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The American Center for the Study of Distance Education
The Pennsylvania State University, College of Education
403 South Allen Street, Suite 206
University Park, Pennsylvania 16801-5202, U.S.A.

Telephone: +814-863-3764 Fax: +814-865-5878

Editor: Morten Flate Paulsen, MFP101@PSUVM.PSU.EDU
Review: Philip W. Pinder
AJDE subscription information: Margaret Koble, MAK10@PSUVM.PSU.EDU

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EDITORIAL

In August, the Nordic Electronic Knowledge Network organized a conference
on Distance Education and Computer-mediated Communication (NEK-91) in Oslo,
Norway. In the closing session, this editor had the opportunity to give a
presentation via audio conferencing across the Atlantic. The conference
proceedings include several very interesting presentations and comprise 31
papers, of which 17 are written in English. The conference proceedings can
be ordered from Astrid E. Jenssen, <astridj@usit.uio.no>. The price is NOK
200,- (approximately USD 30,-).

This issue of DEOSNEWS focuses on the proceedings by presenting the e-mail
addresses of authors who have agreed to respond to questions and comments
about their articles, a list of the papers written in English, and the
final paper in the proceedings:

Astrid E. Jenssen, astridj@usit.uio.no
Tony Kaye, ar_kaye@vax.acs.open.ac.uk
Jyri Manninen, jmanninen@cc.helsinki.fi

Frode Roenning, frode.ronning@avh.unit.no
Linda Harasim, linda_harasim@cc.sfu.ca
Terje Rasmussen, terje.rasmussen@forskning.teledir.no or
terje.rasmussen@media.uio.no

Palme, J. (Sweden) A Comparison of Techniques for Distributed Data Bases in Message Systems.

Palme, J. (Sweden) Extracts from Current ISO/CCITT Group Communication Working Papers.

Fjuk, A. and A. Jenssen. (Norway) Computer Conferencing Systems--Characteristics and Requirements.

Kaye, T. (United Kingdom) Computer Networking in Distance Education.

Nilsen, K. (Norway) Technology Against Centralisation.

Jensen, S. S. (Denmark) Call for your answer--"Online Interview"--Teachers and Tutors in CMC.

Hallem, A. (Norway) Technologically Based Interactive Distance Education Involving Transfer of Mobile Pictures, Sound and Data by Means of Digital Telephone Line (64 kbit/s). Experiences from a Project Between Colleges in the County of Nord-Troendelag, Norway.

Andersen, K. (Denmark) Distance Education at the University of Aarhus.

Manninen, J. (Finland) Computer Conferencing as Learning Environment Experiences from Computer-mediated Facilitating.

Roenning, F. (Norway) Distance Education in Mathematics Using Electronic Communication and CAL Software.

Feenberg, A. (U.S.A.) CMC in Executive Education: The WBSI Experience.

Ringsted, M. and H. Shapiro. (Denmark) Is it Worthwhile Investing in New Learning Technologies?

Jahr, M. (Norway) Digital Video Network--A Training Alternative in a Multi-Culture Environment. A Precis.

Rolandson, G. (Sweden) Distance Educational with Different Technique Facilities.

Harasim, L. (Canada) CMC and Project-oriented Cooperative Work.

Ingesman, L. (Denmark) Teaching the Teachers: Aspects of Distance Teaching.

Olsen, B. (Sweden) How to Succeed with CAKE (Computer Aided Knowledge Exchange).

And finally, the article presented in this issue of DEOSNEWS:

WHEN ACADEMIA GOES ONLINE

A Social Experiment with Electronic Conferencing
for the Nordic Media Research Community

by Terje Rasmussen, Joergen Bang, and Knut Lundby

Introduction

The merging of telecommunications and computers has triggered a new generation of communication technologies which falls outside the mass communication area. Computer communication, until now largely being an expert tool, is about to enter most areas of social activity. Particularly important is the utility of computer conferencing in distance education, its main area of application today. Students benefit from planned teaching and guidance through technical media. The concept of distance education covers various categories of teaching and learning which do not take place under continuous, immediate supervision of teachers physically present. In distance education, electronic conferencing expands educational experience by making competence more available. Electronic conferencing frees educators from rigid office hours and introduces home working as an opportunity. It has proved to be an efficient way of providing distance students with experiences closer to a classroom situation. It may even provide some form of social atmosphere , partly compensating for the lack of on-campus contact. The use of electronic conferencing for graduates is documented by Davie (1987), Harasim (1987) and Hiltz (1986).

Our purpose is to present a mid-way report from the Nordic PROFF project. We wish to present the required components of conferencing and put forward some preliminary experiences. PROFF involves electronic conferencing between more than sixty advanced graduates and staff members at Nordic institutes for media and communication studies. The PROFF network encompasses some 29 research departments at 16 universities in all the five Nordic countries. The project is funded and formally associated to the Nordic Research Council. In addition, the project receives support, financially and otherwise from Norwegian Telecom Research, the department of Informatics and Media Science at the University of Aarhus, and the department of Media and Communication, and the University Center for Information Technology (USIT), both at the University of Oslo.

The term "computer conferencing" is used as a collective term for various forms of computer-mediated communication. Computer conferencing encompasses asynchronous, distributed, and technically mediated interaction. Stressing the technological aspect, computer conferencing can be described in terms of three distinct types of technology: Terminals or personal computers to compose and receive comments, a telecommunications system to connect the computers to a central computer, and a central software system to store and organize texts. Other definitions emphasize its significance for social relations (Rekkedal and Paulsen,1989, Wells,1990). A computer--

mediated communication system allows individuals and groups of people to carry on discussions and conversations over a computer network regardless of time and place constraints, via messages keyed to microcomputers connected via the telephone network or other dedicated networks to a central computer. The medium is a two-way, interpersonal medium, separate from time constraints and entirely based on the written word. The crux of the conference is the sending and reading of and responding to entries in a manner public to all members of the subject-oriented conferences.

The social and technical networks

For some years, a Nordic cooperation programme for research education in the media and communication field has been evolving. The main elements in the programme are mainly composed of annual research seminars and student exchange agreements. The purpose of the programme is to improve the disciplinary aspects of media research education by linking related research interests on a Nordic scale. At a symposium in Sweden in the summer of 1989, plans were debated regarding further developments of the programme. The general idea was to integrate the modest national media environments into a more comprehensible totality, with particular emphasis on research education. Relatively small research settings in each country combined with specialized research interests, make the opportunities of an extended media research environment through electronic means an interesting option. Computer conferencing has the potential to make the Nordic exchange of competence into a more regular and less costly practice. With such visions in mind, the possibilities of computer conferencing were presented, and the PROFF project was in the making. The project started in January 1990 and will last until the end of 1991.

Thus, the electronic network was established on the basis of an already existing "social network" of disciplinary cooperation. As all the participants are located at major Nordic universities, the choice of NorduNET was an easy one. NorduNET is a networking programme in the Nordic countries, funded by the Nordic Research Council. The participating organizations in NorduNET are the respective national research networks: DENet, FUNET, SURIS, SUNET and UNINETT. The purpose of NorduNET is to provide harmonized electronic network services to users in the Nordic research communities. Second, the aim is to support Nordic networking relations. The use of the network is free as to 1992. NorduNET also provides users with connections overseas through gates to other networks like DECNET and EARN. Nearly all universities in the nordic area are connected to NorduNET. Though the services offered to the users differ, electronic mail and file transfer are provided at all locations.

Conferencing systems

Electronic conferencing involves a number of features which assist the creation of a new simulated discursive forum: Its absolute key option is the possibility to enter into group discussion and teamwork irrespective of distance.

Technically, conference systems are software programs located on a central host computer that can be accessed with personal computers connected to the public telephone network, or directly through local and dedicated networks. Participants have 24-hour access to the computer and many individuals can be logged on simultaneously. Although this allows for synchronous interaction, computer communication is typically asynchronous.

The system also involves private electronic mail as an integrated element in the conferencing system. Electronic mail normally involves dialogues between two persons, but a letter can be addressed to a list of receivers. In distance education, this feature is used for submission of assignments to teachers. Computer conferencing is also a convenient way of distributing information to a number of students or participants in on-line collaboration. Electronic bulletin boards reach the participants with relevant information quickly. This implies a dramatic reduction of the turnaround time of assignments and has improved the situation for distance students dramatically. The mail feature is also used for peer counselling and tutoring on an individual basis.

The essential feature of computer conferencing is the relative overcoming of space and time. It allows for asynchronous communication independent of geographical location. Texts may be read and responded to at time and place chosen by each individual involved. Second, it offers store and collect features for messaging. Texts may be retrieved and studied at a later date and repeatedly without any paper files. Third, the fact that the medium is text-based allows textual analysis and coherent reasoning. The textual grounding is of major significance for a medium used on a graduate or doctorate level as it allows for reflection and responses from others. The centralized storage of all mail and notices makes down-loading, editing and merging of texts into team-composed documents a unique option. Messages can be searched and filed by a multitude of parameters. These facilities of on-line seminars, teamwork and group collaboration, make conferencing systems a promising medium for academic discourse.

In order to develop a close cooperation with the operators of the conferencing system, the system used at the university of Oslo, PortaCOM, was chosen as the system for the project. Portacom is a ten-year-old Swedish

conferencing system which integrates electronic mail, bulletin boards and conferencing in one system. Messages can either be personal letters or conference notices. Terminals or personal computers with a printer and suitable communication software can be applied. Portacom fully integrates the mailbox assigned to each individual user and the conference notices. The system keeps track of which entries are unread. All entries are automatically stored in the system and can be reviewed whenever it is desirable. The entries can be reviewed through a number of parameters, like name, number, or all comments to a particular entry, etc. All entries will be received by other participants as soon as they join the system.

Portacom is a mixture of command and menu driven. The level of menu use can be regulated according to the level of acquired experience. A help file assists the user at all positions and command levels in the system. In order to read and write notices, one must be a member of the conference. The user can join conferences by choice or by permission, according to the status of the conferences. All conferences have a status for level of admittance and activity. Most of the PROFF conferences are private, which means that permission is required. Once admitted, full reading and writing activity is welcomed. Also, one is normally allowed to create ones own conferences at any time. In PROFF, however, new conferences are normally created by the administration in Oslo by request.

Electronic discourse

In studying this new medium, democratic and discursive aspects should be considered. Collaborative discourse involves a range of activities based upon individual motivation and collective academic tasks. Conferencing may possess a potential related to its democratic features as it reduces communication barriers. As race, gender and physical disabilities become "invisible", all attention is directed to the textual message. In an electronic conference, one cannot be interrupted by verbal authorities, and responses can be prepared and changed. Thus, once the technical and perhaps financial obstacles are mastered, it provides a relatively democratic environment for group discussion. It can be open to unanticipated and unplanned interactions, and surprising viewpoints and alliances. The fruitfulness of the unexpected may add a verbal freshness to the discussion, largely missing in printed communication. As others have noted, the electronic texts seem to develop a unique form (see Feenberg in Mason and Kaye, 1989). The discursive style lies somewhere between the formality of the printed word and the informality of the spoken word. It is public and yet private in its semantic structure, suggesting a new or hybrid form of textual communication.

Not only is conferencing unpredictable, it may also prove to be consensual. New ideas and critiques provided from a cooperative group may integrate into a communication flow of accumulated value for the ones involved. As conferencing relies on the written word, it enables prepared and considered responses, adding up to a dynamic discursive process. It may lead to re-examinations of concepts and ideas, as it puts experience and knowledge into new light on the basis of extensive feedback from colleagues.

PROFF

Our project differs from most computer-assisted education projects in at least three ways: First, the PROFF project is carried out on an international scale. Scholars and students of media research from five countries participate, and so the project relies on a communication structure of several languages. No standards for communication language are set, in order to avoid linguistic constraints that inhibit the nature of the debate. Secondly, few conferencing projects include doctoral students and academic staff. Generally, conferencing is applied in under-graduate schedules, both in on-campus and off-campus education. The nature of computer conferencing as a reflective and truly discursive medium can in our case be tested thoroughly. A third aspect refers to the internal structure of the various conferences. Unlike other projects, PROFF does not operate with moderators (chairpersons) who usually structure and encourage the communication exchange. The only form of structuring is, except for the titles of the conferences and their introduction, an article in print, for the participants to comment on. No one is required to produce specific entries, except for a short biography in the PROFF Profile conference. The project is presented as an open, non-structured electronic "conference hall" on a Nordic scale, based upon scholarly motivation rather than on training and assignments.

Among the advantages of conferences is the retrievability of other participants statements and the time available for reflection on the texts. In PROFF, this opens up for joint projects between post-graduates and staff in the Nordic media research community. Individual contributions are valued on their own merit as the content becomes the primary focus. Together with the verbal and "un-packaged" communication form, it supports day-to-day critical thinking. By enhancing the opportunity for mediated interactivity, intellectual needs can be satisfied.

An electronic conference proceeds more slowly than an ordinary conference. Still they can save a lot of time: We read more quickly than we listen, and comments and discussions of less interest can be skipped. It is used to bring people together who would otherwise have difficulty in finding time

to meet face-to-face. Everyone can participate when it suits them, rather than having to arrange plans to attend meetings.

The project signs a contract with each participant, specifying conditions for access to the texts developed during the project. All material in PROFF is defined as a collective product for any participant to use within the PROFF activities. All participants are required to join the conferences regularly and to support the ongoing evaluation of the project.

Due to great geographical distances between the participants, hands-on instruction can not be offered. As all the participants are located at central university campuses, the project must rely on a specially designed PROFF technical manual (Skov, 1991) and the services of the local university computer centers. This, however, has proved to be an overoptimistic assumption. A continuing problem in the project is to establish communication between the participants and the local support system.

In PROFF the conferencing system is also used administratively, to overcome the geographical distance between the co-workers involved in the planning of the experiment. Both in the planning and operational phase, the system is used for formulating goals, for discussion of the directions of the project and for the subsequent decision making. As tight deadlines are often required, decisions can not be made so frequently and so democratically with other media. Particularly for the Danish member, situated five hundred kilometers away from the rest of the Oslo-based planning group, the telebased process of management and coordination guarantees full involvement. The system allows for ongoing discussions and reflections related to the parallel activity in the dedicated PROFF conferences. Without doubt, one of the most positive experiences of the medium is its ability to support flexible and goal-oriented project management. Conferencing also extends the boundaries of media organizations such as NORDICOM, the documentation center for Nordic communication research.

Conferencing may constitute a significant tool in academic life in several ways. The PROFF experiment particularly examines five areas: administration and project planning, personal communication, scholarly discussion, tutoring and informal networking. Thus, some are dedicated to procedural and practical questions, others to scholarly discussion. The project includes eight open conferences dedicated to specific topics. Two other conferences are restricted to the planning activity among the five members of the project administration and evaluation group. The open conferences are:

PROFF Profiles lists short presentations of the participants and their present research projects. All participants are required to write a

presentation as their first entry in PROFF. It enables contact between participants with affiliating research interests, and consolidates the social network in general.

PROFF Media Culture is the main conference for a general conceptual discussion on theories of the relationship between culture and media. The debate was initiated by a paper by Knut Lundby on the subject, included in the first PROFF manual (Lundby, 1990). The "Media culture" workshop, brings together Nordic researchers in the field of media and communication to develop conceptions and understandings of the term. It provides the opportunity to interact over a long period and encourages a more continuous discourse on the topics than is possible in face-to-face seminars. Initially, the general subject in this main conference resulted in a somewhat fragmented discussion. To avoid overload and to help the participants systematize their contributions, a collection of edited transcript sequences from the Media Culture conference was sent out with ordinary mail.

PROFF Media Language was initiated after a Nordic seminar in Finland on media research. The conference is an element of the Nordic cooperation on doctorate education on the media field. The subsequent electronic conference serves as a channel for the continuing discussion when the on-site seminar was over. The name of the electronic conference refers to one of the main topics at the original conference.

PROFF Meta was originally established to encourage a debate on computer conferences as a new medium, and thus an obvious subject of discussion among students and scholars in media research. However, the conference proves to be of minor interest. The character of the medium was largely unknown to the participants, who generally are fully occupied with learning the social and technical rules of the new medium. Also, the preexisting research approaches to electronic conferencing were largely unknown.

PROFF Proff is the forum for the staff members of PROFF for discussions on tutoring and all other relevant subjects. For instance, a discussion on how to tutor electronically attracted some interest.

PROFF Nordic Corner. As most electronic collaboration systems, PROFF offers a conference for informal talk and socializing. It is the "social" conference with no other purpose than to be a channel for greetings, appointments, meeting arrangements, etc. Usually, these "electronic cafes" are the most frequently attended. This is also the case in PROFF, though the topics and tone are never as informal as in other educational projects. In our "Nordic Corner", literature, meetings and conferences are frequent topics.

PROFF Bulletin Board & Problems is the place for messages from the project

and for discussions on technical problems and questions. The bulletin board makes it possible to distribute announcements and to maintain a permanent repository of information and documentation to all participants. Computer experts from the Computer center at the University of Oslo contribute with answers to problems. Participation from the computer center in Oslo was supposed to facilitate technical instruction and gradually improve the communicative capability of the participants. However, the multitude of access problems make some participants unable to request help and information through the system itself. Once entered the system, the participants developed familiarity with the command system on their own.

PROFF FFF is a general disciplinary forum for various ideas and thoughts regarding media questions. It is also meant as a forum for literature comments and recommendations that would not easily fit into the other thematical conferences.

PROFF Help (file transfer, etc.) serves as an online helpfile dedicated to problems with file transfer to the Oslo mainframe and the entering of files into PortaCOM.

PROFF Reykjavik served as an administrative planning forum for the sub-groups and their organizers at the Nordic media and communication conference on Iceland in August 1991.

In addition to the specific PROFF conferences, PortaCOM also includes some hundred open conferences, for topics on a wide scale, from political forum, film critiques and computer topics.

Challenges

Though conferencing has the potential to allow for new communication patterns, its practical use is quite another story. A number of evaluations addressing conferencing in distance education pinpoint various technical as well as social obstacles that must be overcome (Mason and Kaye, 1989). Firstly, the technical barriers are still too high compared to the time individuals wish to invest in solving such problems. Most people are not "hackers" at heart and require a functional system from the start. Easy access to computers, software and telecommunications at the user's regular workplace were in many cases not provided for on a permanent basis. The technical world of conferencing is complex, due to the wide selection of communication programs, networks and conferencing facilities available. Accessing the central computer in Oslo from various university sites in the Nordic area, seems in some cases to be a puzzle mostly suited for computer experts. Although harmonized network services is the credo of NorduNET, the electronic path to Oslo involves frustrating experiences for some. This is

mostly due to the wide selection of programs, networks and mainframes. Moreover, the human support on the local sites is not sufficient. Computer conferencing still presumes considerable technical knowledge because of insufficient "social incompatibility".

To learn how to use a new media is one matter. To learn how to integrate it into day-to-day practices, is quiet another. Tight schedules often conflict with the time-consuming initial phase of learning to log on and to get to know the conferencing system. For many, this makes PROFF a marginal activity in an already overloaded schedule. Technical and organizational obstacles are thus closely intertwined. Easy equipment and user-friendly log-on procedures never guarantee frequent and regular use. A proper framework for well defined aims and objectives and permanent user support are also absolute requirements. Lack of feed-back in all forms of communication soon transform enthusiasm into resignation and passivity. In PROFF, those who read rather than wrote, are in a substantial majority. The apathy toward the medium has caused long periods of "lurking" in the conferences. Encountering new ideas is not enough. This is partly due to the lack of common discussion topics. PROFF confirms that Nordic media research is quite a broad and many-faceted area in terms of projects and professional interests.

Prior assumptions were that sixty participants would provide a safe margin above the "critical mass" for the debate to develop. This has proved to be an absolute minimum. A relatively small ratio of the members of the various conferences actually access them, and even fewer produce entries. There are many plausible reasons for this: Except for the planning conference, PROFF is not used for specific projects where the sharing of information is imperative. No moderator (chairman) gives specific tasks for others to execute. This rather low level of structure, probably decreases the priority of computer conferencing on the part of the users, compared to other activities.

While it seems that the system supported intuitive comments and brainstorming, it is awkward for text management of longer, coherent documents. Uploading and downloading of files is required to distribute longer texts, drafts of articles etc. However, routines for file transfer seem as a step far too advanced for the majority in the first phase of the project as it is unable to offer off-line or hands-on help. Thus, practical needs and technical interests collide.

The project underestimated the need for specified tasks, objectives, agendas and dead-lines. The need for a moderator or chairman to synthesize the arguments regularly in each conference proves to be imperative, as the increasing number of entries make the updating for newcomers an impossible

task. In order to keep a regular and fruitful discussion in process, the moderator may require statements from the participants. Just as in regular face-to-face conferences, there are social and psychological elements which may hinder an unrestrained exchange of ideas.

Conclusion

When people become organized around a new medium, its social history begins. Computer conferencing is still in its infancy and much is yet to be done to explore the properties of this new medium. Particularly, such systems still seem to be too much like a hacker's hot-line, instead of a qualified forum for academic discourse. If the potential of electronic conferencing is to be exploited fully in intellectual collaboration, the current format of conferencing will need to be re-conceptualized in dialogue with social trials like the PROFF project.

The coming integrated telenetwork (ISDN) is an international network architecture with a set of standards to be embedded in the telephone exchange system. The transmission speed will establish transport of communication in a variety of forms. In the near future, this will allow computer conferencing to be supplemented with graphics, and subsequently integrated into work-station and multi-media technology. This may extend the range of communication forms with graphics and sound and improve the user friendliness of conferencing.

Our preliminary experiences in PROFF lead us to the conclusion that the critical success factors should also be identified outside the technique. In organized computer conferencing projects, frequent and regular use of a majority of the participants means success. Therefore, conference moderation, a skilled leadership function, is probably required even on a post-graduate level. This function involves a number of tasks, including encouragement of new users, organizing of conferences, introduction of new topics for discussion, introduction and negotiation of tasks, ensurance of feedback on all relevant texts, and carrying out of all practical routines.

Once the technical questions are settled, appreciation of the communication content along with positive system experiences may appear. In order to integrate conferencing into pre-existing activities, technical experience must develop in concert with scholarly interests.

From our current experiences, we may still extract some optimism. In time, electronic conferencing becomes a valuable resource for enhanced dialogue and discursive understanding. After all, to work with texts, whether on screen or paper, is to work with knowledge.

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