The Knowledge Network Audio-Plus Teleconferencing Project

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The Knowledge Network, British Columbia's educational telecommunications authority, in cooperation with post-secondary educational institutions in the province, has commenced a project to explore the distance education potential of three audio-plus teleconferencing technologies. These are the *Optel Telewriter II PC*, *Telesketch*, and *Colorado Video Slo-scan*.

In June 1986, post-secondary educational institutions in the province were invited to attend demonstrations of these three new innovations. These technologies were selected because they represented different interactive multipoint communication capabilities and each can be connected by telephone lines to the Knowledge Network's 20-port Darome teleconferencing bridge.

Five institutions who attended the demonstrations indicated that they were willing to commit time and resources to hands-on trials of the audio-plus technologies. Each institution was asked to identify an application of one of the new technologies which would enhance an existing distance education course.

The University of Victoria, the British Columbia Institute of Technology, and the University of British Columbia selected the *Optel Telewriter II PC* for courses in Computer-Based Information Systems and Business Administration and for administrative uses in Health Sciences. The *Optel Telewriter II PC* is a communication system based on the IBM personal computer. It features simultaneous, interactive voice and data and uses a single telephone line. The unit is capable of using standard IBM software packages to create pages which can be sent simultaneously to multiple sites. Interaction through voice and annotation is made possible by using a graphics tablet, keyboard, and speaker phone attachment.

The Open Learning Institute identified applications for *Telesketch* in Drafting and Electronics courses. *Telesketch* is a self-contained voice/graphics unit. Materials prepared in advance can be stored internally or in a mainframe and commands are activated from the monitor using a light pen. Text, drawings, and voice all can be sent to multiple sites using a single telephone line.

Emily Carr College of Art and Design and the British-Columbia Institute of Technology will use the Knowledge Network's vertical blanking interval to test the *Colorado Video Slo-scan* system for courses in Art, History, and Dietetics, respectively. Slo-scan is a freeze-frame video transmission system which can use either a telephone line or the vertical interval of a broadcast signal to send images to multiple sites. The sending site requires an encoder, while receiving sites

require decoders. A separate phone line can make spoken interaction possible. A frame storer can be used to provide random access capability for images which have been prepared and stored in advance.

A Knowledge Network steering committee and project team will coordinate and evaluate the trials. Results of the evaluation will be used by participating institutions, and eventually the Open Learning Authority of British Columbia, for two purposes. One is to determine the appropriate applications of each narrow band technology; the other is to ascertain the degree of commitment to these technologies that is held by post-secondary educational institutions in the province. Data concerning ease of use, degree of user satisfaction, fulfillment of instructional objectives, perceived advantages and limitations of the technology with respect to the particular application, and suggestions for further applications will be collected from institutional coordinators, instructors, and participants.

The Audio-Plus Teleconferencing Project has run from October 1986 to April 1987. Initially, instructors were trained on their selected audio-plus technology and meetings brought instructors and institutional coordinators together to share information on the progress of each application. During the February implementation period, Knowledge Network staff were sent to test locations to train site coordinators and students on the use of the technology before each trial session. A video produced by the Knowledge Network will document the entire project. The evaluation should be complete by Spring 1987 and results should be available by Summer 1987. Copies of the video tape and the evaluation results will be available upon request.

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