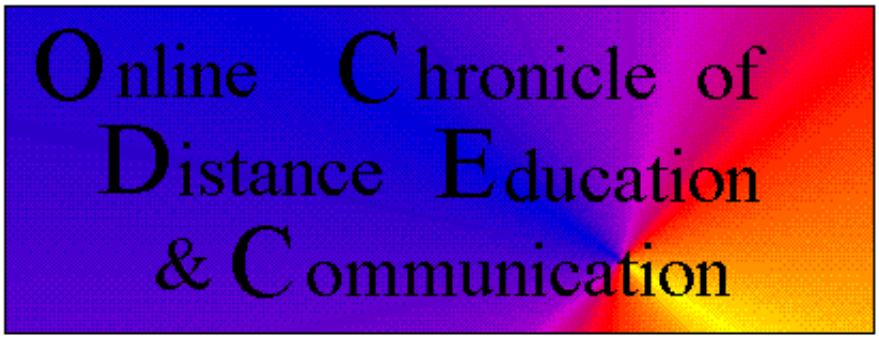

Volume #2, Issue #3

Date: February 1989

Editor:
Jason Ohler, Director
Educational Technology Program
University of Alaska Southeast

ONLINE JOURNAL OF DISTANCE EDUCATION AND COMMUNICATION

In the industrial age, we go to school. In the information age, school can come to us. This is the message implicit in the media and movement of distance education.

Volume #2, Issue #3

Date: February 1989

Editor: Jason Ohler

Educational Technology Program Director

University of Alaska Southeast

11120 Glacier Highway

Juneau, Alaska 99801

Phone: 907-789-4417

BITNET USERID: JFJBO@ALASKA

During 88-89 school yr: 1190 West 12th, #9,Vancouver, BC V6H1L6 Canada

Phone: 604-732-9452
My BITNET ID remains JFJBO@ALASKA

Technical Coordinator: Paul J. Coffin

Box 34166

Juneau, Alaska 99803

Phone: 907-789-0654

BITNET USERID: JXPJC@ALASKA

WELCOME TO THE ONLINE JOURNAL OF DISTANCE EDUCATION AND COMMUNICATION

WE ARE ALWAYS INTERESTED IN CONSIDERING YOUR CONTRIBUTIONS.

Please keep them brief, 4 screens (2 pages) maximum if its possible. If you can, please indent one tab space on the left and keep the right margin at 70. I look forward to hearing from you.

This issue at a glance:

This Issue's Contributions

-

ITEM #1:

THE EVOLUTION OF ED-NET

A Distance Education Plan Takes Shape in Oregon

by

Lynne Schrum,

LSCHRUM@oregon

Three students in Looking Glass, Oregon, are unable to take a class in Advanced Physics because there is no teacher available. Nurses in Fields will have to travel for many hours to attend a staff development class to learn the newest in ultrasound techniques. These and other problems are encouraging the efforts that may make Oregon the next stateto adopt an integrated statewide telecommunications network.

The Ed-Net Committee, under the auspices of Governor Neil Goldschmidt, has submitted a bill to the Oregon Legislature to fund just such a system with an $8 million start-up price tag. The system is designed to strengthen the economic and educational infrastructure of the state. They have a goal to be financially self sufficient within five years.

Oregon is a state with vast distances between small communities; however, there is also a concentrated corridor linking the major population centers, government offices, businesses and university structure. There has always been a lack of equitable access to career advancement opportunities, information and data bases, and to productivity support. In addition, the educational system has been unable to meet the needs of all the citizens.

The Ed-Net system would employ a mix of satellite, microwave, ITFS, telephone, and cable TV to provide video, voice, and computer data services to the entire state. Portland would become the network hub with a C Band satellite uplink capable of transmitting outbound video signals to any community in the state. Microwave and compressed video technologies would be used to initiate video programming from 20 communities in Oregon on a regular basis.

Ed-Net would provide 1300 satellite receive dishes to organizations that become members. These would include all levels of educational sites, educational outreach centers, public and academic libraries, state and county government agency sites, and health facilities. High speed data transmission would be used to facilitate access to catalogs and data- bases around the state.

While an effort has been made to accommodate all participants, the process has produced some dissent. Charges have been made surrounding the fact that the needs assessment process only addressed the administrative and business concerns of educational organizations. Oregon is a state that has traditionally underfunded its schools; cries have been heard that the available money will go toward providing a few students with select classes, at the expense of the vast majority of students. The Oregon Education Association has thus far withheld its support, and has raised several issues of concern.

The 1989 Oregon Legislature is expected to vote by May on the Ed-Net proposal. It appears that currently there is optimism in the Ed-Net committee. This may be a measure of the governor's strength, or equally, the vote may reflect Oregon's general eagerness to lead the nation in establishing a distance education model. Regardless of the outcome, the nation will be watching to see the political process unfold.

ITEM #2

INTERNATIONAL ELECTRONIC COMMUNICATION PROJECT FOR THE NETWORK OF COMMUNITY-ORIENTED EDUCATIONAINSTITUTIONS FOR HEALTH SCIENCES

By

April Jones

JONESA@SSCvax.McMaster.CA

This is a field-based demonstration project that explores the technical and human resources needed to develop effective electronic communication within an international network of medical schools, and begins to assess the impact of the technology on participants and their institutions.

The project will equip Task Force members at medical schools in Canada, Egypt, Indonesia, Nigeria, Thailand and the United States with electronic conferencing and mail capabilities, and will provide direct access to bibliographic data bases for those who do not now have it. It will facilitate the use of these technologies within the institutions and will attempt to develop models for dissemination to other schools within the Network.

The project is being undertaken to support the Network's goals of institution strengthening and faculty capacity-building; outcomes will be looked at in human rather than technical terms. Regular interchange among Task Force members is expected to foster collaboration on educational strategies and programs, sharing of resources and materials, and joint writing projects. Apart from the direct needs of the Network, the project addresses the needs of health professions education institutions to understand more about the non-technical factors involving effective use of electronic communication and state-of-the-art information technologies.

During the 1970's, a number of medical schools in various parts of the world took the decision to educate physicians in a substantially different fashion than was the norm at the time. These institutions were dissatisfied with the process and the outcome of medical education in their countries, and were convinced that it was worthwhile experimenting with attempts to educate physicians whose motivation, knowledge and skills would be more attuned to the health needs of their communities. This group of institutions came together to form a "network" at a meeting in JAMAICA in 1979.

Since these beginnings less than a decade ago, the Network has grown to include thirty full and more than fifty associate member institutions in forty-five countries; nine of them were added within the past year.

The overall goal of the Network is to assist member institutions in training health professionals (primarily physicians) who will contribute optimally to the health needs of the people they serve. Its general objectives include:

- Strengthening of member institutions in the realization of

  community-oriented learning.

- Strengthening of faculty capacity within the institutions.
- Development of educational strategies appropriate to a community-oriented curriculum.
- Promoting population concepts in health professions education.
- Assisting institutions in countries where the political will for innovation exists, with the ultimate goal of improving health care and contributing to achievement of "Health for All".

The main activities of the Network are carried on in its member institutions. Key themes are operationalized in strategies for community-based education, innovation in curriculum planning, faculty and institutional development, and the establishment of inter-sectoral linkages. Inter-institutional collaboration on these and other topics of importance to the Network is centered in the Task Forces.

The Network's goal of institution strengthening is advanced primarily through workshops and conferences at member institutions. In recent years, several of the workshops have expanded into national and regional capacity-building efforts in which the Network institution has assumed a key leadership role. The Telecommunications Project will examine some of the technical and human resources required to meet needs expressed by Network members for communication and information technologies. Since many of the participants are in developing countries, it has the potential to serve as a model for other organizations involved in professional education and international health.

The project will address needs at three levels:

1. The Network of Community-Oriented Educational Institutions for Health Sciences -

(a) Among member institutions, the need for more efficient and effective communication, especially around strategies for educational planning and evaluation Curriculum change in medical schools often takes 2-3 years; and without timely response to requests for facilitation, change may be delayed or opportunities for change may be missed altogether.

(b) Within member institutions, the need for direct access to bibliographic data bases and other information sources. While this is important for student education, it is considered by the deans to be critical for faculty and institutional growth.

2. Health professions education -

(a) The need for increased understanding of the role of communication and information technologies in institutional change and leadership development.

(b) The need for models of successful adoption of these technologies, including factors that influence decisions about appropriateness and cost-effectiveness.

3. International Health -

(a) The need for increased understanding of the human factors affecting collaboration through electronic media.

(b) The need, among organizations in the public sector, for greater experience with international communication technologies. This is especially true in less developed countries, where flexibility and creativity are needed in adapting to local conditions.

The importance of understanding non-technical barriers to effective use of electronic communication cannot be overemphasized. Many of the international projects that have been implemented so far involve transfer of structured information. This project is distinctive in that it depends on free-text exchange of ideas to achieve mutually agreed-upon goals of institution strengthening and faculty capacity-buildingthrough collaborative undertakings.

The long term goal of the project is strengthening of member institutions through enhanced access to colleagues and information sources. The immediate aim is to determine the resources needed for effective transfer and appropriate use of communication technologies in medical schools in several developing countries. The experience gained should serve as an in-depth needs assessment for the Network, and provide a model for expansion of these capabilities within this, and other, international groups.

The specific objectives are to:

- demonstrate the feasibility of establishing electronic communication links (conferencing, mail, and document transfer) among members of an international network of medical schools.
- determine and support training needs in developing country institutions, both for appropriate use of the technology and for effective communication through the medium.
- support direct access to bibliographic data bases, and

determine and support training needs for optimum utilization.

- assess factors that enhance or impair more widespread use of communication and information technologies within institutions.
- develop indicators for, and assess, changes in the institutions that result from introduction of these technologies.
- based on experience gained through this project, and through detailed assessment of the needs of other members, develop a long range plan for electronic communication within the Network.

Each site will be asked to summarize their progress at the time of the Biennial Meeting in September of 1989, and to prepare a final report and recommendations several months before the end of the project period.

ITEM #3

THE FUGA-PROJECT, Denmark

By

Joergen Lerche Nielsen

PCOMJOLEN@DKARH02

.....

FUGA is a pilot project exploring the potentialities of students' use of computers as a tool in distance

education courses for adults offered by The Folkeuniversitet (The Danish University Extension). Located in the Danish community of Vejle (close to 50,000 inhabitants), the project is a joint effort, initiated and carried out by the Vejle local committee of The Danish University Extension and VEJLE WIDEBAND. It is one of a series of projects within the framework of VEJLE WIDEBAND, which sponsors and coordinates a number of programs aimed at integrating new information technologies in various daily life processes, with the intention of strengthening the development of educational and economic institutions in the Vejle area.

VEJLE WIDEBAND is one of a number of such local community programs throughout Denmark which are being funded by the national government in the period 1986-90 in an attempt to discover the potentialities of the new information technologies for improving the quality of local community life.

FUGA is particularly focused on investigating the potentialities that the use of computers provide for fulfilling specific educational intentions which The Danish University Extension has in mind in renewing the form of its distance education courses.

The nature of these educational intentions can be understood as the result of reflections over how the organization of current programs can be improved to contribute to the attainment of its overall aims, in the light of the needs of a changing society.

Since its founding in 1898, the basic idea of The Danish University Extension has been to serve as a mediating link between the sciences and the arts (as they are continuously under development and renewal in the universities and other institutions of higher learning) and society at large. To this end, its activity - until recently - has primarily been directed toward arranging lectures and courses at a high academic level for the general public. Scholars from the universities have provided the general public with the opportunity of becoming informed about the findings and the methods of research and other scholarly work. These offerings are designed to make such scholarly work understandable to mature and interested members of the general public who - in contrast to the group to which university studies are traditionally offered - can not be assumed to have previous knowledge of the subject or field at any predefined level.

While these offerings do not give credit toward an academic degree, the intention is that they can provide a real competence or functionally usable knowledge of the subjects offered. In certain cases the student can receive a certificate documenting the nature and quality of his participation.

These lectures and courses are made available in the 5 university cities. Local committees of The Danish University Extension also provide such offerings in more than 140 other communities spread throughout the land. It means that there are nearly one committee for University Extension Courses in all towns with more than a few thousands inhabitants.

In efforts during the 1970's and 1980's to renew its program and reach new audiences, The Danish University Extension has introduced distance education courses. These have the characteristics usually associated with so called first generation of distance education development: 15-20 weeks duration (since 1982 there are also some extending over a whole year); a specially prepared set of teaching materials; a detailed study guide; possibility for telephone contact with the tutor; two or more written papers; and 3 to 5 face-to-face seminars (usually on a weekend) which are, however, not obligatory; in some cases, an optional final written examination paper and the issuance of a certificate describing the course content and the evaluation of the final examination paper.

These distance education courses are designed for interested people who for one reason or another have

difficulty attendingthe regularly scheduled classes of "near" courses at a particular location. Even though the difficulty associated with geographical distance is reduced in many cases by the traditional offerings in the local communities where The Danish University Extension committees have been established, there may be instances where there are not enough people interested in a particular course in any single area to warrant its being offered - but there may be a sufficient number spread throughout the land to warrant offering a distance course. In addition there are people who because of their many and varied commitments and responsibilities are hindered for practical, social and other reasons from making a new commitment or taking on the extra responsibility to use regular periods in their "free time" to come together with a teacher to engage in the dialogue central to courses at a scholarly level. This includes people who have responsibilities at home which tie them down, shifting work schedules, physical handicaps, etc.

As a point of departure for the FUGA-project, The Danish University Extension, and especially a group within the local committee in Vejle, have formulated more specifically their pedagogical or educational intentions for such distance education courses. They interpret the overall aim of the Extension program as serving as a mediating link between researchers and the general public, in the sense not only of providing the public with enlightenment but also of providing researchers with an opportunity for becoming sensitive to the real problems which people face in a changing society.

Among the needs of a changing society which they feel the Extension program should take into account, they identify the following:

> 1) due to the general technological development, an increase in the proportion of people with planning and supervisory functions in the occupational structure - people who are interested in educational offerings in which they can be actively involved in gaining theoretical insights that provide functionally usable knowledge (rather than courses which primarily entertain and satisfy curiosity)
>
> 2) with the spread of the new information technologies as a tool in many areas of life - including scholarly work - the general need to develop the critical capacity to use these tools - for example in gaining access to, summarizing and analyzing information, and in communicating with others.

On the basis of such reflections, Carl V. Lauridsen has formulated the following objectives for the pilot project: it should be organized in such a way that it provides possibilities for:

> 1) thorough going analysis of and individual concentration on the subject matter.
>
> 2) contact with teachers, fellow students and teaching material, irrespective of geographical distance.
>
> 3) studying subjects which few researchers and teachers are familiar with.
>
> 4) studying (coming in contact with teachers, fellow students and teaching material) irrespective of the time of day.
>
> 5) effective studying (learning?) irrespective of the teaching skills of the researcher involved.
>
> 6) active participation by the students - the computer serves as a tool, not as a "teacher".

7) course offerings for people with physical handicaps.

8) course offerings that one can work with for example either at one's place of work, at home, or in a public center, such as the library.

To fulfill these objectives, two courses were carried through during the calendar year of 1987, with a vacation break in the summer: one in artificial intelligence and expert systems, (20 students); another in visual media and computer graphics, (30 students). A third, in communication strategies in English - a course for advanced students, was cancelled in late summer, due to difficulties with the technical facilities, to which this course seemed to be particularly sensitive. The first two were repeated in 1988, with 20 and 27 students respectively.

In 1989 FUGA plans to offer three courses,

1. Understanding, analyzing, producing mass media

2. Visual media - a restructured version of the course offered the previous two years.

3. Expert systems - PROLOG-programming.

Every student is, for a nominal monthly sum, provided with a computer, a printer, a telephone modem and the software needed for the subject matter as well as for communication. A computer with a 20 Mb hard disk, a telephone modem and an electronic mailbox is located in the home of the project director, Carl V.- Lauridsen, vice-headmaster and senior master, at Rkilde Gymnasium. It provides facilities for a conference system, The Amus Base, which is an electronic Bulletin Board System.

The courses have been planned to start on a week-end, during which the students receive their computer and brief instruction in the use of software both as a tool in their study and in communication through the electronic mail system. The instruction is given by the teachers; and in the second year (1988), also by tutors (who were students from the first year) who remained in contact with about 5 students each to assist them with practical technical problems.

Students work on assignments, both individually and collectively, communicating with each other and the teacher through the electronic mail system.. About once a month seminars are arranged at Rkilde Gymnasium in Vejle, where the content of the course, assignments and questions regarding the use of the computers are dealt with.

The pedagogical vision of this pilot project is reflected in the aesthetic qualities anticipated with the consummate performance of the music form for which it is named - FUGA - the Danish word for "fugue." The realities experienced in the carrying out of the project - while still holding the promise of the ideal - have been, especially in the first phases, characterized by qualities of discordance to be expected in a performance in which the players are still in the process of developing the skills necessary to play their various instruments, including the skills of tuning them in to the same pitch, and making their entrances and exits in the flow of music, in a way which are sensitive to developments of themes and counter-themes in relation to each other and their accompanying harmonies and disharmonies.

Carl V. Lauridsen FUGA

Jorgen Lerche Nielsen Roskilde University Centre

Thomas W. Webb Roskilde University Centre

Denmark

PCOMJOLEN@vms2.uni-c.dk

ITEM #4

INTELENET UPDATE

excerpts from the paper **PUBLIC INFRASTRUCTURE NETWORKS**

by

Thomas Ho

TOMHO@PURCCVM

delivered at CAUSE88 in Nashville, Tennessee

PUBLIC INFRASTRUCTURE NETWORKS:

the Indiana TELEcommunications NETwork case study

Thomas I. M. Ho, Ph.D. Edward J. Tully

Purdue University GTE Telecom, Inc.

West Lafayette Colorado Springs

Indiana Colorado

317+494-9525 800+323-8812

TOMHO @ PURCCVM.BITNET

A public infrastructure network is a telecommunications network that provides basic communication services on which public, e.g. education and government, organizations depend for their survival. An infrastructure network is distinguished from any ordinary communications facility because it is both pervasive and comprehensive! An infrastructure network provides the foundation upon which value-added (beyond merely transport and switching) information services can be exploited for competitive advantage or for service

improvements.

Since 1984, the state of Indiana has been working toward the fulfillment of INTELENET which is currently being cut-over to serve its customers in Indiana government and education.

INTELENET is a fiber optic backbone network that serves 16 concentration sites in Indiana where customers will access the network for transport and switching of their video, voice, and data services and to obtain other value-added information services.

WHAT IS AN INFRASTRUCTURE NETWORK?

The Infrastructure Network Concept

A public infrastructure network is a telecommunications network that provides basic communication services on which public, e.g. education and government, organizations depend for their survival. An infrastructure network is distinguished from any ordinary communications facility because it is both pervasive and comprehensive!

An infrastructure network provides the foundation upon which value- added (beyond merely transport and switching) information services can be exploited for competitive advantage or for service improvements.

INTELENET is the consolidation of virtually all of the communications requirements of Indiana state government and education. This consolidation creates a critical mass, especially with the IHETS video, that generates economies of scale. This consolidation creates bargaining power that can be leveraged to win cost-cutting concessions from vendors.

INTELENET is also an integrated voice and data network. It uses digital switching as well as a digital transmission backbone that efficiently manages voice and data traffic.

INTELENET is also a distinct video network that uses a separate digital video switch as well as a separate digital transmission backbone.

Infrastructure Network Benefits

Infrastructure networks provide cost-effective access with stable prices. The critical mass of communications requirements fulfilled by an infrastructure network will encourage its provider to offer a fixed rate for all line costs for the life (at least 5 and up to 10 years) of the contract negotiated by the network customer and its provider. Conservatively, it is estimated that Indiana will save at least five million dollars during its initial 5-year contract term.

Infrastructure networks lower the entry barriers, in terms of both technology and price, for its users. The comprehensiveness of the network umbrella makes it unnecessary for individual users to bear the burden of either network implementation or network management. In addition to lowering the cost of services, an infrastructure can often also guarantee the capability to expand network capacity dramatically at predetermined costs because the initial infrastructure enables the provider to provide additional services at reasonable incremental cost and because the provider is in a favorable position to remain the provider of additional services.

Infrastructure networks focus attention on communications to help organizations to realize the strategic role

of communications in serving customers or constituents and in delivering services.

Infrastructure Network Constituencies

In order to be sure that an infrastructure network is managed efficiently as well as used fairly, it must be governed by a mechanism created by its constituents. For example, the INTELENET Commission was created by Indiana statute IC 5-21. Distinct from Indiana state government, the Commission is a body corporate and politic with the following responsibilities:

1. Fiscal and administrative services including:
    a. Budgeting
    b. Contract administration
    c. End-user billing
2. Telecommunications management
    a. Telecommunications planning
    b. User group interaction
3. Communications consulting services.

HOW WILL INFRASTRUCTURE NETWORKS SERVE US?

At least, infrastructure networks provide basic transport and switching services. An infrastructure network is also the foundation upon which value-added information services can be implemented. Initially, INTELENET will provide the following services with improved performance at lower cost:

1. Telephone network for Indiana higher education (SUVON) and state government
2. Video transmission service for Indiana higher education (IHETS) teaching Indiana business, health care, and other audiences
3. Private line circuits for various education and government computing networks.

INTELENET has the potential to do much more! For example, its data communication services could enable:

1. Document exchange among Indiana's libraries
2. Shared access to Indiana government and educational data bases
3. Collaboration among pre-collegiate, collegiate, and corporate educators.

Video services could be upgraded to two-way, rather than one-way broadcast, capability to enable video conferencing among government and educational personnel to reduce travel costs. Even geographical coverage could be expanded by providing gateways to national and international networks!

WHY IS INTELENET A ROLE MODEL FOR THE NATION?

At this time, INTELENET is still unfortunately unique! What makes INTELENET unique?

INTELENET is comprehensive! INTELENET serves an entire state. While other states have state-wide networks, no other state-wide network offers the wide range of services offered by INTELENET:

1. Broadcast video at DS-3 (45 Mbps) rates
2. Data services at a wide range (from 1200 bps to 1.544 Mbps) of rates.
3. Voice service.

Other public service networks that may offer similarly broad services do not cover an entire state.

The INTELENET Commission is special! The Commission represents a coalition of state government and education that works in Indiana. IHETS creates the critical mass of communication bandwidth demand that generates the economies of scale to be enjoyed by all of Indiana government and education. State government has created the Commission to capitalize on this opportunity!

Thomas I. M. Ho , Professor of Computer Technology

Purdue University

Bitnet: TOMHO @ PURCCVM

KNOY 231 | TOMHO%PURCCVM

BITNET@CUNYVM.CUNY.EDU

WEST LAFAYETTE, IN 47907

GTE: (317) 494-9525 FAX: 317+494-9033

ITEM #5

USE OF ELECTRONIC MAIL TO SUPPORT DEVELOPMENT OF NUCLEAR MEDICINE IN DEVELOPING COUNTRIES

by

RogerFulton (MED017@DJUKFA11)

and Brian Hutton(HUTTON@METRO.OZ.AU)

Nuclear medicine is a diagnostic discipline which involves the use of short-lived radioactive tracers to study physiological processes in the living body. Although relatively young, nuclear medicine has established an important role for itself in medical diagnosis, as a complementary technique to the familiar x-ray or radiographic technique. Whereas radiology (and also the emerging magnetic resonance imaging) technique yield information about the internal structure of patient, nuclear medicine's strong point is its ability to provide information about function, for example the physiological viability of an organ.

Today, nuclear medicine is in the computer age. Many of the nuclear medicine tests performed in hospitals in developed countries are only possible with computers to control the acquisition and processing of the data. A relatively limited variety of tests is possible without modern computers.

Although computers have been regarded as a necessary and integral part of the equipment of nuclear medicine department's in developed countries, they have often been beyond the reach of departments in developing countries for reasons of (a) cost and (b) problems of infrastructure. This situation is gradually changing, as developing countries purchase new nuclear medicine imaging eequipment.

The imaging equipment used in nuclear medicine is called a gamma camera. It is essentially a large (approx. 40 cm diameter) scintillation detector which produces images of the radioactivity distribution within the patient. On its own, a gamma camera can only produce 'static' images of the radioactivity distribution at one particular time. However, if a computer is connected to the gamma camera, new possibilities emerge. For example sequences of images can be obtained which depict the changing radioactivity distribution with time. Mathematical methods can be applied to this data to calculate a host of parameters which characterize the viability of the organ under study.

To an increasing extent, modern gamma cameras are being sold with integrated computer systems at little extra cost, whereas in former times the computer was an optional 'extra'. Hence developing countries are acquiring computers with significant capabilities (including the potential to access e-mail).

The International Atomic Energy Agency (IAEA) recently organized an international conference on the 'Applications of Computers in Dynamic Scintigraphic Studies in Developing Countries' in Vienna. The theme of the conference was ways in which developing countries, acquiring computer hardware for the first time for, could best make use of it. Delegates from many countries were present .

In our paper, we suggested that it would help accelerate the establishment of state-of-the-art nuclear medicine in developing countries if electronic mail communication could be established between centres in developed and developing countries. For example a centre in a developed country might agree to support a centre with similar computer hardware and software. The form the electronic mail support would take could include questions and answers on both technical and medical topics, provision of software, remote diagnosis of software and hardware problems and so on. The possibilities are quite extensive.

At present, our idea is only an idea. There are several questions to which we do not yet know the answer. Perhaps readers can help out here. We would be delighted to hear of others' experience. For example, is it feasible for someone in equatorial Africa to communicate with the US via e-mail ? Is the telephone service of sufficiently good quality to support modems?

These questions are perhaps best investigated by an international agency like the IAEA. Unfortunately, the IAEA did not seem to pick up on our suggestion at the conference. Perhaps it seemed impractical. Perhaps it is - but we don't think so. We think electronic mail has a definite role to play in education of and the provision of information to (if there is any difference between the two) people who are geographically isolated from each other.

Whether our idea ever comes into practice or not, we hope that it demonstrates another potential application of distance education, and the important role it can play. It is interesting to contemplate that the countries which can perhaps benefit most from electronic communication are currently least able to utilize it.

Roger Fulton* (med017@djukfa11)

Brian Hutton (hutton@metro.oz.au)

Dept of Nuclear Medicine, Royal Prince Alfred Hospital, Sydney, Australia

* (Currently on one year attachment to Institute of Medicine, Nuclear Research Centre, Juelich, West Germany).

ITEM #6

ANNOUNCEMENTS, READER REQUESTS, NEW DEVELOPMENTS

FOR THE DISTANCE EDUCATION CHRONOLOGY from Don Watkins, V076GZHB@UBVMS.

1970 NEW YORK STATE, USA:

Regents College, founded in 1970 by the Board of Regents of the Univ. of

the State of New York. It is a non-traditional way to get an associates's or baccalaureate degree. Regents is strictly an assessment college with no faculty of its own- all learning is carried out via distance ed. as independent study, and/or as credit transferred from another institution.

The Regents have conferred more than 36,000 degrees since the inception of the college. Degrees may be earned in 17 liberal arts disciplines, as well as business, computer technology, nuclear technology,electronic technology, and nursing. I am an alumnus of Regents College and hold both an Associate in Science and a Bachelor of Science from Regents.

There are currently in excess of 16,000 students enrolled. In addition, Regents College is currently developing a data base of distance education opportunities that utilize technology for delivery.

REQUEST FOR INFORMATION ABOUT EUN

Could any kind person send me all information about EUN (Electronic University Network)?
Thanks in advance.
Sincerely,
Cicero Chen
BITNET: WN5A0001@TWNMOE10

Editor's Note: Please send information to the Journal as well as Cicero Chen as I think other readers would be interested.

A REQUEST FOR INPUT ABOUT DISTANCE EDUCATION IN CENTRAL AMERICA

from cdp!csuca@labrea.stanford.edu

We are working on a distance education project in distance education in Central America. At present most of our equipment is at various stages of the order and delivery process. It seems definite that we will receive the equipment for establishing an electronic mail/conferencing link between the universities some time before we receive the equipment for the audio, blackboard, etc. link.

We have received requests from some of our member universities for two courses which we believe could be taught by E-mail. The first is a course in library administration and the second a course on the use of the data base package CDS/ISIS. We have found the personnel who could teach these courses, but the use of E-mail as a delivery system will be an entirely new experience for them. Therefore, we would appreciate feedback from individuals who have taught courses in similar fields about the mechanics of teaching these kinds of courses, the pitfalls encountered, and the success and failures experienced. Also, information concerning courses which seem to be 'tailor made' for delivery through an electronic mail system would be much appreciated.

E-mail address: cdp!csuca@LABREA.STANFORD.EDU
Edgardo Richards
Irvin Boschmann

FYI ANNOUNCEMENT About Whittle Communications and Channel 1 From Don Watkins, V076GZHB@UBVMS

I heard of a new program being broadcast via satellite. It is called "Channel 1". Whittle Communications of Nashville, Tennessee is the originator. It is a news-report by students to other students nationwide. It is paid for by advertising and is "controversial" because the children will be subject to this advertising. However, as part of this initiative I understand that any school that agrees to air this program everyday in their school will be eligible to receive a satellite dish, tuner, VCR, and monitor absolutely free. Needless to say we are thoroughly excited about that possibility.

Have you heard of this initiative? Here is a quotation from TV Guide about it: "High School and Junior High School students across the country may soon see a 12 minute news program-complete with commercials-beamed into "Channel 1" will be tested in a handful of school districts this March. If it is successful, the producers plan to bring the program to 8000 schools starting in 1990. The producers, Whittle Communications, will provide satellite dishes, TV monitors, and VCR's to schools agreeing to present the program to their entire student body every day. The schools will be free to use the electronic equipment for other purposes when it is not being used to broadcast the news show. The cost will be borne entirely by advertisers, who will target their products specifically to teenagers."

I would like any thoughts from subscribers to the On-line Journal about this...Don Watkins

FYI ANNOUNCEMENT: NEWS DIGEST AVAILABLE VIA BITNET From **ONLINE@IRISHMVS**

English language news broadcasts from overseas, monitored via shortwave radio in South Bend, Indiana, are accessible in digest form to all interested parties through electronic mail. The digest, JBH Online, is produced weekday mornings by John Harlan. JBH Online is distributed free of charge to recipients at academic institutions nationally and internationally via BITNET.

The British Broadcasting Corporation, Radio Moscow and Radio Nederland are the three services John monitors most regularly. Others monitored less frequently include Radio Australia, Radio Beijing, Radio Canada, Radio Havana, Radio Prague, and Radio Tirana.

A number of factors, including atmospheric conditions and nearby electrical activity, influence which services can be monitored on any given day.

For more information, or to be added to the JBH Online distribution list, contact Online@IrishMVS.

Editor's Note: What an incredible tool for history, civics, current affairs teachers. Should any of our readers use the JBH Online for instructional purposes please let the Journal know.

ITEM #7

COMPUTERS IN DISTANCE EDUCATION

By Soren Berglund, Univ. of Umea, Sweden
SBLUND@SEUMDC51

Computers in distance education - can they improve anything? Everybody talks about computers and their opportunities. What does computers mean for a distant student in a small village in northern Sweden? Lets compare the possible use of computers with some other, traditional ways to use educational techniques in distance education.

The Computer as Typewriter

The most popular application is word processing. The flexibility it offers in text preparation over typewriters leads to higher quality student papers, as students are allowed to concentrate on what's in their papers rather than on the mechanics of text preparation. In the distance project at the university, the students will use the computer as a word processor in nearly every course module.

The Computer as a Mailbox and Telephone

The computer can not replace the telephone or the expressive lecture, but it is a valuable complement to the traditional ways of communicating. In distance education projects, we use electronic mail as a communication link between students and teachers. By using a central computer in Umea as a storage for electronic mail, everybody can reach each other.

For example, a student can "email" a teacher to ask for guidance about a text that needs further explanation. Student questions are stored in the computer's memory until the teacher checks his or her "email." Teacher replies are quick via the electronic mail system.

The major advantages with this way of communicating are that those involved do not have to rely on special telephone schedules, they never receive a busy signal, and teachers can answer the questions when s/he has

time for it.

There are no time schedules- the electronic mail system is open 24 hours a day! You can also put the question and answers in a computer conference where all students in the course participate. A question directed to the teacher is visible to all students, as is the answer. This can be compared with a question and answer in the lecture room experience.

Of course, conferencing also allows users to send non-group, private messages too. With the conference system, it is possible to "talk" to students at the same local study center by computer conferences only accessible for these students. It is also possible with the same method to arrange group work between students in different centers.

The Computer as an Educational Resource

The computer has brought a new dimension into education in a number of ways. The computer is very good at searching for things in data bases.

For example, industrial statistics for the region on ongoing research projects in different areas are available online from student study centers.

Another powerful way is to use the computer is as a simulator to conduct different experiments that can not be done in reality, because it would take too much time or cost too much money. For instance, it is possible to simulate a company and its progress over time. How well a company does depends on the decisions made regarding production, research and development, marketing and so on. Simulating these aspects allows the student to the see the effects that different measures have on the company. To do this in reality in a simple way is not possible, and it would take too long time to do all calculations by hand.

There are other applications to which the computer is well suited. For example, drill and practice in language learning can be effective. The computer asks the meaning of a word, the student answers, and the computer tells the student if s/he is right or wrong.

And there are a number of uses for application software like general ledgers, spread sheets and graphics. The list of different possibilities for using the computer in distance education can be very long. The computer is only one of several other tools and is not the best tool for all situations. The book is a better "monitor" than the computer and sometimes a video or a cassette is a better choice. Therefore, an important part of our work is to find the right tools for the distance student and the curriculum. The use of techniques must have a focus on quality iimprovement.

What Have We Done So Far?

We have established communication to our local study centers through Datex-lines, a form of leased communication lines that are active only when they are in use. When there is no traffic on the line, it switches down.

We use multiplexors on the 4800 bps lines with up to 8 terminals at the same time, on the same statistical Mux. One multiplexed line always has a modem that can be dialed. This is used by the students to reduce their communication costs and by the university for maintenance. The students use the communication for electronic mail and other resources at the university, like data bases, library services, and special computer

programs.

We are developing computer programs for the institutes. Some examples:

- We have written a simulator for the institute of economic history. The program holds a data base with demographic data and the students can test hypothesis on the data base.
- We have made an authoring program in HyperCard for the Institute of French. The program uses geographical maps.
- A student group, learning communication methodology, is using portable computers for writing and communicating. Every student has a computer at home. We compare the group with another group in another center that do not have access to computers.

As our project continues, we will keep the readership posted. In the meantime, all input is welcome.

From: Soren Berglund
University of Umea

Computer Science
S-901 87 Umea
SBLUND@SEUMDC51

ITEM #8

DISTANCE Editorial: The Implications of Distance Education
By the Editor

THE IMPLICATIONS OF DISTANCE EDUCATION

The shift from centralized to decentralized student body has profound ramifications, affecting many of the principle variables of the traditional education formula. What follows is a brief look at some of these variables and how they can be expected to change within the distance education arena.

STUDENT POPULATION BASE: School becomes a circle of influence whose center is everywhere and whose circumference is nowhere. The 'School Without Walls' (known in electronic circles as 'the virtual school') becomes a reality in larger than life terms. Each student stands at the center of his or her learning network, no matter where they are physically located.

The potential student body is immense. 'School' is limited primarily by the level of interaction needed to maintain quality delivery and the physical limitations of the transmission media, such as satellite footprints, cable routes, phone system, etc., most of which are vast.

For example, electronic mail allows students and teachers to exchange near-instantaneous computer communication using the world-wide telephone network.

On one electronic mail service called BITNET, an MIT professor advertised a course in relativity physics. Because BITNET is available in universities all over the U.S., and because it is also plugged into a number of other national and continent-wide networks around the world, the potential student body includes North America, Europe, England, Australia, and portions of Asia, Central and South America.

One of the latest and most comprehensive distance education institutions, The Commonwealth of Learning, seeks to make all distance education resources among the nations of the commonwealth accessible to all of its members. The potential course offering from such an institution is staggering.

FINANCING: Tax base is no longer the determining factor regarding what 'a school' can afford to offer. Such large student audiences reduce the service per individual cost dramatically. For better or worse, mass audiences will turn education into big business. This encourages the development of different flavors of mediated instruction with specific foci. We should expect more educational television channels, videotext and video services with specific philosophies; everything from christian fundamentalist programming with evolution-free science courses to science course work developed by anti-development environmentalists. In a word, we should expect 'personalized' education.

CONTROL: The amount of control students exert over their education can be greatly increased. The vastness of the educational networks are balanced by the fact that technological teachers can be turned off at any time.

The industrial age's counterpart, getting up and walking out of a class, was virtually unheard of. Where a student does not like a particular teacher or learning dynamic, he or she can turn to a number of electronic options to meet the same or similar needs.

Some school boards would meet online.

ORGANIZATIONAL STRUCTURE: As the industrial age heated up, factory owners realized that they needed a work force capable of inordinate amounts of 'sameness,' consisting of people who would show up at work at the same time on the same days and perform the same tasks in the same way, over and over. Public education was created to meet this need, training children in the spirit of this 'sameness.'

In contrast, information age students will find themselves learning in different environments at different times at different paces, all of which conspires to promote individuality and undermine the power structure upon which the industrial age was founded.

THE MEDIA: Behind the drive to mass produce education, is a fascination with media that is evolving faster than our ability to harness it or understand its moral implications. Whether we survive as a planet will be determined by whether we dominate our technology or the other way around.

In the past, regular education as well as correspondence study have relied heavily on print. But due to the overwhelming presence of TV's, cassette players, VCRs and computers in the home, lessons can arrive in a number ways. Video and audio cassettes delivered by mail are cheap and effective. More elaborate and expensive but enriched by visuals and/or interactivity are lessons delivered via cable TV, satellite broadcast or audio conference. Off hours communications between teacher and student can be maintained by electronic mail, FAX machines (allowing photocopying at a distance) and the phone system.

Laser disks, containing the equivalent of many encyclopedias of information, can be parked inconspicuously in the the home and come with interactive interfaces which step students through lessons, branching for remediation when mistakes are made and advancing to the next level of difficulty when the material is mastered.

And, for better or worse, this is just the beginning.

ITEM#9

APPENDIX- ABOUT THE JOURNAL

by the editor

WHAT IS THE ONLINE JOURNAL OF DISTANCE EDUCATION AND COMMUNICATION ?

[What follows is an excerpt from the first issue of the Journal.

Feel free to send suggestions to the editor.]

This first issue will be primarily concerned with the Journal itself. Once we provide an idea of the Journal's identity and direction, we hope you will contribute to this rapidly growing field of education and communication.

THE MEDIUM

We want short contributions, 4 screens maximum. Rather than trying to compete with a paper-based magazine which does a much better job of presenting long articles, we want contributions that present overview information. Based upon information gleaned in contributions, readers can directly contact the author for more details.

THE MESSAGE

The issues that the Journal is concerned with fall into

four basic content areas:

1. Content Area #1- Distance Education

   The Journal is interested in distance education as the organized method of reaching geographically disadvantaged learners, whether K-12, post secondary, or general enrichment students. Areas of interest include:

   - delivery technologies
   - pedagogy
   - cross cultural issues implicit in wide area education delivery
   - distance education projects that you are involved with
   - announcements, workshops, or programs of study
   - anything else regarding the theory and practice of distance education.

2. Content Area #2- Distance Communications

   The Journal recognizes that education encompasses a broad area of experience and that distance

education includes distance communications that fall outside the domain of formal learning.

The Journal welcomes contributions that deal with serving people at a distance who aren't necessarily associated with a learning institution. The Journal welcomes information about, for examples:

- public radio and television efforts to promote cultural awareness
- governmental efforts to inform a distant public about social issues
- or the many training programs run by private business to upgrade employee skills.

3. Content Area #3- Telecommunications in Education

   Once the distance education infrastructure is solidly in place, local learners will want to tap into it, because they simply prefer learning in a decentralized setting or because they want to expand their learning opportunities and resources beyond those immediately available to them. This phenomenon, which we call 'bringing distance education home,' will grow in the coming years and we look forward to hearing from people about telecommunications in education, as a tool or a content area.

4. Content Area #4- Cross Cultural Communication Efforts

   Particularly Between the US and the USSR

   The Journal is interested in projects concerned with overcoming cultural barriers through the use of electronic communication. The Journal particularly looks forward to contributions concerning:

   - efforts to improve electronic communication between the USSR and the US
   - international electronic conferences
   - cultural domination through the inappropriate use of media
   - the use of telecommunications to promote understanding of the human condition.

To subscribe to The Online Journal of Distance Education and Communication, send the following command to LISTSERV@UWAVM:

SUB DISTED your_full_name

All contributions should be sent to JADIST@ALASKA

Any other questions about DISTED can be sent to: Jason B. Ohler, Editor: JFJBO@ALASKA

or

Paul J. Coffin: JXPJC@ALASKA

Disclaimer: The above were the opinions of the individual contributors and in no way reflect the views of the

University of Alaska.

End of the Online Journal of Distance Education & Communication