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ABSTRACT

ATS-F will be used by the Alaskan library community to develop a knowledge base for the library function of information delivery utilizing satellite technology. The experiment comprises three segments: (1) a weekly 15-minute participatory audio-video unit aimed at school children; (2) a weekly half-hour audio-video unit aimed at a variety of adult audiences; and (3) a daily, one-hour audio unit aimed at information aides and library personnel within the tripartite Regional Library Network. The program for school children will utilize library resources and materials supporting "Man: A Course of Study" and the audio-video potential of ATS-F to reinforce information gathering and research skills. Two broad objectives form the basis for the Library Information Network experiment: to utilize satellite communications to investigate the possibilities of expanding traditional library operations, and to explore nontraditional library/ information center operations and their application to satellite technology. The experiment is planned for September 1974 through August 1975. A list of job descriptions for key personnel is included, plus a budget for both the developmental and operational phases. (Author/KKC)

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LIBRARY INFORMATION NETWORK EXPERIMENT

WITH ATS-F SATELLITE TELECOMMUNICATIONS

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ABSTRACT

ATS-F will be used by the Alaskan library community to develop a knowledge base for the library function of information delivery utilizing satellite technology. The experiment comprises three segments: 1) a weekly 15 minute paticipatory audio-video unit aimed at school children; 2) a weekly half-hour audio-video unit aimed at a variety of adult audiences; and 3) a daily, one-hour audio unit aimed at information aides and library personnel within the tripartate Regional Library Network.

The program for school children will utilize library resources and materials supporting MAN: A COURSE OF STUDY and the audio-video potential of ATS-F to reinforce information gathering and research skills. In a learning experience parallel with the classroom, children will produce silent video tapes. Some of these tapes will be selected for broadcast with the children who made them leading a simultaneous discussion with other sites. Each of the broadcasts and discussions will be taped, and returned as circulating items of the Regional Library Network. By this experiment the library profession can explore both the delivery and generation of non-print information artifacts.

The programs aimed at the adult audiences will provide a tele-access system for information delivery by showcasing library print and non-print materials and by offering opportunities to interact in a cooperative information interchange with human resource personnel. Unusual library materials, art, prints, sculpture, audio cassettes, films, and video cassettes showcased may be

directly requested by the viewers through the audio feedback provisions of the experimental system.

The programs for information aides and library personnel will allow daily participation in an audio and telefacsimile information exchange. This will provide the now non-existent opportunity for statewide conferencing, for standardization of statistics, policies, and procedures, and for training of a web of community information aides to link individuals with information needs in the villages with thoses resources which can fill those needs.

BACKGROUND

The concept of the assemblage of information at a specific point has characterized libraries since Alexandrian times. The then contemporary technology was represented by astrolabes, tablets, scrolls, and books. Scholars both used and produced information. Medieval libraries were characterized by not only chained books, but by the production and reproduction of manuscripts. Today's information center-library, to utilize today's technology, must un-bind itself from solely books. The capture by print of ideas as the single mode of information delivery has delayed library development. Furthermore, somewhere in the focus on the storage of information forms, the library has lost the operation it once had of information generation.

Man in the twentieth century must know. The resources for knowing are unfamiliar to rural Alaskans. Even print forms are not generally available, nor are they part of a traditional learning pattern, which for non-literate people is largely through participatory interaction with peers. Song, story-telling, dance, and

art are other non-print forms of information delivery that the native cultures use. This tradition of visual and aural public communication exists in our culture through programs, film, video, and other multi-media forms.

Twentieth century technology offers to the library profession an opportunity to function dynamically and generatively rather than passively and as curator. As the telephone and typewriter, commonly accepted tools of library technology, have permitted expansion of traditional library operations, so can satellite technology, expand the traditional operations. But with satellite telecommunications, libraries can once again foster information generation, by user participation within the communications nexus, and then will reflect more correctly the learning patterns familiar to Alaskan natives. Rural Alaskans must learn to live in the twentieth century. Through satellite technology, libraries may provide the necessary information.

OBJECTIVES

Two broad objectives form the basis for the Library Information Network experiment. One is to utilize satellite communications to investigate the possibilites of expanding traditional library operations such as:

Collection development, means of bibliographic control, creating and updating union list for both print and non-print materials;

Patterns of information distribution and retrieval by direct acess, interlibrary and network loan, and information referral;

The development of policy, personnel training, standardization of statistics, user needs assessment, user practice assessment, and review of budgetary services;

The education role of libraries from early childhood to a college without campus; and the coordinative role of the library functioning as a clearinghouse for multi-agency functions.

These are all present functions of the twentieth century library. Through satellite communications we can study these functions on a scale which would not be possible by any other means in our area.

We hope to determine if satellite telecommunications would expand the library function of information delivery to non-traditional users--rural Alaskans. By experimental expansion, through a satellite network, we hope to learn more about the possible functions of library-information-media centers.

Furthermore this experiment allows us to explore library reinforcement of information gathering and research skills and curriculum support in a crossfertilizing learning experience of student participation in generating information and its distribution.

The second, and potentially more exciting objective is the exploration of non-traditional library-information center operations and their application to satellite technology. Such operations would include the development of outreach programs geared to the traditional library non-user; the development of a mode of information delivery through communications and experience, i.e. by providing the technological experience, the viewer-user may receive information while generating it; nad telefacsimile used for immediate transfer of print materials essential to standardization of forms, statistics, and policies.

Though this experiment information can be gathered about the development of a tele-access system where the viewer-user has the opportunity to receive information through the experience of participative information generation and exchange.

Finally we hope to obtain a knowledge base for the development of a statewide Library Information Network linked through satellite telecommunications. Such a pattern may serve as a technological template for the development of other statewide and national regional systems.

Because neither of the above objectives is physically possible through conventional modes of information exchange given the vast distances between low-population centers, satellite telecommunication offers the only medium for the potential achievement of improved and innovative library services.

DESCRIPTION OF EXPERIMENT

Library Program for Children

The Library Program for Children will consist of weekly, 15 minute silent video tape broadcasts from a single video site to all sites. Simultaneously with the video broadcast will be the audio capacity for all sites to transmit and receive.

School children using library resources and materials supportive to MAN: A COURSE OF STUDIES will, as viewer-users, utilize the audio-video potential of ATS-F to reinforce information-gathering and research skills. The professionals librarians will provide supplementary materials supportive to the theory base of MAN A COURSE OF STUDIES through the tele-access system. The students will produce silent video tapes of village life under the direction and editing of the experiment's technical staff. When one of these tapes is broadcast, the student viewer-users who made it will lead in a simultaneous discussion between other sites. This then becomes an extending and personalizing adjunct to the MAN: A COURSE OF STUDY

theory base taking the students from the classroom to their physical environment.

Each of the broadcasts and discussions will be taped, these tapes becoming circulating items of the Regional Library Network. By this experiment the library profession can explore both the delivery and generation of non-print information artifacts. Participants will be: school children, classroom teachers, Community Information Aides, school librarians, Regional Library Systems and Experiment staff.

Library Program for Adults

The library program for Adults will consist of weekly, half-hour audio-video programs. Formats will vary in this unit of air time for various audiences.

One format will be a long-distance opportunity for cooperative information(LOCI) and will consist of multi-directional discussion lead by outreach librarians and community information aides from a video site with guest resource people. Programs will make known information available about services, agencies, procedures, and contact people from the full range of organizations which affect Alaska village life, ie. ASHA, BIA, Alaskan Native Health Services. native organizations and corporations, nutrition aides. Office of the Aging, ACTION, etc., through agency presentation and viewer-user participation. Programs will also demonstrate techniques of skilled craftsmen in such high priority interest areas as snowmobile repair, construction techiques, hide preparation, beadwork, etc.

Another format will use not only a video and audio broadcast channel, but three separate audio channels for feedback. This will be a video and audio taped showcase of a total assemblage of information resources around a subject pertinent and of interest to the viewer-users. These materials will include, for example, on Indian culture: books, periodicals, records, museum reproductions, realia, slide programs, filmstrips, film, as well as individuals who might function as resources.

When these tapes are transmitted, requests for the materials shown will be taken from the viewer users on audio channels. The regional resource tele-information center will mail or telefacsimile requested materials to the local information centers for the viewer-users. To further expand the possibilities of this tele-access system, the viewer-users will also have print-out catalogs of media materials and paperback books available in the region. Utilizing the audio channels of the satellite, the viewer-users may request by catalog number items that they need.

For the Library Program for Adults, the following materials will be used: video tapes, films, filmstrip and slide packages, art prints, books, periodicals, records and cassettes. People will be used in this program as an information resource. Brochures and leaflets from participating organizations will be made available.

The location of the sites for this program will be located in the community information centers, or libraries.

Library Program for Information Aides and Library Personnel

The Library Program for Information Aides and Library Personnel will consist of daily, one-hour trasmissions on audio channels using live audio interchange and telefacsimile. Major areas for discussion

will be the following: services exchange, career training, and statewide planning and standardization.

Services Exchange will be a one hour, live audio interchange between participating sites. The rapid development of a statewide information delivery system can be produced through the opportunity for shared information on: collection development, i.e.. acquisition, sources, titles, accession procedures, and the complation of union lists for media, serials, monographs and special collections; technical wervices operations, biblographic searching and bibliographic control; public services operation, a standardization of statistics and procedures, borrowing practices and policies, inter-library loan and access techniques, information-referral inquiries; clearing house for multiagency functions and outreach practices; and such management aids as user practices assessment, budgetary guidelines, personnel practices, policy development, and interagency cooperation.

Career Training will be a one-hour weekly library interchange to develop a state program for the ongoing in-service training of librarians and for the development of a state-wide community information aide program as has been demonstrated at the Fairbanks North Star Borough on a borough acale. Workshops will be the basis upon which a career leadership program will be structured. Methods of training will include existing technology for information exchange, regional statewide services available to communities, library management, techniques for community interaction, and methods for conducting NEEDS assessments.

Statewide Planning and Standardization will be a one hour audio interchange of members of library planning bodies. Statewide library planning is hampered presently because of inability (geographical and fiscal) of planning bodies to meet frequently. Local and regional boards and committees with members scattered throughout the state could interchange information on plans, objectives, policies of national interest by satellite communications. The Governor's Advisory Council on Libraries and the Alaska Library Association Personnel Committee, Conference Planning Committee and Long-Range Planning Committee could avail themselves of this opportunity, as well as Library Commissioners and Board members, public librarians, school librarians, university and community college librarians and media specialists.

The participants in this program will be information aides and library personnel within the tripartate Regional Network.

Support material for this program will be utilization software developed at regional library distributed by telefacsimile.

The sites for this audio program will be information centers and libraries.

EVALUATION

Library Program for Children. The evaluation of this program would consist of degree and extent of participation, the use of pre-and post-tests to discover the increase in technical vocabulary, communication of language skills and visual literacy of viewers-user

in the target age group, and the number of tapes developed for library circulation.

The existence of the Anchorage School System's utilization of the MAN: A COURSE OF STUDY syllabus may function as a urban control group which functions without the variable of the satellite telecommunications.

Library Program for Adults. Functioning as control for this experiment will be the records developed by the ATS-1 Library Program, "What do you Want to Know," selecting an equal amount of broadcast time and length of experiment duration.

Statewide existing user studies will serve as a base for the comparison of who is using library services: age, sex and educational level, what is being used, type of material, type of service, type of programs, and indicating the areas of unmet needs.

The extent of interaction between the viewer-users and participants at the video initiating sites will create an opportunity to evaluate the usefulness of a cooperative information interchange via satellite technology.

Statistical analysis will indicate the extent of use of telecommunications.

By recording requests, by tele-access, indicating: number of requests, types of materials requested, sites initiating requests, frequency of sites initiating requests, sex, age, education level of requestor, counting the number of interacting agencies, their representatives, and viewer-user participation, nad by preparing statistical records of information requests and interagency referrals, a knowledge base will be obtained for the development of a statewide Library Information Network linked through satellite

telecommunications.

Library Program for Information Aides and Library Personnel. Measurement of the frequency of use of the programs by planning groups, library personnel, and information aides. There will also be direct evaluation of the efficiency of satellite conferencing and training. Tests will be administered to all training groups. By investigating the accelerated development of library collections bibliographic access and delivery techniques, the statewide Alaska library community will evaluate the effect that satellite technology as a template may have in the rate and shape of the development of a social service institution. To measure this development toward regionalization, and library growth in materials and services, the state annual report on libraries and the AKLA update of its regional directory will supply pre- and post-statistics. The control will be the nine-month block (September 1971-July 1972).

TERMINATION OF EXPERIMENT

Following the experiment all of the above projects will be terminated until additional satellite time is available. The standard methods of providing services will be resumed (i.e., mail service, telex system, consulting visits to communities, etc.). Quantitative information requests, referrals, materials used, and individuals' and agencies' participation can be measured. Qualitative impact of such information and information exchange, expansion of human scope, lives opened to new horizons, would require subjective analysis and report system based on value judgment, moods and metaphor. Pherhaps through the development of participatory software, an indication of effectiveness may be determined.

TIME FRAME

The experiment commences the first week of September 1974 and will continue until August 1975. Through experience with ATS--1, it has been demonstrated that regularly scheduled consistency is essential for optimum efficiency. Therefore, the weekly calendar as designed during the development phase will be the pattern for the duration of the operational phase.

DEVELOPMENTAL AND OPERATIONAL ACTIVITIES

Developmental Phase -- Broad Outline of Activities

Recruitment of Staff
Establishment of Offices
Experimental Design Process
Review/Redesign
Specialized Interface Design
Agency and Community contacts/conferences/commitments
Agency review/design/redesign
Commence ordering of experimental software
Commence ordering materials and production hardware
Commence training design
Commence interface construction
Commence promotion tools
Complete recruitment
Project program schedules
Production of software
Develop Test Programs
Review hardware and software function capacity and interface with satellite system

Operational Phase -- Broad Outline of Activities

Commence on-site video taping
Commence broadcasting
Begin compilation of weekly and monthly statistics
Review technical proglems and report to engineers
Intensify public relations awareness
Step up production of utilization software modifications and redisign of program
Flow chart distribution procedures
Commence distribution of teleacess requests
Disseminate evaluation forms
Expend budget
Schedule modifications as to stated participant needs
Prepare final report based on collected data
Distribute final evaluating report to participating agencies and legal entities

PERSONNEL CHART

Developmental Phase Personnel. Because the Library ATS-F experiment is a complex, each program demonstrating differing possibilities of utilization of audio, video, live and taped programming, the maximum planning time in the developmental phase is scheduled -- January 1973 to commencement of program.

Personnel for the developmental phase will be identical to those listed in the operational phase, as they will assist in early planning and organization. Personnel essential for early developmental phase will be:

Experiment Director
Media Production Specialist
Outreach Librarian
Secretary/Clerk

As the developmental phase matures, the Media Technician and the Informational Systems Technician will be sought.

Operational Phase Personnel. The full organization table will be employed.

Job Descriptions

Experiment Director-Agency Systems Coordinator will be responsible during the development phase for preliminary planning, agency contacts, the organization, and development for the operational phase of the experiment. The position requires a professional library background with solid knowledge of standard library operations and procedures.

Media Production Specialist will do camera work, audio and video editing, graphic production, equipment control and maintenance and monitoring and recording all programs.

Information Systems Technician will be responsible for contacts with participating agencies, development of user surveys, materials inventories, training designs, and the teleaccess system.

Outreach Librarian will be responsible for the development of the program components. Outreach responsibilities of this position include recruitment and development of individuals and agencies for active viewer-user participation, for the development of information referral systems for interagency activities, and the exchange of software produced during developmental stage.

Secretary/Clerk will handle all correspondence for professional staff, maintain files, appointment calendar and program schedules and assist in the development of promotional aids and the compilation of statistical data relating to evaluation.

BUDGET FOR DEVELOPMENTAL PHASE--Computed for 1½ years

Personnel			
Experiment Director	(16,400)	24,600	
Media Production Specialist	(14,100)	21,150	
Media Technician	(8,875)	13,112	
Outreach Librarian	(14,500)	21,750	
Information Systems Technician	(11,000)	16,500	
Secretary/Clerk	(8,800)	13,200	
Total plus 15 Benefit			126,858
Materials - Production			3,100
Supplies			3,750
Library Materials			5,000
Office Equipment			2,400
Maintenance and Repair			1,000
Facilities--Rent/Utilities			3,900
Telephone In-State			2,250
Insurance			450
Printing and Publicity			1,500
Travel			4,500
per diem (40/day for 40 days)			1,600
Equipment			12,000
Total			168,308

Per Annum salary rates for the positions

Specialized hardware needs: 2 Sony VO-1600, video editing equipment, special effects generator and console, interface between VO-1600 and ATS-F, 2 video cameras compatible with VO-1600 including tripods, etc., cables, junction boxes, and miscellaneous equipment, 2 Sony 21 inch color video monitors, interface (optical pedestal) for 8mm, 16mm, alides, etc.

BUDGET FOR OPERATIONAL PHASE--Computed for 9 months

Personnel plus 15% for benefits	63,429
Materials--Library Demonstration media and print forms	3,000
Supplies--Office production	2,500
Maintenance contract and repair	500
Facilities--rent and utilities	2,600
Telephone in-state	1,200
Insurance	1,200
Printing and Publicity	3,000
Travel per diem (40/day for 40 days)	1,600
Total	79,329

COMBINED OPERATIONAL AND DEVELOPMENTAL PHASE BUDGET TOTALS

Operational Phase	79,329
Developmental Phase	168,308
Total	247,637

SPACE AND UTILITY REQUIREMENTS

The contracting Regional Resources Center will be the headquarters for the experiment director. Alaska Educational Broadcasting Center will contract with the board of the center and the funds and operations for the experiment will be channelled through this headquarters. Rent, utilities and telephone for the space requirements have been budgeted within the contract to the Regional Resource Center. All video transmission facility requirements will be met by the proposed 5 video transmission sites at Juneau, Anchorage, Bethel, Fairbanks and mobile unit.

FEEDBACK ,DATA COLLECTING AND REPORT SCHEDULE

Data from specially designed logs, report forms, charts, statistical and narrative weekly reports will be compiled by the Information System Technician into monthly reports. A quarterly compilation of this data will be distributed to participating sites and legal entities.