Facilitators**: a facilitator should be present in each conference suite being used (could also be the chairperson in one suite).
- **Participants**: these are the people who will take part in the conference.

Agenda

The **agenda** is a plan of exactly what is expected to take place. It will include arrangements for seating, timing, use of equipment and roles of participants. Facilitators work with the same agenda, which is controlled by the chairperson. It is usually characterised by:

- short presentations
- controlled contributions (one speaker at a time)
- pre-read content where possible so that critical awareness is apparent from audience
- careful timing

Equipment

- **The equipment** used includes the conferencing facilities, which also includes use of computers and projection equipment for a variety of multimedia presentation formats. Web-sites and PowerPoint presentations are commonly used. Use of media needs to be written into the agenda and participants must plan well in advance for this purpose.
Communication in video conferences

**Etiquette** is very important in video conferences. The unspoken rules of verbal communication in face to face conversations and discussions do not necessarily apply here and it is easy to disrupt a video conference. On the surface, it should be treated as a more sensitive communication environment, and as such, careful consideration must be given to its ecology.

- Make sure you are in the picture
- Do not move too much—it is distracting to watch
- Do not move or rock furniture
- Be careful with unnecessary noises—microphones are very sensitive and even a cough sounds like a car crash
- Do not whisper or have conversations with partners, they will be heard at the other end of the connection
- Speak normally
- Switch off mobile phones
- Brightly coloured and/or reflective clothes can cause viewing problems on the screen
- Look at the camera as much as possible rather than the screen. Eye contact is gained through the camera lens, not the TV monitor/screen

**Active listening** is very important. Active listening is letting people finish what they have to say before interrupting and also being able to summarise the essence of what they have said. It is more important in video conferencing as there is a slight time delay so it is not always possible to tell who is speaking from a group as facial and body signals are more obscured in what is essentially a low quality image environment.

**Be conscious of other participants.** It is important not to speak too much and allow interaction with other participants. Be aware that some people may appear only in the background as silent observers. So if you are planning any presentation or discussion points, work out in advance who will say what and also who will answer questions on given subjects.
3.2.2 The communicative phase

In transition between the structural phase and the communicative phase participants are encouraged to reflect on experiences of using web cam or video conference communication. The guidelines below form the basis for the formal component of the communicative phase.

Reflections on communication

Have you taken part in video conferencing before? This can include uses of web cams on personal computers or synchronous mobile video phone calls. “Synchronous” means communication that happens live, so video messages that are recorded and then sent to another person cannot be included (they are “asynchronous”).

If you have you may have some perceptions of what it is like to communicate visually without being in the same physical space. If not you may have heard others speak about it, or you may be able to imagine what the advantages and difficulties may be.

You are going to engage a group of people in another country in a discussion of your project topic.

- What do you think this will be like?
- While this is dynamic and has obvious advantages for communication, there will also be difficult aspects.
- Think of the possible difficulties to presenting and discussing through this medium.
- How could you overcome those difficulties?
- Can you think of a good way to organise your presentation?
Video discussion task

In the second video conference we will work in established project groups to present ideas to our partner project groups. Follow the checklist below to work out how you could begin to structure the ideas for presentation.

Identify a person to introduce the group

*Prepare to* introduce the group, remind them who you are— but not in too much detail—and identify:
  - the working title and focus of your project
  - the focus of the discussion for this video conference

A safe way to design the conference

*Create* an extremely short summary of each aspect of the topic that the group would like to discuss. You should be able to remember this adequately enough so that you don’t have to read it from a paper.

*Prepare some questions* to engage your audience in discussion. Remember, you are familiar with your topic, and while they may have a good knowledge of your subject, some people may have little or no idea about the ideas you are working with. Prepare questions that get people into the topic at a general, but meaningful level, e.g. their own experiences, impressions or implications of the topic in their own country or social setting. The questions could be used as part of the following sequence, or you could design your own ideas for presentation.

  - *The first person* (not necessarily the person who introduces) should briefly present her/his own ideas.
  - *The second person* should continue, but this time she or he could make comparison to the first person’s talk to identify the progression of ideas and relationships if the topic has varied.
  - *The third person and other subsequent participants* should continue in the same manner and finally one of the group members should summarise by bringing the presentation to a conclusion, after which wider discussion can take place.
**TIME LIMIT:** The facilities will be booked for 90 minutes, from 2:15pm - 3:45pm GMT time; 3:15 - 4:45pm GMT+1 time, so we need to set a time limit of approximately 12-15 minutes per group—*including questions and answers*—as there will be six groups. This allows for some expansion time if topics become interesting, though we may need to limit discussions to those times.

**Sample agenda:** We need to work out a sequence for presentations. As we have three groups at each university, the suggestion for six discussion groups is:

- **Welcome** (2:15-2:20)
- **1st team** (2:20-2:32) Topic title
  
  **Mode of presentation** *(e.g. Discussion with PowerPoint, Document camera, etc.)*

- **2nd team** (2:33-2:45) Topic title
  
  **Mode of presentation**

- **3rd team** (2:46-2:58) Topic title
  
  **Mode of presentation**

- **4th team** (2:49-3:11) Topic title
  
  **Mode of presentation**

- **5th team** (3:12-3:24) Topic title
  
  **Mode of presentation**

- **6th team** (3:25-3:37) Topic title
  
  **Mode of presentation**

- **Other issues** (3:38-3:45)
The formal component identified above can take place over a series of conferences during which time participants learn to explore the possibilities for integrated multimodal communications. At the same time there may also be structured lessons arranged around the materials created for the Invite Project and this stage can be as short or as long as necessary depending on the needs of individuals, groups and organisations or institutions involved. At this stage much greater playfulness and cultural exchange is beginning to take place and video conferences can be engaging and dynamic and can look quite professionally designed.

As the formal component progresses though, it gradually gives way to the social component, which builds upon the basic training, but also sees the facilitator or trainer beginning to take more of a back seat in the proceedings. The aim of this phase is to identify critical aspects of design that now take on board a comfortable blend of formality and playfulness, emerging operational confidence and cultural awareness of how information is being used and how it will be received by remote participant groups.

After video conference 2 or 3 the following ideas are openly discussed with participants in relation to a presentation of the social cycle of adaptation to video conferencing (fig. 2). Participants work through the questions in Table 1 to begin to identify patterns within their own communication processes and how they match or differ from the cycle.
<table>
<thead>
<tr>
<th>Social factors (1): Formality</th>
<th>Technological dimensions (1): Operational</th>
</tr>
</thead>
<tbody>
<tr>
<td>How much?</td>
<td>What do we need to know?</td>
</tr>
<tr>
<td>What factors constrain this?</td>
<td>Can we actually do it?</td>
</tr>
<tr>
<td></td>
<td>Are there other ways we could do it?</td>
</tr>
<tr>
<td></td>
<td>Why do we choose this way?</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Social factors (2): Playfulness</th>
<th>Technological dimensions (2): Cultural</th>
</tr>
</thead>
<tbody>
<tr>
<td>How much?</td>
<td>What do we know about our partners?</td>
</tr>
<tr>
<td>Why?</td>
<td>How will that influence our plans?</td>
</tr>
<tr>
<td>What benefits?</td>
<td>What do our own characteristics say?</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Social factors (3): Design</th>
<th>Technological dimensions (3): Critical</th>
</tr>
</thead>
<tbody>
<tr>
<td>What is the plan?</td>
<td>What are the strengths of this plan?</td>
</tr>
<tr>
<td>What is it based on?</td>
<td>Are there any things you would like to do, but cannot do at this stage?</td>
</tr>
<tr>
<td>Who will do what?</td>
<td>Why will these roles suit these people?</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Considerations of appropriacy</th>
</tr>
</thead>
<tbody>
<tr>
<td>What tells us this will be a suitable way to proceed?</td>
</tr>
<tr>
<td>How would that be different in different settings?</td>
</tr>
<tr>
<td>What are we changing since video conference 1 &amp; 2?</td>
</tr>
<tr>
<td>Why are we making changes?</td>
</tr>
</tbody>
</table>
3.2.3 The specialised phase

It will always be necessary for participants to move between the structural, communicative and specialised phases to a certain extent, which is dependent on how much they know about the content of discussions, the remote participants and the modes of communication they are employing in a particular video conference. As they move into the specialised phase however, it becomes clear that reciprocal obligations are emerging between the participant groups towards a mutual understanding of appropriate discourse patterns and critical choices for design. It is the aspect of design though that brings the three social and technological parallel strands together into participation.

Participation takes place in the earlier phases, but what becomes more evident here is that successful participation is not necessarily based on successful use of the technology available within the video conference environment. In the Invite Project, some of the more dynamic presentations have taken place as a result of mistakes or failures in executing the design plan and thus moving on to Plan B. In order to reduce anxiety over possible problems in the transition from design to participation though, a significant amount of socialisation needs to take place through the actual video conferencing medium.
For this purpose, the video conferencing environment has been designated as a social space within the courses used in this study as it is a difficult and relatively unresearched process to measure by any academic or professional standards. MacKenzie (1993: 7) argues that:

“[T]hose of us who research social processes are seldom able to set up our own experiments. We have to wait for the world to do it for us. The passage of time, and changes it brings in the factors and phenomena that interest us, are our single best resource”.  

*(in Whitley, 1997)*

Educational research can be conducted into the phenomena that are measurable by learning outcomes, but to define processes that measure learning in the “social space” of a course leaves us subject to our participants and their interpretation of the world. Too much guidance or control interferes with the very nature of social interaction. Despite this though, it is very difficult to take a back seat to all the planning and organising; the design of video conference discussions and presentations.

Design though is very much centred on strategic interaction and exchange. Three particular questions are explored by McCarthy and Hatcher (2002: 14-15) around the issue of learning to answer questions strategically, which they refer to as “learning their demographics”:

“What’s in it for me?”  
Listeners need a reason before committing themselves to what can be a demanding mental process.

“What do I want to say?”  
We have aims according to our own reasons for speaking and we make demands of our listeners.

“What is the most effective way of constructing and presenting the particular things I want to say to achieve my purpose?”  
Will my listeners make adequate concessions to my demands on their time?
Without guidance video conference participants set out to design discussions or presentations according to their own aims, but in so doing—and especially where there is no clear sense of shared history or collective identity around what has been learned in class or is common knowledge in a given culture—it is easy to tune out an audience. To counter this possibility at the same time as enhancing participation, a “mute microphone” activity was set up around each of the topics. After each topic was introduced by a loose interpretation of a spoken abstract (background, focus, methods of investigation, discussion or analysis, overall relevance/value), the remote groups reactivated the microphones to answer three simple questions for their remote partners:

“What do you want to know?”
“What do you want to see?”
“What do you want to be able to discuss?”

Answers to these questions immediately placed emphasis on audience in a way that goes beyond the immediate call to “learn their demographics” (McCarthy and Hatcher, 2002: 15). It focuses critical aspects of the design from an audience or user perspective. Where interaction is designed by individuals or teams without this intermediary stage, it runs the risk of being too specific on a topic about which audiences may have little or no critical awareness. Inclusion of this stage brings in a much more social aspect of participation and it allows participants to begin specialising in the topic and the modes of presentation, but in a manner that is in tune with their audience.

At earlier stages of the research, participants were advised to focus more on the design. On reflection this created greater anxiety in their expectations for expert delivery and reception of the presentation. This more socialised process focuses more on the participation and how design is used to facilitate that participation. This level of socialised participation emphasises that effective communication is not necessarily about the effective use of the most advanced technology. This would be a bonus, but we face numerous operational problems:

a) from limitations of how much participants know about how the technology works;
b) from limitations in the equipment available, how old it is and what it will work with.

What matters more at this stage in building communities through effective participation is the use of the most effective technology to facilitate a clear presentation and dynamic discussion.

In developing specialist discussions and presentations, participants adapt their discourse according to audience characteristics, but still creatively design the communication to follow logical structures for deliberative discourse either through the formal strategies listed in Table 2, or through more creative designs that are analysed as a contrast to the formal strategies. Either way participants have emerged into a community where meaningful visual interaction takes place with people they have never met and may never actually meet.
<table>
<thead>
<tr>
<th>Table 2: Strategies for specialised discussions and presentations</th>
</tr>
</thead>
<tbody>
<tr>
<td>(Adapted from Wallace, 1980, in Jordan, 1997)</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Basing discussion on established fact</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Formal statement</strong> Statements or questions of fact</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Basing discussion on personal or unsubstantiated feeling</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Formal statement</strong> Statements or questions of feeling</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Basing discussion on established opinion</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Formal statement</strong> Statements or questions of opinion</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Basing discussion on recommended or adopted action</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Formal statement</strong> Statements or questions of action</td>
</tr>
</tbody>
</table>
4. An emerging definition of social telepresence

4.1. From feedback to elective transferability

The specialised phase of communications development is enhanced through a multi-level feedback cycle, which includes:

- **Participant to participant** (P ⇔ P)
  Participants give feedback to each other either within their own project groups, or across project groups and between individuals and groups across remote video conference locations. This suggests a *specialist-emergent* perspective, in which independent peer evaluation takes place.

- **Facilitator to participant** (F ⇔ P)
  The facilitator gives feedback to individuals and participant groups on specific issues that they may not have identified themselves. This suggests a *specialist* perspective. Greater emphasis however, is placed on P ⇔ P feedback as a more important social negotiation process.

- **Participant to facilitator** (P ⇔ F)
  Participants either respond to F ⇔ P feedback as further enquiry or justification of ideas, or provide important feedback from a participant perspective that may have been overlooked or misinterpreted by the facilitator. This suggests a *specialist-reflective* perspective, in which participants are more likely to make tentative suggestions rather than strong claims.

During this cycle the facilitator takes the position of participant observer, taking field notes (oral or written) on discussion and written comments. Feedback is primarily generated through a series of reflexive processes, which suggests that they reflect on and critically analyse their own work, the work of their group partners and the work of other participant groups.
Methods of generating feedback include:

- Open qualitative questions that elicit in-depth responses about aspects of the social cycle of adaptation to video conferencing (fig. 1), on the social factors of formality, playfulness, design, and on the operational, cultural and critical dimensions. This is mostly P⇔P.

- The qualitative questions are used to generate open discussions on participation in video conferences and the aspects of communities that may be emerging at this stage. This is mostly a combination of F⇔P and P⇔F.

- DVD and streaming server recordings of video conferences are shown to participants for critical discussion. This is mostly self reflexive and P⇔P.

Reflections on feedback are transferred directly into plans for follow-up video conferences in a manner that encourages participants to make their own independent decisions on all aspects of the social cycle of adaptation (fig. 1). What emerges from this is a decision making capacity, defined here as “elective transferability”. Elective transferability includes the capacity for developing and using communication skills in a range of communication contexts from a combination of institutionally recommended perspectives and socially negotiated perspectives. Participants identify which strategies and skills are most important to their own proposed designs for communication.

P⇔P feedback is the most important method of informing emergent-specialist design, which reinforces participant confidence in using elective transferability strategies. This may also be enhanced through F⇔P, but this represents a more traditional training and mentoring role which is not as indicative of social negotiation processes. P⇔F feedback does not tend to happen as spontaneously and is tentative at first due to cultural expectations of formality levels between student⇔teacher or trainee⇔trainer. This level of feedback can be very valuable as the facilitator begins to see critical design suggestions from a more assertive participant perspective. Ultimately this is the level of confidence needed among participants to be able to set up video conference communications independently.
4.2. The possibilities of social telepresence

Current video conferencing research and technological development focuses very much on the concept of telepresence. However, as this is largely viewed from a technological perspective, it is commonly seen as a set of technologies that enables users to produce multimodal communication settings, in which that there appear to be no physical barriers between remote user groups. High definition technologies are clearly increasing the potential for simulation and/or presence production. Knudsen and Andresen from the Telepresence Research Group at Lillehammer University College, Norway, are engaged in extensive research and development for presence production methods and technologies. Figs. 4 - 6 provide an example of how telepresence was produced for a discussion between two key presenters at the Norwegian Festival of Literature, 2008. The two presenters are physically located in Lillehammer in Norway and Toronto in Canada.

In figure 4 we see a subjective camera view of the two participants in their own locations, where they are clearly separated and no assumption is made that they are in the same physical space. In figure 5 we see them in an objective view where it would be possible to imagine the two people in discussion. Figure 6 transforms the two images into a simulation of the same studio setting where they clearly appear to be talking to each other in the same physical space, despite being in Norway and Canada respectively.

Fig. 4: A subjective camera view of two remote video conference participants

(Knudsen & Andresen, 2008)
Fig. 5: An objective camera view of two remote video conference participants
(Knudsen & Andresen, 2008)

Fig. 6: A telepresence view of two remote video conference participants
(Knudsen & Andresen, 2008)
In contrast to the view of telepresence as the multimodal production of simulated close physical proximity, studies in cyberculture have identified concepts such as mental and emotional telepresence, which have been studied in relation to online gaming communities. This study argues here that social telepresence can be enabled, and perhaps eventually produced, through a combination of aspects of physical, emotional and mental telepresence.

- Physical, or technological, telepresence is achieved through sensation in relation to use of images, where it is perceived that there are no physical barriers between remote participants. An example is provided in figure 6.

- Emotional telepresence is achieved by suspension of disbelief where the person feels they are part of what is happening. It commonly happens when reading a novel, watching a movie or taking part in computer games and online gaming communities.

- Mental telepresence is achieved through intellectual engagement. This happens when people are immersed in complex intellectual activities and forget about surrounding physical settings or constraints.

- Social telepresence is achieved through a sense of belonging to a community, which may be brought about by engagement in meaningful social interaction via technological media. It may involve a combination of aspects of physical, emotional and mental telepresence.

Social telepresence can be achieved quite easily with very limited technologies, but that use of advanced technologies will not always set the necessary enabling conditions. To return to a communities view of communication, we can see a continuous development and reinforcement cycle between the four key aspects of communities development.

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It would be easy to assume that the development cycle shown in figure 7 is a linear process, but even in physically present communities we can enter the cycle at any stage. A simple example is starting a new job in an unfamiliar organisation or in a different career setting. The employee enters this situation at the level of reciprocal obligations and must learn the collective identity and shared history of the professional community. In a family setting or in many social settings, people grow up with the familiarity of other community members and thus shared history and collective identity emerge in a more holistic parallel to reciprocal obligations and discourse.

New video conference participants also enter the emerging community at the awkward stage of reciprocal obligations and a sense of belonging through the emergence of identity and/or history may eventually break down virtual barriers towards a feeling of social telepresence. In reality, this can also happen in a first or second video conference, suggesting that a feeling of social telepresence is not dependent on a sense of belonging to a community. Below (figure 8) are four examples where remote video conference participants are interacting in a manner that suggests they have forgotten there are physical barriers between the two sites. The most obvious signal that indicates this is the body language and clearly social behaviour of the participants.

Fig. 7: Continuous development cycle of communication in communities
(based on Mercer, 2000)
Fig. 8: Four examples that indicate a sense of social telepresence in a video conference (Aberystwyth and Brno)

As communities develop, it becomes easier to facilitate a sense of social telepresence through a greater sense of identities and emerging shared histories. Here these are referred to as plural concepts as it may never be possible to gain a singular sense of community between remote video conferencing groups. As long as participants begin to understand differences however, and begin to see overlapping similarities, then a shared awareness of what is culturally and critically possible is seen through the design of activities and the participation that takes place. Activities that are socially meaningful can reduce the effect of physical barriers, but a significant amount of further research is needed to be able to identify a framework for mapping processes of how social telepresence is enabled.
5. Redefining the social cycle of adaptation to video conferencing

Given that a major goal of the Invite Project is to set up training that will provide strategies for professional communicators, the academic foundations of the participant observation process works critically in favour of a process that helps to bridge the gap between academic and professional life. As students come to the end of their academic life and consider career prospects, the development of strategies for elective transferability of communication skills becomes very important. The observation of negotiated social communication however, has led to a reassessment of the social cycle of adaptation to video conferencing.

The initial framework, presented in figure 1, was designed from earlier video conferences undertaken in 2005 and it was adopted as a foundation on which to develop methods for the Invite Project. As it was based on research conducted into the development of media and computer literacies (Baron, 1998; Snyder, 2003; Coles and Hall, 2001; Kress & Van Leeuwen, 2001), a full scale project such as Invite was needed to test whether it would be adequate to inform an objective assessment of the nature of video conferencing communication in and across community groups. What emerges is that a large amount of the framework does work to inform video conferencing communications, but that particular aspects of the technological dimensions would need to be expanded, to take account of the more socially oriented face to face communication of video conferencing.

In terms of the social factors, a clear process between formality, playfulness and design has been reinforced and this has been observable throughout the set up of initial conferences, the feedback processes and participation in subsequent events. Within the technological dimensions however, there are limitations in the operational, cultural and critical definitions, as these were originally set up within the digital rhetorics project (Lankshear and Snyder, 2000, in Snyder, 2003) in relation to computer literacies rather than video conferencing. Through the Invite Project it has been possible to identify a wider scope and division of each of the technological dimensions.

The operational dimension (Snyder, 2003) clearly serves a dual role in restricting or facilitating both technical abilities of how to operate equipment and a language ability role in being able to use basic functional and social language to enable an operational level of exchange in a video conference. Lack of ability to communicate in this context can be equally or even more limiting than lack of technical ability, in terms of creating a base level of success in effective video conferencing. Until participants can function in operational terms, high levels of formality are still in evidence as they are induced by the lack of abilities.
The cultural dimension engages participants in authentic social communication and they do begin to experiment with possibilities that create a dynamic pattern of meaning and interaction (ibid.). However, a more traditional interpretation of "cultural" needs to be added here, especially with transnational participant groups who in this setting are made up of a mixture of different nationalities and are presenting to other different nationalities in video conferences. It is essential to begin to address cultural issues of what can be discussed or shown appropriately, without offending cultural sensitivities. In these terms it is the difference between awareness of possibilities for authentic activities and awareness of how appropriate those activities may be. Through observation it is possible to understand how participants move between levels of formality and playfulness.

The critical dimension works with increasing awareness of how effective the choices of design are for the aims and intended outcomes of presentations or discussions. What emerges here though is that while it is clear that participants become aware of the effect that these choices have on remote audiences, it does not necessarily follow that they will act upon this knowledge. As such it becomes clear that it is possible to differentiate between the knowledge itself and the willingness to take chances or face challenges. In some video conferences the lack of willingness in this respect meant that the same problems would be repeated in following events. This may happen as a result of participant groups not being willing to meet the challenges, but may also occur as a result of constraints from the chair and/or facilitator of the video conference. It may also happen as a result of operational aspects of limited technologies or poor use of furniture and space in relation to more creative designs for dramatic performance of presentations.

Taking the current social factors and expanded view of technological dimensions into account as a continuous cycle where any aspect can inform any other aspect, groups still arrive at a level of participation in a video conference. During or on completion of the video conference participants go through numerous processes of evaluation and reappraisal and subsequent video conferences are expected to result in more dynamic participation. Participation itself can be informed from both sides in the cycle, firstly by the social factors and technological dimensions and secondly from a communities perspective. Depending on existing levels of assimilation within communities, participant groups can create and work with spontaneous aspects of communication that do not always need extensive prior preparation.

As participation is the event itself, it is at this level of engagement that social telepresence actually happens, depending on a successful blend of enabling conditions. The enabling conditions emerge as a successful combination of the social factors, technological dimensions or aspects of communities. It also depends on the elective transferability of strategies from earlier video conferences and the continuing development of audience awareness that emerges from the feedback in the evaluation stage.
Figure 9 represents the social cycle of adaptation to video conferencing as it emerges from the two years of video conferencing research undertaken in the Invite Project. It reinforces the original cycle, which was based on social factors (Baron, 1998; Coles & Hall, 2001; Kress & Van Leeuwen, 2001) and technological dimensions (Lankshear & Snyder with Green, 2000). In relation to the technological dimensions, observation of communication in video conferences, conducted during for the Invite Project, has been able to identify a dual division within each of the dimensions that further informs methods and strategies for training and development.

From a communities perspective, the remote participants observed did not know each other prior to engaging in initial video conferences, and as such they always entered at the level of reciprocal obligations. It transpired that communities did evolve through exchange and increasing awareness, but it is at the levels of design, participation and evaluation that the most important levels of social negotiation take place. Design reflects the critical choices for presentations that groups adopt in relation to their own projects and aims and their perceptions and knowledge of audience characteristics. This is revisited through evaluation where further critical evaluation results in elective transferability where participants choose which aspects of video conferences were successful and make informed decisions on current and future designs for subsequent events.

Participation remains the most elusive process to analyse at this stage as it is at this level that social telepresence may be enabled. In contrast to the more tangible production of physical telepresence, social telepresence can happen spontaneously, sometimes as a result of unexpected audience interaction and reception of communication. In some cases it happens where original aims for design do not follow plans and as such, significant further research is needed to address the processes at work in creating the enabling conditions for social telepresence. Suffice to say at this stage that it is an observable phenomenon that results in highly valued social exchange and great feelings of achievement for having taken part in dynamic multimodal communication events.
Figure 9: Reinterpretation of the social cycle of adaptation to video conferencing.
6. Conclusion: belonging to remote communities

Through this project it has become evident that the social cycle of adaptation is a basis on which it is possible to identify characteristics of communication for training and communications development. The most significant conclusion that can be drawn is through a review of the emergence of communities in the development of strong social ties: the ultimate goal of communications training. While communities of practice can be seen as informal gatherings of likeminded individuals who share a social bond, they can also be very formal professional, academic or social groups and as such, patterns of discourse established will vary considerably.

In a video conferencing environment where participants have little or no shared history and collective identity, communication begins awkwardly with reciprocal obligations. The obligations however, are complicated and interrupted by the operational difficulties participants face in a new communications environment. By working through the procedures we have developed with the Invite Project, it is possible to watch the evolution of new community groups where multicultural groups come into contact for the first time.

As participants become comfortable with the environment and the reciprocal obligations of socialised communication, discourse patterns emerge that cannot be anticipated and which are different with each new round of video conferences. Being a socialised process, this means that participants are more than stakeholders in the process; they are the meaning makers and gatekeepers to their own communities that rapidly evolve beyond the decisions made and advised by the facilitator. As such what begins to emerge is a back-tracking into collective identities and emergent shared histories that in a face to face community environment we may take for granted as those are the values with which we have been brought up and through which we have socialised; values that are acquired rather than learned. What finally emerges through the video conference environment is that many of the patterns of socialisation are actually learned, but at some stage that we may not even notice, we see or undergo an assimilation process where we realise we are effective communicators within a shared understanding of what actually constitutes communication.

In this situation it becomes clear that each video conference exchange will be unique to the participant groups and their shared social understandings. As such notions of “best practice” in training cannot be adhered to as the needs of the situation will constantly change the requirements of communication and the modalities through which participants actually structure their work. This requires a shift of viewpoint in video conference training to acknowledge that their can only be “developing practice”.


Appendix

Samples of video conference recordings held in the INVITE project database and on the streaming server at Aberystwyth University

Semester 1, 2006/2007

Project groups for S1-0607-VC1, S1-0607-VC2 & S1-0607-VC3

Aberystwyth
- Cultural differences
- Renewable energy sources
- Manufacturing consent in the media

Masaryk University
- Famous experiments in psychology
- The Russian-Georgian conflict
- The Green University Project

Recordings

S1-0607-VC1: 12/10/06: CD available: not on streaming server

S1-0607-VC2: 03/11/06: streaming server link: http://streaming.aber.ac.uk/Unrestricted/Departments/llcentre/EL2MU3_1_0607/EL2MU3_1_0607.wmv

Facilitated by Libor Stepanek & John Morgan (at Masaryk), Jo Eastlake (at Aberystwyth)

Technical properties for streamed recording
- Length of recording 01:35:41
- Bit rate: 1.11 Mbps
- Video size: 320 x 240
- Audio codec: Windows Media Audio 9.1, 10 kbps, 16 kHz, mono 2-pass CBR
- Video codec: Windows Media Audio 9.1
Semester 2, 2006/2007

Project groups for S2-0607-VC1, S2-0607-VC2, S2-0607-VC3

**Aberystwyth**
- Immigration and emigration
- Food restrictions in Islamic culture
- Changes in Behaviour across generations

**Masaryk**
- Human rights
- Environmental issues

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**Recordings**

**S2-0607-VC1: 08/03/07**: recording unavailable due to technical complications. Facilitated by John Morgan (at Aberystwyth) & Alena Hradilova (at Masaryk)

**S2-0607-VC2: 22/03/07**: CD available: streaming server link: [http://streaming.aber.ac.uk/Unrestricted/Departments/llcentre/vidconf/MA381629/MA381629.wmv](http://streaming.aber.ac.uk/Unrestricted/Departments/llcentre/vidconf/MA381629/MA381629.wmv)
Facilitated by John Morgan (at Aberystwyth) & Alena Hradilova (for Masaryk, remotely from Aberystwyth)

**Technical properties for streamed recording**
- Length of recording 01:47:29
- Bit rate: 1.11 Mbps
- Video size: 640 x 480
- Audio codec: Windows Media Audio 9.1, 40 kbps, 32 kHz, stereo (A/V) 2-pass CBR
- Video codec: Windows Media Audio 9

**S2-0607-VC3: 7th April 2007**: CD available: streaming server link: [http://streaming.aber.ac.uk/Unrestricted/Departments/llcentre/vidconf/AP521726/07_April_VC.wmv](http://streaming.aber.ac.uk/Unrestricted/Departments/llcentre/vidconf/AP521726/07_April_VC.wmv)
Facilitated by John Morgan (at Aberystwyth) & Alena Hradilova (at Masaryk)

**Technical properties for streamed recording**
- Length of recording 01:55:29
- Bit rate: 1.25 Mbps
- Video size: 640 x 480
- Audio codec: Windows Media Audio 9.1, 128 kbps, 44 kHz, stereo (A/V) 2-pass CBR
- Video codec: Windows Media Audio 9

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Semester 1, 2007/2008

Project groups for S1-0708-VC1, S1-0708-VC2, S1-0708-VC3, S1-0708-VC4

Aberystwyth
- Body language and non-verbal communication
- Food celebrations and customs around the world
- Global warming

Masaryk
- Traditional vs. alternative medicines
- Art psychotherapy
- Cultural stereotypes

Recordings

S1-0708-VC1: 11/10/07: CD available: streaming server link: http://streaming.aber.ac.uk/Unrestricted/Departments/llcentre/vidconf/OC501114/OC501114.wmv
Facilitated by John Morgan (at Aberystwyth) & Libor Stepanek (at Masaryk)

Technical properties for streamed recording
- Length of recording 01:19:44
- Bit rate: 1.11 Mbps
- Video size: 320 x 240
- Audio codec: Windows Media Audio 9.2, 40 kbps, 32 kHz, stereo (A/V) 2-pass CBR
- Video codec: Windows Media Audio 9

S1-0708-VC2: 15/11/07: CD available: streaming server link: http://streaming.aber.ac.uk/Unrestricted/Departments/llcentre/vidconf/OC061551/OC061551.wmv
Facilitated by John Morgan (at Aberystwyth) & Libor Stepanek (at Masaryk)

Technical properties for streamed recording
- Length of recording 01:41:42
- Bit rate: 1.11 Mbps
- Video size: 320 x 240
- Audio codec: Windows Media Audio 9.2, 40 kbps, 32 kHz, stereo (A/V) 1-pass CBR
- Video codec: Windows Media Audio 9
Semester 1, 2007/2008 - Recordings (cont’d)

S1-0708-VC3: 29/11/07: CD available: streaming server link:
http://streaming.aber.ac.uk/Unrestricted/Departments/lcentre/vidconf/NO311655/NO311655.wmv

Technical properties for streamed recording
- Length of recording 01:56:57
- Bit rate: 1.11 Mbps
- Video size: 640 x 480
- Audio codec: Windows Media Audio 9.2, 40 kbps, 32 kHz, stereo (A/V) 2-pass CBR
- Video codec: Windows Media Audio 9

S1-0708-VC4: 14/12/07: CD available: streaming server link:
http://streaming.aber.ac.uk/Unrestricted/Departments/lcentre/vidconf/DE420606/DE420606.wmv
Facilitated by John Morgan (at Aberystwyth) & Libor Stepanek (at Masaryk)

Technical properties for streamed recording
- Length of recording 02:08:46
- Bit rate: 1.11 Mbps
- Video size: 640 x 480
- Audio codec: Windows Media Audio 9.2, 40 kbps, 32 kHz, stereo (A/V) 2-pass CBR
- Video codec: Windows Media Audio 9
Semester 2, 2007/2008

Project groups for S2-0708-VC1, S2-0708-VC2, S2-0708-VC3, S2-0708-VC4

Aberystwyth

- Death ceremonies in ancient Egypt
- Aristotle and his influence on science
- Problems in language learning

Masaryk

- Animal testing
- Forgery in fine arts
- Brno: culture, history, sports

Recordings

S2-0708-VC1: 13/03/08: CD available: streaming server link:
http://streaming.aber.ac.uk/Unrestricted/Departments/llcentre/vidconf/MA362
259/MA362259.wmv
Facilitated by John Morgan (at Aberystwyth) & Hana Katrnakova (at Masaryk)

Technical properties for streamed recording

- Length of recording 01:49:44
- Bit rate: 1.11 Mbps
- Video size: 320 x 240
- Audio codec: Windows Media Audio 9.2, 40 kbps, 32 kHz, stereo (A/V) 2-pass
  CBR
- Video codec: Windows Media Audio 9

S2-0708-VC2: 17/04/08: CD available: streaming server link:
http://streaming.aber.ac.uk/Unrestricted/Departments/llcentre/vidconf/MA352
625/MA352625.wmv
Facilitated by John Morgan (at Aberystwyth) & Hana Katrnakova (at Masaryk)

Technical properties for streamed recording

- Length of recording 01:03:37
- Bit rate: 1.11 Mbps
- Video size: 320 x 240
- Audio codec: Windows Media Audio 9.2, 40 kbps, 32 kHz, stereo (A/V) 2-pass
  CBR
- Video codec: Windows Media Audio 9
Semester 2, 2007/2008 - Recordings (cont’d)

S2-0708-VC3: 24/04/08: CD available: streaming server link: 
http://streaming.aber.ac.uk/Unrestricted/Departments/llcentre/vidconf/AP432616/AP432616.wmv
Facilitated by John Morgan (at Aberystwyth) & Hana Katrnakova (at Masaryk)

Technical properties for streamed recording

- Length of recording 02:15:27
- Bit rate: 1.11 Mbps
- Video size: 640 x 480
- Audio codec: Windows Media Audio 9.2, 40 kbps, 32 kHz, stereo (A/V) 2-pass CBR
- Video codec: Windows Media Audio 9

Other recordings

Tart S.R.O.: 13/09/07: CD available: streaming server link: 
http://streaming.aber.ac.uk/Unrestricted/Departments/llcentre/vidconf/se272834/se272834.wmv
Facilitated by John Morgan & Janice de Haaff (at Aberystwyth) & Libor Stepanek, Alena Hradilova & Barbora Budikova (at Masaryk)

Technical properties for streamed recording

- Length of recording 01:07:27
- Bit rate: 1.11 Mbps
- Video size: 320 x 240
- Audio codec: Windows Media Audio 9.2, 40 kbps, 32 kHz, stereo (A/V) 2-pass CBR
- Video codec: Windows Media Audio 9
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