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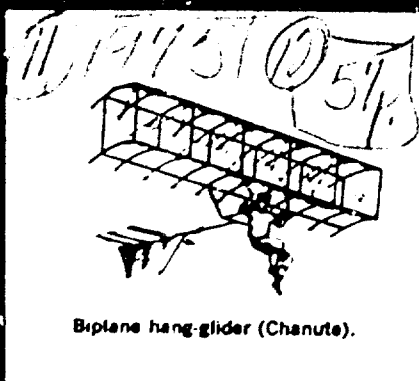
19th

# MILITARY LIBRARIANS WORKSHOP

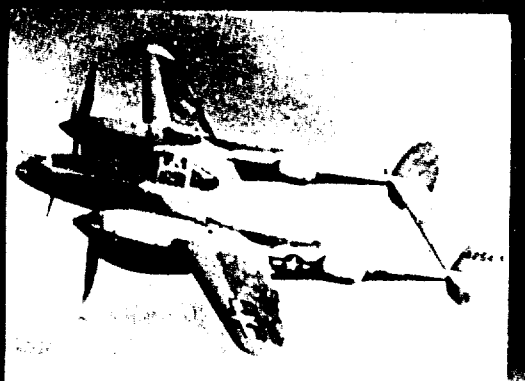
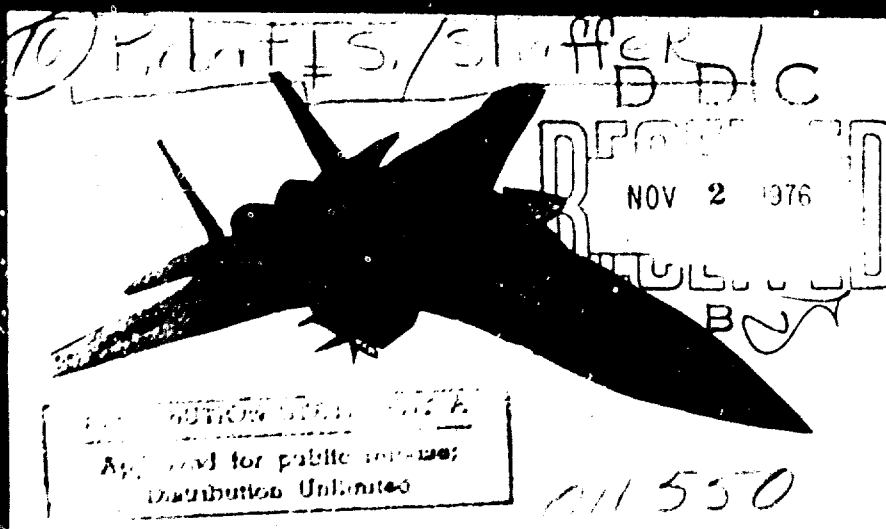
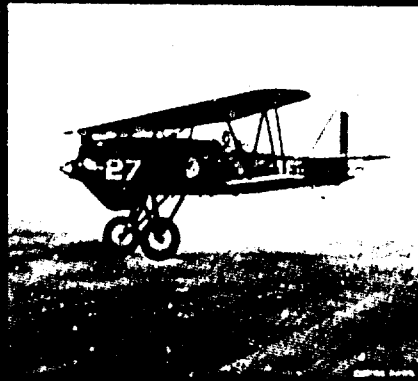
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Intellectual Updating:  
Changes in the State of the Art of  
Librarianship,  
30 September — 2 October 1975



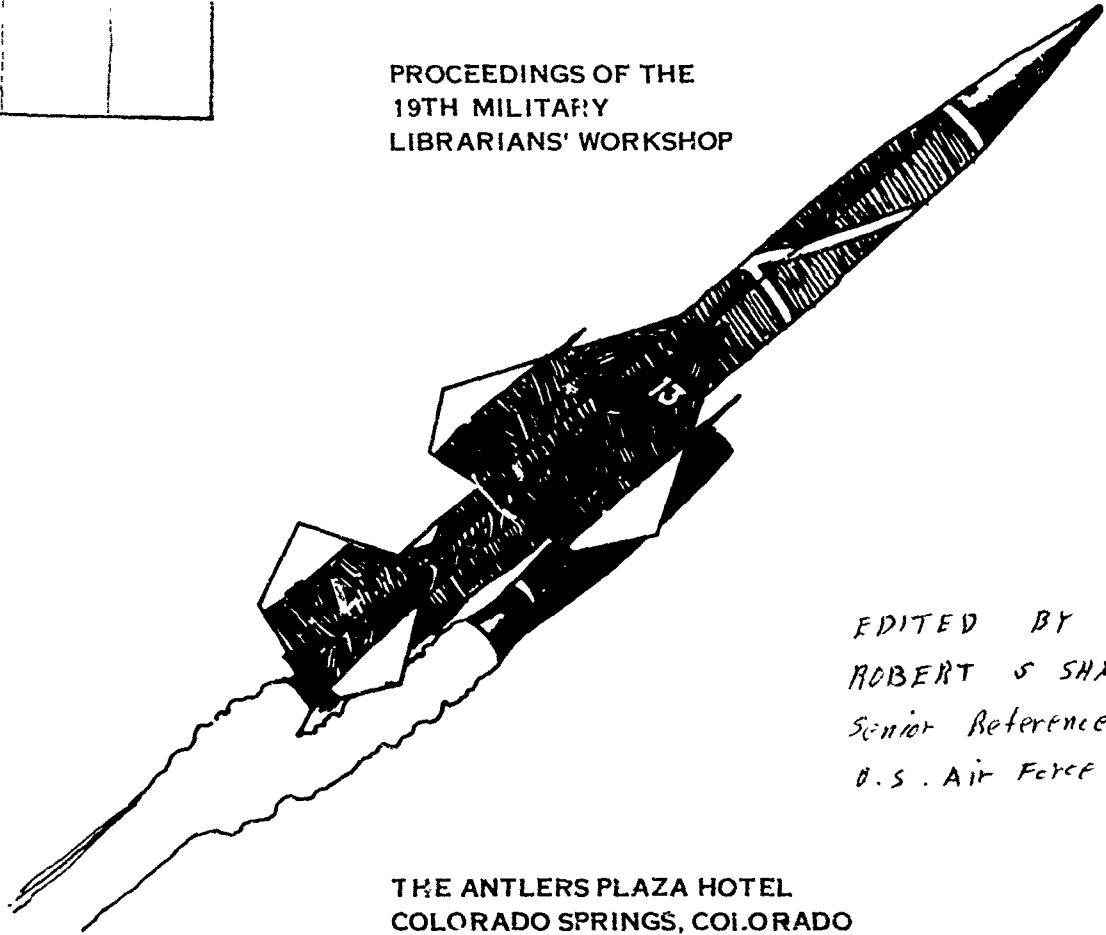
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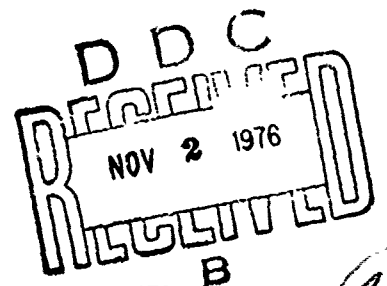
PROCEEDINGS OF THE  
19TH MILITARY  
LIBRARIANS' WORKSHOP



EDITED BY  
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U.S. Air Force Academy

THE ANTLERS PLAZA HOTEL  
COLORADO SPRINGS, COLORADO  
30 SEPTEMBER - 2 OCTOBER 1975

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## Introduction By Lt Colonel Claude Johns

Ladies and gentlemen, it is my pleasure to introduce our distinguished Superintendent. All of you know, as I do, that at our annual conventions we are normally welcomed by a local base commander, never by a major commander. But I want you to know that General Allen asked to greet you this afternoon and to welcome you personally. I could recite his military career for you, but you can read his official biography in the program. What you won't read in his biography, however, is that this gentleman knows libraries. And, he is a great supporter of the Academy Libraries. Thus you know what I mean when I say that I am truly happy to present our Superintendent, Lieutenant General James R. Allen.

## WELCOME

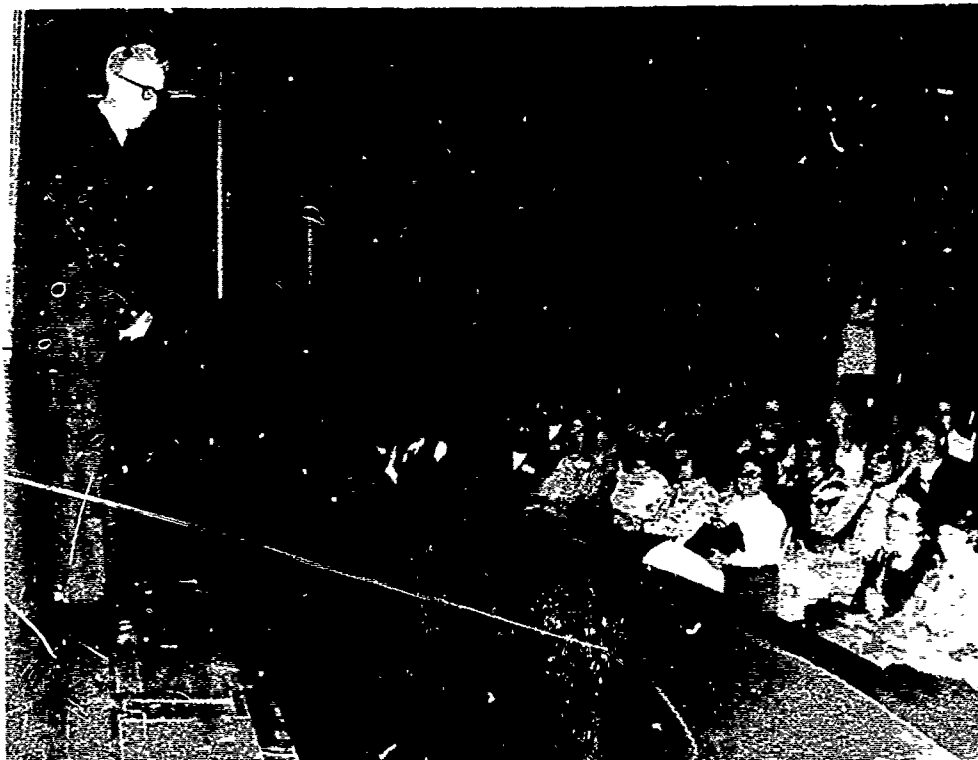
James R. Allen  
Lieutenant General, USAF  
Superintendent, United States Air Force Academy

I'm very delighted to welcome all of you here to the Air Force Academy on behalf of the staff, faculty, 4320 of what we consider the finest young men in America and Claude Johns. We are very enthusiastic about having groups such as yours come to the Academy, for a variety of reasons. We're kind of proud of the place, we're a little bit off the beaten track at least as far as the population centers of the country are concerned, and we go to a great length to encourage as many as we can to come and have a look at the Academy. We're fairly successful in this area. As a matter of fact, this is considered the greatest tourist attraction in the state of Colorado. Estimates run from 1½-2 million visitors a year, many of whom are driving down Interstate 25 and look out to the west and see the chapel sticking up and say "Let's go over and look at the Academy". They come over, and we are delighted to have them.

Of course the American people are paying for this place and we want them to see what they are getting for their money. We also think they're getting their money's worth. The average visitor also leaves a dollar and eighty five cents here and we appreciate that. As a matter of fact, that revenue goes to help support the non-revenue producing inter-collegiate programs that we cannot support. It is a one-hand-washes-the-other type situation.

I would mention, however, that in spite of the very magnificent facilities and the absolutely spectacular scenery that we have here, the best part about the Air Force Academy, is the Cadet Wing which is 4320 young men, plus of course the staff and faculty that are dedicating their lives to educating them. I could go on for 45 minutes or an hour talking about these young men we have here, and I don't think they're really all that unique either. From what I've seen of the other service academies and other colleges and universities around the country, I really think the youth of America are all first class, dedicated, and patriotic as any of us were more years ago than we care to reflect upon. They're a lot smarter than we were, they're so bright it's almost scary, and that kind of ties in with your visit as librarians. They are very young and naive. The average age of the cadet when he arrives here and raises his right hand and takes the oath is 18.3 years. He's just right out of high school, right out of mother and dad's arms, and their mothers and dads have raised them well. We're very proud of what we get for 4 years to work with, to build upon the family environment that they came from. They're just super young men.

This is the 19th Annual Workshop of the Military Librarians, and I also understand that you've met here once before in 1961, and I presume that there are some of you who were



here at that time. I won't ask for a show of hands. Those of you who were here at that time will notice some significant differences. The size of the cadet wing at that time was about 1750. Of course the Academy was really brand new in those days. West Point and Annapolis would say we're still brand new, but the Academy has matured considerably since those days. We've gone through a big expansion program of the facilities and we're in a relatively steady-state situation now in regard to construction, size of student body and so forth.

We will be bringing in young ladies next summer. I was one of those, as many were, who had some reservations about that when it first came up. But, we have gone into our planning in really great depth this year, and everything we thought was going to be a problem we've worked out solutions for, and there's not going to be a problem at all. I want to encourage any of you who have daughters, nieces, or cousins that are 17, 18, 19 years old that might be interested, to ask them to send for a catalog. We think that this is one of the finest male institutions in the country, and starting next year it's going to be one of the finest co-educational.

You will be visiting our library. We're very proud of it. It's expanding rapidly even in the short 13 or 14 months that I've been here. We now have a color-television-cassette capability with which the cadets can check out a cassette and earphones at the desk and go listen to and watch a program at their leisure, and we've got a computer terminal at the library that they can work with.

I guess the thing that we're most proud of is the Gimbel Aeronautical Collection we have in our library and I'm sure Colonel Johns will show you this. As a matter of fact, you can't get out of the library without seeing it. He's worked it that way! But it is helpful and we're very proud of it and it puts us, as far as

aeronautical collections are concerned, among the top in the world I suppose. I just wish that I personally had more time to browse through the many items which are in that collection. It would take years to go through all of the items.

With regard to your visit I'm not about to give you advice on how to be librarians, but as military librarians I know you're experiencing the same thing that everyone else in the military is experiencing. It's the challenge to do an ever expanding job, with ever decreasing resources. And that's kind of typical of all of us in the Department of Defense are probably in the government as a whole these days. We talk about expensive weapons systems and that sort of thing in the Air Force and some of them are pretty expensive, but our greatest expense, of course, is always manpower. So our challenge--your challenge--is to figure out ways to provide greater service with less manpower. I suspect that's one of the subjects you will talk about during these workshops, and if you get any good ideas be sure to pass them on to Claude Johns.

I do want to say how pleased we are to have you here with us, I hope you have a chance to look around to your hearts content and come back to see us again and again. I'll leave you with one thought. "Don't worry about the future of America with the type of young boys that we have here (young ladies starting next year) and at the other service academies, and colleges and universities across the country." There were some wild incidents that happened during the 60s, but that pendulum has swung all the way back and these young people are solid. I tell people, "This is the second best job in the Air Force," and they say, "What's best?" thinking that I'm going to say to be Chief of Staff of the Air Force or something like that, and I say, "To be one of those cadets starting all over!"



## COMMAND BRIEFING

William S. Whipple, Captain, US Air Force  
Chief, Community Relations Branch  
US Air Force Academy

*(Text adapted from script used with illustrated presentation)*

It is my pleasure to have the opportunity to greet you this afternoon. The Academy is a 4-year undergraduate institution established by federal law for the special purpose of providing the United States Air Force with educated and responsible career officers. The primary programs within our 4-year curriculum are academics, leadership and military training, and athletics or physical education. We also provide a religious program, and what you will hear me refer to as the "cadet way of life".

The Academy was founded in 1954 at Lowry Air Force Base in Denver. In August of 1958 the Academy staff and cadet wing moved to this permanent location, and our first class and all subsequent classes graduated from here.

The young man who wishes to become a cadet must first of all meet certain requirements including age, citizenship, health and character as well as make high scores on standardized college entrance examinations. For some selected young men who fall just short of meeting these requirements the Academy operates a preparatory school, which is located about 3 miles south of the main cadet area. It affords an opportunity for a member of the regular or reserve component of the Air Force to undergo an intensive program of instruction in English and mathematics, as well as in military training and physical education. The prep school program is 10 months long. It concludes with entrance examinations, through which prep school graduates are considered for admission to the Academy, along with all other candidates. If selected, they will become members of our new entering class.

Normally, our cadets receive appointments from their congressmen or senators, although there are some other categories through which they may be admitted. In any case, all young

men must meet our very demanding physical and academic entrance requirements.

We're going to speak of three major programs this afternoon.

- The first is our academic program, under the supervision of the Dean of Faculty, Brigadier General William T. Woodyard. This program is conducted through four major divisions: basic sciences, engineering sciences, humanities, and social sciences. Courses from these divisions provide all cadets with a general undergraduate education, with knowledge of professional subjects, and with an opportunity to major in any one of 21 different academic fields. Each cadet is required to complete a sequence of courses known as the core curriculum. This is designed to prepare him for a broad scope of activity in the regular Air Force. The core curriculum therefore is evenly divided between the basic and engineering sciences on the one hand, and the social sciences and humanities on the other.

Each cadet is required to take at least 187 semester hours for graduation. The total Academy curriculum consists of: the academic program with 145½ semester hours, leadership and military training for 27 hours, and physical education and athletics for the final 14½ hours. The cadet must take at least 46½ semester hours in his major subject field, and most of our cadets take more courses than required. Many have graduated with more than 200 semester hour credits. Upon



completion of this program, the cadet will receive a Bachelor of Science degree. He will be commissioned as a Second Lieutenant in the Regular Air Force, and he will have incurred an obligation to serve at least 5 years on active duty.

The Academy and the Air Force guarantee to the top 15 percent of each graduating class that they will be sponsored for graduate education at a civilian institution in a field of their choice sometime between 3 and 8 years after graduation, if they have performed well as Air Force Officers and there is a valid Air Force requirement for the graduate degree program they select. Many of our cadets also compete for graduate scholarships and fellowships. In our 17 graduating classes, we have produced an average of one Rhodes Scholar and one Guggenheim Fellow each year. In fact, this has been growing; for example, last year nine Guggenheim Fellowships were given in the entire country, we received three of these. We feel that this success is a reflection of the quality of the Academy's faculty and curriculum, and more importantly of the cadets themselves.

We maintain a semester long exchange program with the French Air Force Academy at Salon, France. Each fall since August of 1969, a limited number of our cadets and French Air Force Academy cadets have exchanged places and studied at the other's service academy.

Here at the Academy we have a mostly-military faculty composed basically of Air Force officers, with a few selected officers from our sister services and some allied nations. All of our instructors have their master's degree, while about

30 percent have earned doctorates in the subject they teach.

●The second major program we shall discuss is the leadership and military training program. It is under the supervision of the Commandant of Cadets, at present Brigadier General Stanley C. Beck. It provides opportunities for every cadet to practice leadership and the motivation to become a career officer in the Air Force. Senior cadets or first classmen, as we call them, are actually entrusted with the operation of the wing, which is organized with a cadet commander, his staff and subordinate units of groups, squadrons, flights and elements. All of our seniors are cadet officers. They and cadet non-commissioned officers must accept responsibility here and they must make routine day to day decisions. Together, they manage what we call the cadet way of life and command and administer the 4 groups and 40 squadrons which make up our entire cadet wing. The cadet wing commander and four group commanders retain their rank for one full year, while three promotion lists a year provide all other upper classmen a chance to experience similar leadership opportunities.

There are about 100 cadets assigned to each squadron. During the summer months basic cadet training for the incoming freshman class is conducted in an encampment area in the northern region of the Academy grounds. This is the period that our new arrivals make their transition from civilian life to the cadet way of life. Field training experiences teach them the traditional principle that one must learn to follow before he can understand and assume the duties of command.

Since more than 70 percent of

each graduating class enters flying training after leaving the Academy, training in the techniques of survival is a very important phase of the military leadership program. A downed pilot, for instance, must know how to live off the land, to escape and evade the enemy or resist his captors, should he be taken prisoner. For these reasons each of our sophomore cadets receive extensive survival and confidence training in the mountains to the west of the Academy. One feature of this training is a 4 day, 30 mile hike over rugged mountains with limited equipment and food. The program also includes a 15 mile exercise that demonstrates the fundamentals of escape, evasion and resistance training.

The airmanship program here is also under the Commandant of Cadets and it includes among other things jet flight orientation, utilizing the T-37 aircraft, and voluntary courses in air navigation including training flights in the T-43. Both of these programs incidentally are done at Peterson Field near Colorado Springs. A soaring program offers rides for selected cadets and provides them with an opportunity to receive a commercial soaring license, and a parachuting program is available which has for 5 of the past 7 years produced the national intercollegiate champions. One of the most popular features of airmanship training here is our light plane program in the T-41 aircraft. This is our military version of the Cessna 172. All of our senior cadets who are physically qualified for pilot training in the Regular Air Force will enroll in this Academy course. Air Force instructor pilots will administer the 18 hours of this program. Additional flight training is available through the Academy

Aero Club. Cadets can normally fulfill the requirements for a FAA private pilot license before they graduate, if they so desire.

As you can see the philosophy of military training and leadership at the Academy is pretty much learning by active participation. However, classroom instruction in military subjects also takes place during each fall and spring semester. This instruction includes such topics as the organization of the Department of Defense, Air Force, Army, and Navy. Combat operations, command and communications, and solution reporting are also covered. Service life areas such as pay, promotion, honor, ethics, customs and parades are also covered as well as career opportunities.

•The final of the three programs we're going to talk about is the athletic program, managed by the Director of Athletics, Colonel Frank Merritt. It includes physical education, intramural sports, and intercollegiate athletics. In addition to stressing physical development and skills, the athletic program is designed as a laboratory for enhancing cadet leadership training. In the intercollegiate or varsity program, we compete in 18 sports against representative schools from throughout the nation. In intramurals, our 40 squadrons compete against each other, in 16 different sports.

Our facilities for athletics are outstanding, and in addition to the buildings, include 125 acres of land devoted to outdoor athletic fields, an outdoor track, football practice fields, baseball diamonds and tennis courts. Our cadet gymnasium has two swimming pools, basketball courts, squash and handball courts, a boxing and gymnastics room and a host of other special purpose

facilities. Across the street from the gym is a separate field house that includes our intercollegiate basketball and hockey arenas, and a multi-purpose area with our indoor track and enough room to play an indoor football game. Varsity football is played in Falcon Stadium which is about 3 miles southeast of the cadet area and has a seating capacity of approximately 50,000 fans.

Of course, the total Academy program provides the cadet time to relax, be by himself or to enjoy social activities with young ladies from nearby colleges and the surrounding area. In addition, there are more than 60 clubs and other organized activities available to cadets, ranging from photography to skiing which you might guess is one of the largest clubs in this winter sports area.

The Air Force Academy stresses the development of moral values through an extensive but entirely optional religious program through which we hope to achieve an awareness among our cadets of the need for high moral values in their lives and careers. This program also includes numerous discussion groups, speakers, movies, retreats, and banquets, plus of course, daily devotions and formal religious services on the weekends. The cadet chapel is designed to enclose four separate areas that include Protestant and

Catholic chapels, a Jewish synagogue and a multi-purpose meeting room for those cadets who are not members of the three major religions in America.

On another subject, the cadet honor code is a very special feature of the cadet way of life. It is not a complicated set of rules, or a book of regulations as many people think, but one short, essential statement: "We will not lie, steal or cheat, nor tolerate among us anyone who does." To the cadets the code is the standard of conduct in the Air Force following graduation.

This then, is essentially how the Air Force Academy accomplishes its mission—through academics, military leadership, athletics, and through that intangible I mentioned called the benefits of a cadet way of life. We believe that the Academy must motivate the bright young man, from the moment he arrives here, to accept the challenge and to serve a regular 30 year or more career as a professional Air Force officer. We try to encourage qualities of integrity, moral character, and courage.

We also strive to instill in each cadet a knowledge of world history and the great American past, an awareness of his present role in life, and a dedication to duty, honor and country. We believe very firmly that if our cadets graduate from here with these ideals and qualities in mind, the leadership of your Air Force tomorrow will be in most excellent hands.

Thank you.

## COST ANALYSIS AND BUDGETING

Rowenna Weiss Swanson, Professor of  
Library and Information Science, Graduate School of  
Librarianship, University of Denver

*Dr. Swanson, former research specialist, US Patent Office was an administrator for research programs, Air Force Office of Scientific Research in Arlington, Virginia, and is a consultant in documentation and information systems.*

Professor Swanson introduced the intellectual updating aspects of the 19th Military Librarians Workshop by presenting information on what the librarian needs to know in order to do cost analysis, and to prepare and defend a budget. She suggested that even if higher management does not require reporting of the cost of performing the functions under a particular supervisor, each supervisor should, nevertheless, want to know those costs. Knowing them can be a real help in doing an effective job.

Unfortunately, most library practice does not involve the design of data collection to determine the specific items for which cost is incurred. However, the collection of data on actual costs should not be too much of an exercise if one follows regular business practices. In reality, a library is a business and Professor Swanson sees no reason why a library should not be run as a business. More and more, managers who are business-oriented look upon the library as an operation that should be reporting its performance data the same way as any other business unit.

To get control of costs within a person's responsibility area, one needs historical data on how money was spent for particular functions in the past. These data are often used in preparing future budgets, for example. They may help predict costs for changes or improvements projected for an existing operation. For this latter case, simulation may be used to try to get an assessment of what the cost impact might be on future budgets.

Professor Swanson indicated that the cost analysis and budgeting handout she prepared for workshop participants is considerably more detailed than could be discussed in the

time immediately available. It covers the broad subjects of classification of cost concepts, an excerpt on work measurement techniques, and budgets and budgeting.

The distinctions between fixed and variable costs, the tendency of overhead costs (usually considered fixed) to rise, the need to be aware of time periods involved in killing specific items that are no longer absolutely essential to one's operation—these topics, along with many other cost considerations, were analyzed as an aid to both short and long term budget preparation.

Moving along to the various kinds of budgeting processes in use in governmental libraries and information science organizations, Professor Swanson referred to the specific examples printed in the handout. She contrasted traditional *object of expenditure* (line item) budgeting with *performance budgeting* perspectives, pointing out that when the time comes to reduce costs, the librarian-administrator finds himself in a comparatively defenseless situation with an *object of expenditure* budget. Here all costs are aggregated, and higher management takes one look at the high allocation to salaries, and consequently staff is often reduced.

Although the elements of *object of expenditure* budgeting are an essential part of the more sophisticated *performance budgeting* process, the breakdown of elements allocated to different services permit the librarian supervisor to say to higher management, "Here's how we've been spending the money for services. You tell me where you want to cut."

She expressed the explicit hope that before her professional life is through she can see

better cost analysis in libraries. Why? Not only as an aid in planning for improvements to be made as mentioned before, but also in order to permit thorough examination of costs that have been incurred, comparing them with planned costs, thus extensively helping to improve prospective planning for the next budgeting period.

It was mentioned that the Department of the Army is getting ready for a complete study of Army libraries. Professor Swanson asked those attending the workshop to forward to her at the Graduate School of Librarianship, University of Denver 80210, copies of cost analysis and budgeting studies made in their libraries and information agencies.

## AUTOMATION/COMPUTER INITIATIVES AND ADVANCES IN FEDERAL LIBRARIES

Barbara Markuson, Executive Director  
Indiana Cooperative Library Service Authority

*Mrs. Markuson was the first full-time automation staff member at the Library of Congress. Before assuming her present position, she was a private consultant in Washington, D.C.*

In each of the workshop sessions a survey was taken to assess the depth of familiarity of the participants with computers and automated systems. The results indicated a wide awareness of this field of technology which now has been around about twenty years. In one generation it appears that about 100% exposure is obtained at the eyeball level to the equipment involved in a new technology. The technology of the automobile was cited as a similar development. To move an entire field forward is slow—for instance, not everyone learned to drive during the first score of years following the production phase of the automobile.

As far as the technology pertinent to library automation is concerned some of the technical developments that were expected to be well along by now have not come about. However, who would have thought that by 1975 close to one thousand libraries would be doing cataloging in on-line networks? We're just gearing up to automation.

When discussing the possibility of adding automated systems to many libraries, it has been noticed that many librarians seem to base their cost data on very scanty information. This places them in a poor framework to evaluate alternatives. As someone observed—the worst thing that ever happened to librarianship was naming those libraries the Carnegie *free* public libraries. The libraries were not free, it was the *access* that was free. They should have been named Carnegie expensive libraries and thus have gotten the early public accustomed to expecting to pay for services. Automation costs, but with it major problems in processing and bibliographical control are beginning to be solved.

In all planning toward cooperative library service a major handicap has been the lack of attention to standards. Recently reviewing cataloging practices at some 20 libraries it was discovered that almost every local variation was based on *no* documentation of any recognized validity. It was opinion, judgment, somebody's notion—and *it will cost them money*. We will rapidly reach the point where we'll "walk the plank" or whatever it is that happens to people who don't adhere to standards.

It is easy to think that you can't conform to a standard because of the uniqueness of your operation, and it is comfortable to believe that—until you see what the standard is. It is being found that non-adherence to standards costs dearly in training, and in later adjustments to networks. Networks are coming very rapidly for all types of processing whether government documents, tech reports, or monographs. These are all going to be in the networks, and the library that will be penalized is the library that has not standardized its processing.

As far as the technology of bibliographic control is concerned it is pretty well licked. Acquisitions in many libraries is still lagging behind in development, but acquisition procedures will be phased into networks, or there will be locally packaged systems before long.

What must be worked on now is delivery. Every library should have access to the kind of systems that are capable of solving the enormous problems still with us in quality of reference service. Here is where full attention must be placed in the next decade. In doing so, however, whether there are networks or

no networks, user service must always be the responsibility of the local contact.

Circulation is going now into mostly packaged minicomputer systems although some networks are planning to get into circulation later. Networks can provide a framework through which libraries can bind together to become a more powerful group—another way to bring some attention to their needs.

The decade of the development of independent library systems as a major thrust in library automation is almost finished. There will be locally developed systems, it's just that they will not be where the action is. You will not look to the locally developed system for major breakthroughs. There are a number of reasons for this. One is the sophistication required—another the economics. The foundations are supporting networking and cooperation and not individual library automation. Local management has been to find out about cooperatives. It is very much prone to let someone else develop a system, and then bring it in.

Librarians have been remiss in not demanding more promptness in supplying documentation from the people who serve us. In this day and age it's a pretty sad thing when we have to wait so long to get new updates of items such as L.C. subject lists and services from G.P.O. All of us should remember that people respond to pressure, and at times maybe a little push is in order.

Moving on to equipment innovations—the light pen reader for bar code labels is about the size of a regular fountain pen and is the size of a regular fountain pen and is one of the simplest, most reliable input devices available. With its two fiber optic strands, a little infra-red light, and a photo transistor, when the light pen is passed over a bar code label the impulses are converted to digital information which is stored. You've seen these labels almost daily on the packaged goods from your local grocery store.

Light pens are used in circulation systems and have promise in acquisition operations for checking in *books* that were ordered, perhaps eventually *serials*. Maybe the pressure to hurry-up and use these bar code labels will

come from the grocery stores that sell paperback books, and want to use the same technology that they use on packaged groceries. This technology is a possibility for very rapid, low cost identification of bibliographic records and it requires practically no clerical expertise.

The components of a typical telecommunications network, such as those used in OCLC are: a terminal which in most systems installations happens to be a cathode-ray console which looks like your television set with a typewriter, a modem, or data-phone which converts the signal from the terminal into a voice signal that can go over telephone lines and a modem at the other end of the line. This connects to a computer with its data base. The cost model for such an installation is based on monthly rental of the modem, cost and maintenance of the terminal, monthly rental of the modem, cost and maintenance of the terminal, monthly rental of the telephone line, charges for the use of the computer, data-base, and printing.

In some new installations, Computer Output Microfiche or Microfilm (COM) comes from the data base. The output is not on paper, but on a master from which microfiche or microfilm can be made. This is going to be a tremendous breakthrough because of the low cost, and the ease of sending information around. This system is already in use in the Environment Protection Agency which sends its catalog around to all of its department libraries on COM. Purdue University has 30,000 serial titles in its serial data base. Its holdings list is updated monthly, a COM master is produced for about ten dollars, the copies costing \$1.50 each are then sent to all branch libraries. This enables each branch library to have as much information as main on the serials holdings.

There are good readers available with a scale A to Z on them, or subject headings can be used to break the file down something like the drawer labels on a card catalog. Some industries are switching from on line systems back to this kind of system because it does not depend on access to telecommunications, which is more expensive data transmission. Since on line costs are so high, and costs are going down on computer output microfilm,

a small library may be able to have a COM data base on hand in its own library, perhaps edited to its profile. Retrieval could be almost as rapid as on line, and if it's a bad day in the on line system, retrieval might be faster.

At the moment it is not quite clear what is going to happen to the federal library system—whether federal libraries will be in one network, or whether they will join local networks. A great deal of networking depends on the strength of local cooperation, local training, local cost situations, and of course telecommunications.

The Federal Library Committee has sponsored a terminal in GPO where the *Monthly Catalog* is produced, hoping to encourage personnel in that division to put government documents into machine readable format—MARC format. This is a development that should be greatly encouraged as it is a glaring gap in our bibliographic control, and a very expensive gap.

Standards will soon be available for technical reports, books, maps, manuscripts, archival type material, films, phonograph records, serials, AV materials and realia, models, etc. We can then all adopt these standards with confidence, and they can be integrated into a common data base which is really the power of the type of system OCLC represents. This is something of a model of the way the national network will eventually operate. However, the responsibility to implement the standards cannot rest at the national level, it rests at the local level.

Moving on to the mechanics of machine records—in developing any format for an automated system, you do not look at what you start with, you look at what you'd like to end up with. You determine the outputs that you would like to have. The outputs then define the format that you must process. Keep in mind that the computer does not read, you have to identify every field of data for the computer.

The whole community of formats that libraries deal with have been developed under the international standard, the standard communications format that makes it possible to send data over telecommunications lines. Thus some of the characteristics of the format

relate to the characteristics of the telecommunications industry.

An example of a Library of Congress card on MARC format was distributed and each workshop participant was asked to look at the long sheet of paper. Anyone looking at it would conclude that it takes more effort to put a record in machine readable format because so much more must be specified about the record. The payoff is that when you do this, you then can derive almost everything you want to do in the future automatically. With this format, you have tremendous flexibility in getting at units of the data record.

With respect to the selection of people who are going to program the MARC format—your ideal programmer would be someone who has had experience in programming text or variable field data. MARC format is not the simple formatting that you see on your electric bill—the latter is pretty straightforward. MARC is a complex format and programming this format rapidly separates the men from the boys. At times programmers will tell you that this is about the most difficult program they've ever done. They don't know what all of these things are. They have to work very closely with you in understanding this format. Some good programmers write fairly decent book catalogs after about 2 or 3 days of training in MARC, and by then they have something like standard modules that they can put together. They need to have some experience in text processing. You cannot bring your run-of-the-mill programmer in and have them learn MARC programming very readily.

In the beginning, people went into the system to get catalog cards. Now, they are beginning to get more and more interested in the data base, so you will find a growing interest in using the tapes for developing local indexes. There are a number of commercial firms that can take MARC tapes and do almost anything you want with them.

The Department of Transportation Library did not want to do any local programming but they did want an acquisitions list from the tapes. The first thing that they did was get a program free from the Library of Congress



that did them an acquisitions list. Later they found a program that on their particular system did it even faster, which they bought very inexpensively from a vendor of program modules. They paid about seventy-five dollars for the little accessions list package, input a few parameter cards and were running. There was almost no local effort that went into that project.

You may want to try to find a package that will do what you want, rather than dealing with a local programmer who may not even have done your kind of project before.

Learning to input in MARC format is simply learning what the tags are and how to apply them. Thousands of librarians have learned this in the last two or three years. It is different, it is a little more time consuming, but one of the beauties of networks is that once you do it, no one else has to do it again. The amount of data you have to input should be reduced through cooperation. It does take some training and care in learning something that none of us learned who got out of library school more than 10 years ago.

Each participant of the workshop was then asked to assume that he or she is considering going into an on-line computer system. *What points should you consider, what basic common sense questions should you ask the representatives of the network, or the salesman of a system run by a commercial vendor?*

Past experience has indicated that people in this situation fail to get the basic points understood before they get into a system, or they sign a contract which leaves very important points completely unstated. Very often they are surprised when they get the costs after the system is installed, because they never really nailed down all the costs in the first place.

Among the questions that should be asked, and points suggested by and presented to the workshop participants were the following:

1. What data bases does this system actually provide access to?
2. Must the contract be renegotiated if another data base is added to the system?
3. Can we use a terminal that we already have? If not what is unique in yours? What kind of output?

4. Is this system difficult to operate? (What is the level of sophistication required to use the system?)

5. What other users of this system are there nearby? (You will want to contact some of these users, get their telephone numbers, addresses).

6. How does this terminal link up with the particular data base or bases? Where are they located? What is the cost of telecommunication lines?

7. If a distinctive terminal is required, how new is it? Would it soon become obsolete? Who is going to maintain it, how far are they?

8. What time period (in the local time zone) is/are the data base/bases available?

9. What is the time coverage of the data bases? What fields are covered?

10. What training is the network or vendor going to give your people? What level of experience is the trainer going to have?

11. If training is not free, what are the charges? Is the training going to be held at your shop or do you have to send staff somewhere else?

12. What documentation will they provide you so that you can operate the system after the trainer leaves so that you can train new personnel?

13. Are there any restrictions on the use of the system? Can you do searches for other people, or another library without paying more to the network or vendor?

14. If it's one of the larger systems--What is the response time on the terminals? (They're probably not going to want to tell you, but perhaps you can find out by talking to some other customers.)

15. Is the off-line search printing or COM service going to be done on a 24-hour turn-around basis, or what is their delivery schedule on search products?

16. If there is an SDI type component where you send information about your agency, or the divisions of your agency and interest profiles, and/or you have cataloging, and perhaps circulation data--this is all *your* input, your data. You would want to put into the contract that this data is not an asset of

the network or vendor, so that someone else would not latch on to it if the company went bankrupt.

17. Who are some of the competitors? What does the vendor or network see as advantages of this system?

18. Are you required to do a certain number of searches in a specified time period to keep the system "up?" What costs do you incur if you do not use the system?

19. Are there any supplies that must be brought from the network or vendor, such as bar code labels?

20. What is the cost of the terminal? Is there a log-on cost? Do you have to rent a modem? What does it cost?

21. In accessing the data base, is the cost usually by the minute?

22. If there are several different data bases available, each with a different cost structure, what is the minute cost on those that you are likely to use the most? (Be leery of the "average" costs quoted to you.)

23. You want a clause in your contract that everything terminates, your lease—the whole agreement, if the price fluctuates more than a certain amount so that you are not locked in.

24. You may want to break the costs down, and find out which costs the vendor or the network does not control directly so that you have some kind of a notion of the kind of increases that are very likely to be passed on to your library during the specified contractual period.

The above are some of the questions to ask and points to consider before you do your feasibility analysis. It is at this time that you want to find out if what you are considering is cost-effective, or if you can perform the services cheaper manually. Does your library need that computer service? In any information retrieval service you also have to consider if your library has the resources to fill the demand that is created for documents, reports and the like to which the service alerts people.

If you decide to go into a system you, of course, need legal counseling, preferably when you begin to develop plans to go into a system. The Indiana library network has legal counseling for every contract for an outside service, every contract with members—every document of this nature is gone over in several sessions.

It is rather difficult to explain a data base to a lawyer who has never even heard of one. Contracting between libraries bothers lawyers. You know—would you really sue another library? Lawyers can be helpful with penalty clauses, caliber of servicing staff, etc., but you will have to explain in detail data base ownership, important aspects of the systems such as protection of the files, security, what you need back from a vendor who goes bankrupt. Sometimes a contract gives the name of a bank and the officer to contact should a firm fail. If you decide to go into such a contract it would be good to call that officer and find out if he has ever seen any of this purported documentation!

## RECENT COPYRIGHT DEVELOPMENTS AND THEIR IMPACT ON LIBRARIES

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Professor Munch was not available to deliver this scheduled presentation at the Workshop. However, he has provided it for publication in the *Proceedings*.

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At the outset for those of us not intimately familiar with the law of copyrights, it might be well to examine the substance and nature of what the word "copyright" means from the point of view of the law. A copyright is viewed in the United States as a property right and moreover is very similar to a single-sided pancake, because it is a negative property right. The power of the owner of a copyright is the power to enforce in courts of law the prohibition of others from using the copyright without permission. Stated another way the author or owner of a copyright has a protective right to the *exclusive* use of the particular representation.

There are two kinds of copyrights presently existing in the United States. The common law copyright, a right recognized without the necessity of statutory blessing, has existed since our country was founded and is still today a healthy, strong, and widely held property right. It exists in any artistic, creative, or literary representation created by an author, artist, or composer for so long as the actions of the creator do not dedicate the copyright to the public by an act of abandonment or general (unlimited) publication. So long as the common law copyright exists the creator may exhibit or perform his representation of an idea or ideas to limited audiences for limited purposes without losing his property right in the common law copyright. I must emphasize, though, that the

right exists in the particular representation of an idea, but not in the idea itself. The only protection in the United States that protects an idea must be found either in the Federal Patent Law or in the Trade Secret Laws of the fifty states. Furthermore the common law property right attaches to the representation of an idea its use and serves to prevent unauthorized reproduction or "copying" of that representation, but in the event the representation is in a concrete form, such as a painting, manuscript or book, or statue while the right to prohibit copying exists, the common law copyright does not extend to the object itself, and the purchaser of a painting, for example, protected by a common law copyright, owns all property rights in the painting except the right to copy it.

The common law copyright may exist in such mundane things as one's own private letters, photographs, sketches, speeches, limericks, or even parodies of songs. The creator and owner of such a common law copyright may share his creation with his friends or with other limited audiences, and not lose his property right in his creation. Even the public presentation of a play does not abandon the common law copyright of the author, nor would the public performance of a song in which a common law copyright existed abandon the melody. However in recent times it has been held that making



mechanical recordings of a song subject to a common law copyright and then selling the recordings does result to unlimited publication and, therefore, abandonment of the common law copyright.

In recognition of the value to society of the works of inventors and authors, the drafters of the United States Constitution in article I, section 8, clause 8, provided that "the Congress shall have the power. . . to promote the progress of science and useful arts, by securing for limited times to authors and inventors the exclusive right to their respective writings and discoveries." Congress has from time to time provided by statute in the copyright field specific classifications and detailed procedures and remedies available to the owner of a statutory copyright. As I have mentioned earlier the common law copyright exists only so long as the owner of the copyright does not abandon it or lose it by general publication.

For the owner of a copyright to perfect statutory protection under the copyright law of the United States, (Title 17 of the *United States Code*) he must do precisely the opposite of what he would do to protect a common law copyright; that is must publish the work with the Statutory Copyright notice affixed to each copy of his works published or offered for sale in the United States. The form of the statutory notice of copyright must be followed carefully and may consist of either the word "copyright" or the abbreviation Copr. or the symbol, capital "C" with a circle around it accompanied by the name of the copyright proprietor, and if the work is a printed literary, musical, or dramatic work, the year in which copyright was secured by publication. Also, after publication, with copyright notice the creator must then "promptly" deposit two complete copies of the best edition of his published work with the register of copyrights in the Library of Congress.

Assuming the work was entitled a copyright in the first place, once the statutory notice and deposit procedures are followed, the owner of the copyright has secured within the territorial limits of the United States copyright protection for 28 years subject to a

28-year renewal, and may take advantage of the international conventions protecting his copyright in foreign countries.

The variety of remedies available to the owner of a statutory copyright are impressive and available through the Federal District Courts. These remedies include among other things, injunctions against the copier preventing his continued use of the copyrighted material, monetary damages, attorneys fees, and even the remarkable and unusual remedy of having the offending copies seized, impounded, and destroyed. While the latter remedy is not necessarily either the most appealing to the copyright owner or the most rewarding to him, it is still an impressive deterrent to modern pirates in this field. For example, in the recent case of *Duchess Music Corporation v. Stern*, 458 Federal 2nd, 1305, 1972, the defendant made cassette tape recordings of phonograph records legitimately issued under a copyright license of such well-known musicians as Elvis Presley, Johnny Cash, Burt Bacharach, Mick Jagger, Joni Mitchell, and Buck Owens. Substantial quantities of these "diskleg" tapes were discovered in Phoenix, Arizona, and 25,000 complete tape recordings along with labels, and machinery utilized in the manufacturing process were seized by the United States Marshall upon proper application to the Federal Court by the copyright owner. The Court of Appeals in the *Duchess Case* held that not only the infringing copies but those articles of machinery or equipment used to produce them were subject to the seizure and destruction provisions of Title 17 of the United States Code.

The Constitution speaks of Congressional Power to protect the "writings" of the author. Section 5 of title 17 provides the following categories of works eligible for registration under the Federal Copyright Law (presumably as "writings" of the author): (a) Books including composite encyclopedic works, directories, gazettes, and other compilations. (b) Periodicals including newspapers. (c) Lectures, sermons, addresses (prepared for oral delivery). (d) Dramatic or dramatical-musical compositions. (e) Musical compositions. (f) Maps. (g) Works of art;

models of designs for works of art. (h) Reproductions of a work of art. (i) Drawings or plastic works of a scientific or technical character. (j) Photographs. (k) Prints and pictorial illustrations, including prints or labels used for articles of merchandise. (l) Motion-picture photoplays. (m) Motion pictures or other than photoplays. (n) Sound recordings. The act further provides that the categories shall not be held to limit subject matter of copyright as defined in section 4 of title 17, nor shall an error in classification invalidate or impair the copyright protection secured.

In addition, prints and labels, and compilations may be regarded as new works and subject to copyright protection.

Once the creator of a work has secured his federal copyright by publication with proper notice and prompt deposit with the Library of Congress copies of his work, the statute then provides that he has the exclusive right to his works. That is the statutory version of the common law approach through the negative property right that exists in original representations, and that is the right to prevent others from copying the work.

If a third party without permission does copy a work protected by a federal copyright, unless his action is excused by a proper defense, such as an omission of the copyright notice on the particular representation which he copied, an exception granted by statute, such as in mechanical reproduction of songs, or the wide and far ranging doctrine of "fair use," then that third party is guilty of infringement, sometimes called plagiarism. Inasmuch as only "copying" is forbidden by the copyright law, it is conceivable that the third party could have created a very similar work to that protected by federal copyright without copying, and if he did so he would be entitled to a separate copyright of his own, for it is only the representation of an idea that is protected under copyright law and not the idea itself. That would indicate that to prove infringement, the very first element of proof one need look for is the element of access by the accused party to the protected work. If access cannot be proved whether by direct evidence or circumstantial evidence,

then it would seem impossible to prove copying.

Once, however, access is proved, then the second element of infringement, that of copying, may be proved by striking similarities in the impression on the mind of a casual observer with respect to the offending article as compared to the protected article. Once access is proved, even innocent or subconscious copying is no defense to infringement. Perhaps one of the most striking examples of access in copying, and certainly one seldom replicated in the case law of this area, occurred in *Gross v. Seligman* 212 F. 930 (1914). An imaginative artist in the halcyon days of the beginning of this century posed a model in the nude, photographed her and entitled the photograph "Grace of Youth" and copyrighted it. He then sold all of his rights in the photograph and in the copyright.

Several years later the same artist placed the same model once again in the nude in the identical pose. This time he told her to smile, and he placed a cherry stem between her teeth, photographed her, and called the new photograph, "Cherry Ripe." He then sold the second photograph, and the question was whether or not the second photograph was an infringement on the first photograph. The court in *Gross v. Seligman* compared the photographer's use of the identical model, the camera and the photograph involving the same pose with the tools that might be used by a painter in copying from memory another's famous painting, and consequently held that elements of access in copying were met, and that the second photograph infringed upon the first one.

Subconscious infringement was present in the case of *Fred Fisher, Inc. v. Dillingham* 298 Fed. 145, (1924). No less composer than Jerome Kern was held to have infringed the "ostinato" accompaniment of another copyrighted song "Dardanella" and despite the fact that Mr. Kern testified that he was not aware of any plagiarism, and despite the fact that Judge Learned Hand in that case believed Mr. Kern, the good judge nevertheless found that "Mr. Kern must have followed, probably unconsciously, what he had certainly often heard only a short time before."

By far, however, the defense raised in almost every infringement suit is the defense of "fair use." This doctrine is a judge-made exception to the exclusive right of the owner of a copyright to its use, and has grown up in the law on a case by case basis. The doctrine of "fair use" contemplates copying for the purposes of criticism, comment, news reporting, teaching, scholarship, or research, as well as innocent and insubstantial copying for background purposes in other major works. The courts generally weigh the following when considering whether or not a use is fair: 1) the purpose and character of the use; 2) the nature of the copyrighted works; 3) the amount and substance of the portion used in relation to the copyrighted work as a whole; and 4) the effect of the use upon the potential market for or value of the copyrighted work. Case law in the field of fair use does not follow nor is it capable of being classified into any neat packaging or pigeon-holing, because of the very nature of the judge-made exception to exclusivity.

For the past many years Congress has been considering a revision to the copyright law, and H.R. 2223 was introduced into the House of Representatives January 28, 1975. This bill incidentally reflects identical bills offered during several recent years. It would attempt to codify and make more available, and more readily understandable various exceptions, by specifically approving certain reproduction of copies by libraries and archives, and exempting performances and displays by teachers. If this legislation finally does become law, it will partially clear the muddied waters of "fair use" and the problems that doctrine imposes to those engaged in library science. However, muddy pools will remain, and a comparison of two cases as a conclusion to these remarks might serve to focus our attention on the most dangerous of those muddy pools for those who solve problems in the library science area today.

The 1962 Case decided in the United States Court of Appeals for the 8th Circuit entitled *Wihtol v. Crow* 309 Fed. 2nd 777 (1962). The plaintiff owned a statutory federal copyright on a hymn entitled "My God and I." The defendant was head of the local department

of the Junior College and High School of Clarinda, Iowa, school district and was also choir director of the First Methodist Church of Clarinda and its organist. He received relatively modest compensation from the school district and even less from the First Methodist Church. The defendant was familiar with the song "My God and I" and sat down and created a new and appealing arrangement to the melody. After his toil as a composer, he printed 48 copies of his new arrangement on the school's duplicating machines and had the song performed once by the high school choir, and once more at church one Sunday morning by the choir of the First Methodist Church. The defendant was quite proud of his arrangement, and it was apparently well received by both the high school audience and the church congregation, so he wrote to the copyright owner informing him of the arrangement he had made and offered to have the score reduced to manuscript form and sent to the plaintiff for his perusal.

Thereafter the plaintiff wrote a rather formal letter to the defendant indicating that a minimum infringement fee of \$250.00 would be acceptable to him, and most generously offered not to institute a criminal complaint for willful infringement under Title 17 of the United States Code. The surprised and chagrined high school teacher and choir director pleader "fair use" as a defense. The court's decision on this matter was succinct and chilling, and is quoted as follows: "The copying of the plaintiff's song by Crow was, in our opinion, an infringement of the plaintiff's copyrights in suit," and not only was Mr. Crow himself held to be an infringer, but the school district and the First Methodist Church of Clarinda, Iowa, were also found to be infringers.

That appeared to be the state of the law with respect to deliberate copying of materials protected by federal copyright until the celebrated case of *Williams and Wilkins Company v. United States* 487 Fed. 2nd 1345 (1973) which case was affirmed by an equally divided Supreme Court. In the renowned *Williams and Wilkins Case*, the plaintiff, a medical publisher, brought an infringement

action against the United States of America, because of the copying of articles by the National Institutes of Health and the National Library of Medicine without permission of the copyright owner. The trial judge in the Court of Claims, (the Honorable James F. Davis) decided, following the rationale of *Wihtol v. Crow*, that the government was liable for infringement.

The case contains a far ranging and illuminating discussion of the doctrine of fair use, and in deciding that the use by the defendant agencies of the United States was fair, considered: "First, plaintiff has not in our view shown, and there is inadequate reason to believe, that it is being or will be harmed substantially by these specific practices of N.I.H. and N.L.M.; second, we are convinced that medicine and medical research will be injured by holding these particular practices to be an infringement; and third, since the problem of accommodating the interests of science with those of the publishers (and authors) calls fundamentally for a legislative solution or guidance, which has not yet been given, we should not, during the period before congressional action is forthcoming, place a risk of harm upon science and medicine. In section IV of the Court of Claims decision the court indicated that they were not deciding that all of the elements upon which they based their finding of fair use would be necessary in future cases, nor were they willing to say that an absence of one of them would be unnecessary. They

went on to say that "connected with this point is the second one that our holding is restricted to the type and context of use by N.I.H. and N.L.M., as shown by this record... we do not pass on dissimilar systems or uses of copyrighted materials by other institutions or enterprises, or in other fields, or as applied to items other than journal articles, or with other significant variables."

There were three vigorous dissenting opinions in the case, and Judge Nichols' dissent observed that "we are making the *Dred Scott* decision of copyright law."

Before those of us concerned with the art and practice of library sciences indulge in jubilation and rejoicing at the *Williams and Wilkins* Decision and the inferential demise of *Wihtol v. Crow*, it would be well to remember the care used by the majority of the judges of the Court of Claims in severely restricting the application of their view of the law to the precise facts of the case, and a four to four split decision by the Supreme Court of the United States is of little comfort to those attempting to predict a specific fair use problem today. The majority of the judges in the Court of Claims once again denominated the issue as one best suited for solution by Congressional Action. Unless and until, however, Congress decides to amend Title 17 of the United States Code I for one would feel that I was on most uncertain ground if I strayed far from the clear and unambiguous approach of *Wihtol v. Crow*.



## SATELLITE COMMUNICATIONS AND ACCESS TO INFORMATION

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*Dean Goggin earned her Masters degree and her PhD degree in Library Science from the University of Illinois. She has worked in various line positions as a librarian including duty with the Office of Technical Services, Department of Commerce*

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I'm very pleased to be able to come to Colorado Springs and be with all of you this morning. I don't know whether you know what you're in for but I come as a missionary dedicated to converting each and every one of you to the importance of experimentation on satellites for the delivery of information. I would like to end the presentation of my ideas by having this group leave Colorado Springs aware that in this world of today and tomorrow, when information is essential to the survival and the success of people, that we as librarians are interested in experimenting with the latest technology to see if we can overcome the deficiencies of our country and in the world.

In the access to information and the use of information, many of us in our organization have been adopting with great ceremony the National Commission of Library and Information Science National Plan for Libraries. Our statement says, "We believe in equal access to information to all people," regardless of where they are. Then we go back to our areas, and I think you would agree with me that if you lived in Tucumcari, New Mexico, you would not have equal access to the information to the same extent as somebody who goes back to Washington, D.C. We can't mouth these platitudes any longer, in my opinion, without doing something to see if we can correct the inadequacies in access to information. Here I am a missionary, and I hope you will all be ready for your conversion.

In order to present to you my ideas on this field, I'd first like to start off by briefly describing the development of satellite technology up to the point today where it is possible for us to think of experimenting with satellites, and I would like to describe some of the experiments that have been done on satellites, then some experiments that we are actively engaged in on the new satellite that is to be launched in January, and see where that leaves us. For some of you who are experts in the field of satellite communication, forgive me for talking in "baby talk," but to many of us this was a new field when NASA offered us status as a user on the communications satellite. None of us knew very much about satellites.

I have a very simplistic approach to it. We know that communication satellites receive, amplify and transmit voice, music, television, telephone, telegraph, and data signals from one point to another point or points on the earth. We're talking about a system of communication satellites. The system has been in existence only 15 years. Much progress has been made within that 15 years.

It started off in 1960 by launching the first communications satellite which conveyed radio and TV signals. This is what is called a passive satellite. It only could reflect the signals. It was really a gas-filled balloon. It was a low altitude satellite and orbited at such a low altitude that it was visible to an earth station so that you could get a signal

from it, only a quarter of an hour for each rotation. Because of this, the Echo satellite was cheap to launch but terribly expensive to use because you needed so many of these satellites to cover any kind of a continuous signal possibility.

Two years later in 1962, NASA launched the first of their Relay series. This was a middle altitude satellite, and for the first time they were able to launch an active satellite. This means, if I understand it correctly, that the signals are received by the satellite and then transmitted or retransmitted to earth stations. These satellites, the Relay series of satellites, were the first to connect us by satellite with South America; and they were first to connect us with Japan in a communication exchange. This, again, was a series of satellites that rotated at such a low altitude that a signal could be received by the earth between two and four hours out of every rotation. So out of a 12 hour rotation, only 2 to 4 hours could the earth receive from this satellite, for there was no way we could look to these satellites and say, "These we can use for any kind of a continuous exchange of information from one station to another."

In 1963 and 1964, NASA had a real breakthrough when its scientists and engineers developed a method by which they could launch a satellite that would be geosynchronous in its orbit. In other words, they could launch it up to 22,300 miles above the equator, and in that orbit the satellite can go as fast as the earth moves in rotation. Therefore, it looks to us as if it were stationary up there. So now you have visibility from the earth for 24 hours, and a continuous possibility of messages being relayed. With this breakthrough in satellite technology it became possible for commercial interests who were concerned about telephone and telegraph messages around the world to launch some commercial satellites. And, you remember, the first of those was the EARLY BIRD. And the EARLY BIRD was there to help link the whole world in communication.

There are four of these commercial satellites, the Intelsat System, up in orbit now. They are used by such companies as

Western Union, American T & T, and others, to transmit special events, television programs and they include facilities that provide many voice channels for telephone messages. There is one other international commercial system. It was launched by the Russians, and is Intersputnik. This was a fine breakthrough, but one of the problems was that Intelsat was having to put in three or four hundred thousand dollars for every ground station. This makes it rather expensive if you think you want communication via satellite to a particular library, because no library is going to be able to put hundreds of thousands of dollars into a ground station.

So, NASA has been experimenting since 1969 with an Application Technology Satellite Series. These satellites are being launched to see if it is possible to have so much power in the satellite that the ground stations can be very small and very inexpensive. That has been the thrust of NASA experimentation since 1969. The ATS 1 through 6 were launched between 1969 and 1974. ATS 1 generally broadcasted special events, voice only, and it broadcast some educational and health programs to Alaska and to the Pacific. ATS 2 aborted. ATS 3 is remembered because it was the first satellite to have a color camera, and it sent back color photographs of the earth from space. It also demonstrated that if you used communications satellites with the shipping fleets at sea, you could manage the whole shipping fleet in a much more economical manner.

The ATS 5 was the next active satellite, and it contributed scientific and technological information.

In May 1974, the ATS 6 was launched. This was the first satellite to be launched totally dedicated to test the practicability of satellites as effective means of broadcasting education and health information to people in remote areas of the United States. The theory was that satellites could get information to people who could not be reached easily, quickly, or economically by any other means. The ATS 6, which has just finished its one year of experimentation, was towed by satellite experts across the ocean, stopped

over Madrid, Spain, to help track the Soyuz mission; and then it was pulled over to North Africa where it is now beaming on India in a year-long experiment to see if people in small villages all over India could learn to read and write via satellite.

What were some of the programs that we experimented with here in this country with the ATS series? One of the experiments was in Alaska. Now, I don't know how many of you have been to Alaska, but you know the barrenness of parts of Alaska. You know the space problem. One of their great problems was the matter of delivering health care to people in remote villages. With the ATS 1 there was a voice connection from some very remote villages into a medical center in Alaska, so that a medical aide or a nurse's aide could get on the radio and transmit via satellite to the medical doctors in the clinic and say, "I have a patient here, and the patient has a pain, and the pain is between here and there, and the skin looks so and so. What should I do?" And the doctors would try to diagnose from this kind of a voice description whether that patient should be rushed by a helicopter into a medical center, or whether the person could be treated by taking a couple of aspirin and going home to bed, or what needed to be done. I'm not sure any of you would be very happy if your ills and pains were diagnosed by voice description by a medical aide.

With the ATS 6 they are able to put ground stations into very small villages, in little clinics. The patients are brought to the clinics. Color television cameras are there. The doctors are in Fairbanks and in Anchorage. They are seeing the patient. In Alaska there are a great many cases of skin disease. I saw some very dramatic video recordings of this process where they brought the person in and focused the camera on the diseased area. The attendant answers some questions, and the doctors can check on the appearance and color of the skin and diagnose the problem.

The doctors are seeing hundreds and hundreds of people that they would not normally see as patients. Many of these patients do not need to be brought into the hospital. They can be treated locally, and the

next time the satellite is active, the doctors can recheck the changes in the patient's condition. Critical cases often can go immediately to a hospital because the diagnosis has been made. Medical records are being transferred via satellite to the doctor in either Fairbanks or in Anchorage so that the record for the patient is right there when the doctor is looking at a patient who is a thousand miles away. This kind of health care experiment has been fantastically successful. And when the final evaluations are in, this is going to be a tremendous activity for future satellite work.

One other kind of health care experiment is going on based in Seattle, Washington. It's called the "WAMI," which stands for "Washington, Alaska, Montana, and Idaho." The only medical school for that region is in Seattle, at the University of Washington. The problem has been, when people are recruited to come to medical school from very small towns, they don't want to go back to the small towns to practice. Therefore, that area—the four state area—is really very destitute of doctors in the rural areas. The people in WAMI are bringing medical education out to 'the boonies,' if you will. Via satellite, with down links that are interactive—that is with two-way communication, the first two years of medical education can be provided in the small community colleges and in the universities and colleges located in the rural areas.

Clinical experiences for the medical students is provided by bringing clinical patients before the television screen. The medical doctors and educators in Seattle are also before the television cameras. There can be a two-way communication via satellite, with questions, answers and discussions about the condition of this patient out in the clinic. This experiment appears to be successful enough that the newest satellite to go up will have some advanced experiments in this area.

What other experiments were on the ATS 6? In Appalachia, which spreads from New York State to Tennessee, Kentucky, and Georgia, there has been experimentation to deliver to elementary and secondary teachers service courses in how to teach reading, and

how to teach careers—career education. Very innovative methodologies were used, and teachers gathered in small rural areas to interact with the programs via satellite.

The experiments on the ATS 6 satellite convinced everyone that you really need to have an interactive mode. ATS 6 was to go up with one-way TV, from the main studios out to the ground stations, and voice or audio return. Because of some confusion with channels and who has the right for channels, it appears that the channel that the ATS 6 was using was on the same wave length that was used to alert the nation in case of a catastrophe, and so you know what happened. We were told, "Well, you just can't go on that." And so what we did was to use the ATS 1 and 3 which were still up in orbit. All of these satellites have a duration of life which is from 3 to 4 to 5 years. All of them are living longer than we expected. We used the ATS 1 and 3 as a return voice channel. There was two-way experimentation in some stations and one-way experimentation in others.

In the Rocky Mountain Region the experiment was connecting junior high school students in rurally isolated communities in eight western states with a resource center in Denver. Packaged programs and live programs were video-taped and sent via satellite from the studios in Denver up the Morrison Uplink, which is one of three uplinks that send messages to the satellite and were received down in 57 small ground terminal stations in 57 rural sites. Adults also received some special programming during some of the hours of satellite usage. Those were some of the experiments that went on with ATS 6.

Now, we have such reaction from participants as: "You said it was an experiment, but I thought it was going to last longer than one year." "How can you give me a career education in junior high school and not continue it next year? We really want it!", and the people in Alaska are saying, "We can't do without delivery of medical care." We are told now that NASA's decision is to tow the ATS 6 back across the world to the United States at the end of the 1-year experimentation in India.

Meantime, a new satellite will be launched in January of this year. This is called the Communication Technology Satellite, the CTS. It is unique in that it is a shared satellite with the Canadian Government and the United States Government. The experiment is in the United States and the experiment is in Canada, each have times and days, and we're working that out now. So, like on Monday, Wednesday, and Friday one week, experimenters in the United States can use the satellite; and on Tuesday and Thursday and Saturday the Canadian experiments can go on. Canada is experimenting with some similar ideas as the ones I described for the ATS 6; that is, the delivery of information, the delivery of education, the delivery of health care to remote villages in Canada.

One very fascinating experiment which will take a couple of months, is an experiment to see if the Canadian Government and the officials of the railways can tell where their trans-continental train is, while it's en route from one end of the country to the other. When the train leaves the Eastern Seaboard to go across Canada, the only way they know where that train is, is when the train stops at certain "watering spots" to take on water, and the engineer runs into a little building there and telephones and says, "We have now arrived here." This means that there could be train traffic on the tracks that have been left. It means that on the tracks ahead there can be no traffic until they get another call that says the train is over here. They're trying to experiment to see that if they put a ground station on the train, they can then repeatedly send communication via satellite to the central office, which will locate the train specifically everywhere it goes across the country. Therefore, they can use the track system for many more trains, and the freight can move more quickly because they'll know every minute where that train is. I must admit I was rather baffled when I heard that this condition existed, and I'm glad if satellites can expedite transportation.

There are some shared curriculum experiments going on with this CTS. Stanford University in Palo Alto, California, and Carlton College in Canada are going to share

expert faculty by tying classrooms together. and so the Stanford students can sit in a classroom in Palo Alto with the live professor standing before his live class in Carlton. Both of them will get the same lecture, both of them will be able to ask questions. The students at Stanford have to signal to let the faculty member up in Carlton know that they want to ask the next question. The experimentation involves determining if this is a practical way to share specialists between universities. Some very exciting experiments are in progress at the NASA Ames Research Center in California trying to compress the video signals and do a lot of work to see how much more can be transmitted via satellite. in the scheduled time.

WAMI is going to continue its medical education via satellite. The Lister Hill Medical Center in Washington is doing some experimental work with biomedical communications. There are some experiments in the VA Hospital system, where they're going to connect 30 hospitals together and see if they can share continuing education programs and other communication uses are planned.

There are, in all, 13 experiments on board. One of those experiments is called SALINET. And SALINET stands for Satellite Library Information Network. This is an attempt to see if, by means of satellites, information can be shared and disseminated to people, no matter where they live. We are using the Rocky Mountains Plains areas as our test bed. We are hoping eventually to use all 57 downlinks in the rural 8-state area of the Rocky Mountains Plains area and add 4 more states: North and South Dakota, Nebraska, and Kansas, to make it 12 states in all.

What are we going to do, by satellite?

First there is the program to reach the user, and the potential user of information. We are going to attempt to send messages to convince people that information we'd like to show them they need, is available that it is possible for them to get it, it is possible to get it quickly, and it is possible to get it in the format in which they can use it. This is almost a marketing technique. But, we are constantly aware that many people, particularly in rural areas, have given up on the hope of getting information.

They have a little library that's open from 2 to 4 Wednesday afternoon and it has some of the best sellers and a few mysteries, and it's a good place to send the children to get them out of the house on Wednesday afternoon so that you can have a tea party or something. But really to say that we have information and you can get it and you can design your business because of the newest information, is another matter. There's almost a hopeless feeling in many of these communities. We are very anxious to see if we can, via satellite, impact the whole 57 communities with this kind of message, and describe to them the process by which they access the information. There are many state networks, but very few that are used to a great degree, and much of the problem is that citizens don't know how to access the information which is available.

Secondly, we will aim some programming at communities and their needs. For example, some of the communities have become 'boom towns' because of the discovery of resources that were not known to be there before. These communities are having terribly serious problems in water pollution control, in zoning problems. The Japanese have come over and bought up land in Montana and Wyoming, and all of a sudden little villagers are saying, "Well, you know, we never had to worry about zoning because Joe down the street owned the property and he wouldn't do anything to hurt us. But now, you know, you've got some other people coming in. Don't we need to protect ourselves?" How do we go about it? So we are planning to package, and beam messages that will help in solving problems of this kind in order to help them better determine their own lives and the safety of their communities.

Thirdly, we think that if the first two programs are successful people will be asking for more and more information. And so we're experimenting with the idea of compressing bibliographic data, sending it over the satellite to downlinks in certain central parts of this 57 downlink area, in order that it can be used to create all kinds of information packages, serials records or locations, catalogs, and so forth. One of the things about satellite

communications is that the band is very wide, so that you can beam a program, and on top of that you can 'piggy-back' all kinds of signals that the people looking at the program don't even know is there. You can also do a very neat thing in that you can scramble what you send, so that if a business firm in--let's say Rifle, Colorado--wants some information which we can get through, say the data base CHEMCOM, we can scramble that information so rivals of that company who are on that receiving band with them, will not know that company "X" in Rifle is experimenting with something new which may make a new market. This privacy, of course, is very necessary with medical treatment. One would not like to be on open television with his or her sores and pains being diagnosed between doctor and patient; and so that kind of information has to be scrambled.

Finally, with the three programs we have a fourth program, which is to train people, update people who are manning libraries and information centers in this Rocky Mountain area, in order that they can handle the information demands to be forthcoming. We have been most successful with the funding for the continuing education program. And we have some 10 hours of continuing education offerings in most exciting format, which is being field-tested now to see the response, and it is ready to go on the satellite as soon as it goes up in January.

I'm concerned that I, representing SALINET, am the only library experimenter on the satellite. If the satellite can examine a person's skin so that a doctor can diagnose, cannot the satellite system also identify bibliographic needs, research needs, information needs of people, and develop a delivery system for them? This technology is just wide open. We have asked as SALINET users, to be users on the ATS 6 when it comes back.

Even more exciting than that is the latest creation of a Public Satellite Consortium made up of people and companies that are very interested in this rapid delivery of information to any part of the globe with inexpensive downlinks to remote locations. The people in this consortium are now exploring buying satellites and launching

them, renting time, buying time on a satellite to use it for certain purposes. The world is wide open in this field, and we're excited to be a part of it.

I think every librarian ought to be watching extremely closely experiments that are going on, and for the opportunities that we have to not worry that the mail loses your interlibrary loan and you can't get it there in 6 weeks; after which time the person doesn't really want it any more, he doesn't even remember asking for it. Instead, there is the capability that we can deliver information and documents promptly via satellite. Now, I say this positively but I hope you understand that we are experimenters on the communications satellites. We have not yet proven that this is economically sound, but I urge you to watch this. It's a program that could revolutionize the way we deliver information to people.

Does anyone have a question or two?

*(Remarks from the audience)*

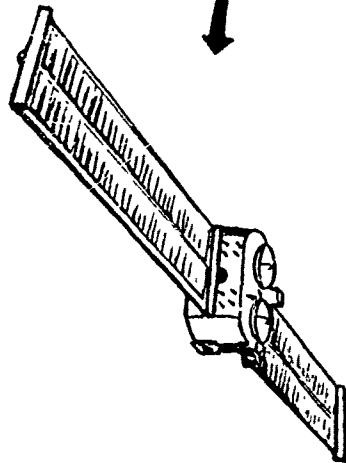
"I would like to add a word or two--I'm from Alaska and our state library group has used the satellite very effectively up there. We were asked to go on this first experiment with the help of HEW two years ago and we were given gratis two hours each month, one hour every two weeks. Ours worked mainly out of the Anchorage area because we had proper radio broadcasting equipment at the native medical hospital. Three or four of us decided it could be lots of fun and real interesting so we went over to the hospital to do a program. We were trying to reach the villages. If you have never been to Alaska, you don't know what being out in the bush means. There's no way of getting in except by air--there's no way getting out except by air. So the mail doesn't come in and the mail doesn't go out and the radio is the only link with civilization. Usually there is a health aide, either a young woman or a young man in the village who sometimes is the only English-speaking person in the village and each of them has a good two-way radio. That's the only radio in the village and anything that needs to be gotten out goes over the radio.

So we were asked if there was something we could do to help the schools in the

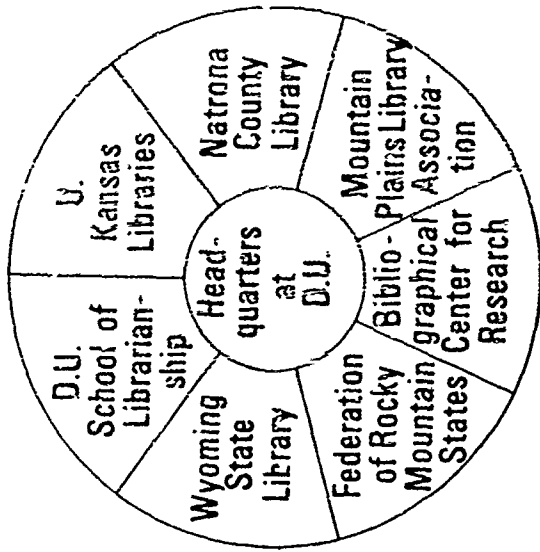
villages. Usually the teachers, if they had reference questions, had no way to get outside information—so this is what we thought we could help with on the hour we were on the air. We would ask an assembled group of local teachers a group of questions and say now—“Would you tell us what you need, and the next time we’ll be on the air will be such and such a time, and you be at the radio and you send your questions down and we’ll send the answers back the next time, or air ship material to you. It was disappointing for the first few times because we’d get on the air and we’d say “Alakanuk, Kasiglcook, are you receiving us?”, and there would be absolute silence—not a word. This went on for two or three times and then somehow we got the information that they were sitting around up there, fascinated with

the whole process. We’d say, “Is Alakanuk getting us?” All the response that came from that spellbound audience was nods! We finally got some of that straightened out. One of the nice things that came out of it was—we were very anxious to record native legends and myths in their native languages for state records, and we were able to get some of these and they’re in print now. We have some of them that have been taken off the tape from the satellite, and that was a nice bonus. We did get some requests for material, and we were able to do what we thought would be helpful, and what amounted to an aerial interlibrary loan sort of thing. Of course, its over with now until somebody else gets another satellite and gives us some free time.

Thank you.

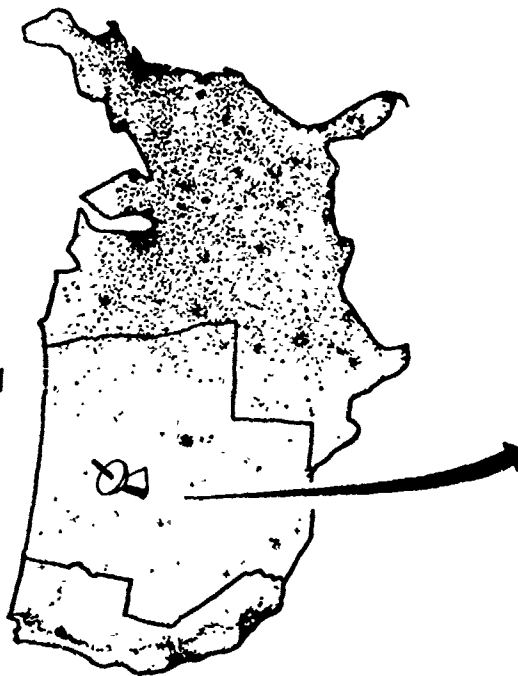


# SATELLITE LIBRARY INFORMATION NETWORK



PROGRAM EVALUATION

CONTINENTAL U.S. POPULATION



Strategies for satisfying information needs of individuals.



Information on critical problems facing town and municipal officials and businesses.



In-service training for library staffs.



Compressed bibliographic data from U. of Kansas to resource centers in the region.



REPORT FROM THE FEDERAL  
LIBRARY COMMITTEE

Mr. James Riley, Executive Director  
Federal Library Committee

I'm very happy to be here this morning. I was appointed to this position in January 1974 and unfortunately I wasn't able to make your meeting last year.

What I want to do is first of all welcome you to the Federal Library Committee meeting. What we've been trying to do in the last year and a half is to get a broader representation with FLC among federal librarians. As you know—I'm not going to get into the membership and how it's organized, but the Federal Library Committee has 40 members, and they're primarily institutional members. Ten are regional representatives. I have found since I've been appointed to the position, that the federal librarians would like to somehow become more identified with FLC. So working through the FLC, Executive Advisory Committee we were able this year to get a program scheduled for three of the regular meetings to be "open" meetings to all federal librarians. I don't think we have had that kind of an arrangement before. The three meetings are open to all federal librarians who are in the Washington, D.C. area at that time. Tentatively, these meetings are to be held in the Coolidge Auditorium in the Library of Congress that seats about 300.

Also, I wanted to mention that if you are going to be in Washington and would like to attend our regular FLC meetings, let us know and we'll send you a letter inviting you as an observer. It is a way I think, and I know that the Executive Advisory Committee agrees of opening up the meetings to other federal librarians with agencies that are not members of the Committee.

I want to discuss the *Newsletter*. We have the *Newsletter*, and if you're not on the mailing list, all you have to do is write to us and send us your mailing address and we'll put you on the mailing list. We are open to suggestions of what you'd like to see in the *Newsletter*. We also have the *Vacancy Roster*. If you are on the mailing list for the

*Newsletter*, you should also be getting the *Vacancy Roster*. We do know your criticism of the *Vacancy Roster*, that it is not timely, that you get it too late. On the other hand, we hear from agencies that have used this as a vehicle to have people contact them that have worked out very well. So, we have to find a way of getting it out in a much quicker fashion, perhaps at the sacrifice of the quality of the publication.

We're doing a lot of things in the Committee, but there are three that are very important right at the moment. One is that we just had another meeting last week with GSA, Data Telecommunications Division. We've been meeting with them and have reached a point where they are going to work with commercial data base firms, to negotiate contracts with them so that they'll be available on GSA schedules. That's something that our people have felt very strongly about. If we can get commercial data bases on the schedule it's going to be much easier for all of us. The Telecommunications Division of GSA has welcomed FLC to work with them on the contracting negotiations. They have identified approximately 200 commercial firms and they have sent out the specifications that they believe are required. The commercial firms are reviewing them now and they should be completed in 20 days. The GSA will begin to contact each one and have a negotiating contract team, of which we can designate one of our people as a member, and they will contract with each of them individually. They are going to work with the commercial firms first, get them on the schedule, and then they're going to work with the non-profit, so that means that if you're looking for OCLC, it'll be quite some months away.

I would like to discuss our relations with the National Commission on Library and Information Services. We work closely with them, much closer than we have in the past few years. The Federal Library Committee

has recently become more nationally oriented. What that means is that we have the responsibility of thinking of federal libraries and how they relate to a national program and we are very much involved in that today.

With respect to OCLC, we started out with a contract that we really implemented and began to put into action in January 1974, with approximately eight libraries. We now have 40 libraries that are participating in this project, with 10 more that we are assisting, doing everything we can in our office to answer their questions and to help them, if they have a desire to go ahead and start using OCLC. Every indication is that, of the ten, seven of them look like they will be participating in the project in the next few months.

The steering committee, that is made up of members who participate in the OCLC project, have designated our office the responsibility to go out and to talk to federal librarians whenever we possibly can, about OCLC. In fact, that is one of the reasons why I'm here at this workshop. The demonstration that we have today is a teletype approach, not the CRT; and, the young lady is Sandy Hamilton who will give the demonstration. Sandy was formerly with the Department of Interior at Ann Arbor (she's on loan from the Department for two years to a Western Governors' Association) where she used the OCLC system through teletype.

We do have a regional responsibility that we implemented in the spring of 1974. We have regional representatives on the Committee. Each of the 10 regions is represented, and we have a Panel on Regional Libraries that is to study relationships of federal libraries that are in the 10 federal regional councils, and to coordinate programs with such libraries through FLC. This panel is made up of federal librarians that are members of the FLC Committee, or that have field libraries. So this is primarily a Washington membership; however, there are service representatives that are not in the Washington area. One of the 10 representatives that make up the FLC regional representatives has been appointed to that panel. Their purpose is to work and develop

programs that relate to the regions.

I'd like to conclude my remarks this morning by repeating a few comments that have been made here earlier this week. How do federal libraries participate in the OCLC project if they're outside the Washington, D.C. area, and if they want to go through another regional--or, another network within the region that they are located? The first thing you have to do is contact us. OCLC will not really work directly with you; that's the way they operate. They want to find one focal point in the network that they can identify and say, "That's the contact." If you call in, they'll say, "Call the FLC office."

To save time, you can come directly to us and we'll assist you in any way we possibly can. We had one experience where we had an agency that wished to participate in OCLC--we worked with them for some time, and they made a decision to go with a network in its region. That seemed to be the most cost-beneficial and most practical way for them to go. That is our job, as we see it. We have to go with you all the way, and then you make the decision what you want to do. The important thing is that if you do go into OCLC and you're in a region, you're recognized by OCLC as a federal library, because we have, in our contract with OCLC, the agreement that we will be able to pull annually from the data base all federal library input. So, it makes no difference what part of the country you're in. If you're using OCLC, we will receive annually a tape of everything that you and other federal libraries have cataloged. Thus, we will have the potential to make a federal data base.

We are working on a project with the Government Printing Office to bring them into OCLC. It is a 3-month project just to determine the feasibility. They are receiving a CRT terminal. If it's not there now, it should be within this week.

We'd like to hear from you, what you think we ought to be doing in relationship to military librarians. One thing that I have noticed is your bibliographies. I'm very much impressed with the bibliographies that the military has been producing, and I would like to be able to announce them on a regular

basis in the *FLC Newsletter*. Now, if they're available from the sources through you, that would be the address that people would write to. If you don't have that kind of distribution, then we would say "limited distribution."

If you do get them into the federal system of either NTIS or Government Printing

Office, and you know how they can be purchased, we'd need that information. I hope that you will take this very sincerely and make these available to us, and instruct us how you'd like them to be publicized, so that we can release that information.

Thank you very much.

THE FEDERAL LIBRARY COMMITTEE AND IMPROVING PROCEDURES TO  
PROVIDE BETTER INFORMATION SERVICE

Mary L. Shaffer  
Director Army Library

*Mrs. Shaffer is the permanent Department of Defense representative to the Federal Library Committee.*

Mr. Riley has briefed you on the activities of the Federal Library Committee from his view as executive director. I would urge those of you who are in Washington to attend these meetings, especially the open ones. I think you will find them very useful.

Today I would like to speak to you about the way the FLC operates, and on some items of concern to the committee and DOD libraries in this period of change.

On June 4 of 1973 the Federal Register published a document on the reorganization and functions of the Federal Library Committee. In the body of the document it is specified that, in addition to the permanent representative from DOD, one member is selected by the permanent representative from each of the three services, Army, Navy, and Air Force, to serve as a non-voting member for two years. The membership among the services is rotated among special service, or 'rec' libraries, technical and academic, and school libraries in that service. The DOD representative may poll the three service members for their opinions before a decision concerning the vote.

Your individual representatives are not always able to attend the FLC meetings because of travel restrictions and prior commitments, but they do receive the notes from each meeting. The few times I have not been able to attend, one of the representatives has been asked to take my place. The term of the representatives: Nell Strickland, Army representative; Bart Greenwood, Navy representative; and Colonel Claude Johns, Air Force representative, will expire in May of '76. At that time new representatives from each of the services will be selected from a slate provided by the Federal Library Committee.

Mr. Riley gave you an excellent overview of the FLC activities and projected programs. To many of you these activities may appear remote and not very relevant to your operation. I would like, however, to emphasize that all libraries in the defense community will inevitably be affected by the actions, the programs, and the recommendations of FLC.

I personally have briefed many librarians from the various services on the automation projects of the Army Library, and, of course, on our participation in the OCLC project. As a result, several libraries in the Army and Navy have joined a network either through time-share or through a dedicated leased line. Several of the larger libraries are helping smaller libraries by permitting them to 'piggy back' on their terminals. At the Army library there are two other libraries utilizing its two terminals.

Very soon we will be able to print our labels for spines, book cards and pockets, and do a selective print-out of records for review directly from the CRT. This capability will further reduce the technical processing time for new acquisitions. In effect, we will have totally automated our cataloging section.

In addition to this one very visible program that has resulted from a cooperative effort on the part of the federal librarians in the Washington area, there is an ad-hoc committee, of which I am a member, that is exploring other areas of interest in cooperative automation. The objective of the ad-hoc committee is to get together those librarians who have a common interest in extending automation. The groups will exchange information based on experience, and attempt to develop a vehicle for cooperative implementa-

tion by all or several of the interested libraries.

A questionnaire was developed by the ad-hoc committee and sent to the various libraries in the metropolitan area to identify functions amenable to automation, and to determine the extent of the interest in retrospective cataloging. The response to the questionnaire indicated that the highest interest was in circulation control, acquisitions, and bibliographic retrieval.

The ad-hoc committee met two weeks ago and began sorting the various group interests and designating group leaders. The leaders will call together librarians interested in exploring the feasibility of another cooperative venture. If nothing else, there will be an opportunity to exchange ideas and see what other libraries are doing. For example, several of us are interested in utilizing our OCLC tapes, those that we have developed as a result of input or the use of records. We hope eventually to build a data base from these tapes that will give us current awareness lists, SDIs, and other data that we now search for manually. We are already receiving requests for inter-library loan because the data base shows us as holding a needed title, and our own reference librarians are using a CRT for bibliographical verification.

We are now in the process of inputting a large volume of military documents and studies that are very likely to be the only copies that are extant. As more and more materials are declassified, we will catalog these publications and make them available. I strayed a little from FLC, but I thought that might be of interest to you.

Other projects that the FLC has a great interest in and that will eventually affect you is the work of the task force on personnel that Elizabeth Knauff is chairing. There has been quite a bit of correspondence between the Civil Service Commission and the Federal Library Committee on the subject of upgrading librarians, standardizing job descriptions, revising classification standards and recruiting procedures.

The central storage of little-use materials is being discussed with GAO. Copyright and its impact on libraries is very much in the

forefront and will impact on all libraries. There have been meetings with GSA regarding the Federal Supply Schedule, particularly FSC-76, Part III publications. FLC is keenly aware of how difficult it is for librarians to work with a competitively advertised schedule. This is just a sample of the programs and projects FLC is working on. The committee is dedicated to finding ways and means of utilizing the resources of all federal libraries in the most effective way possible in order to meet the expanding national need for information.

In Chicago at the SLA meeting of military librarians, I tried to make a point that I would like to put before you again. A few years ago, out of sheer desperation, we began an effort to find better ways of utilizing the manpower and facilities that were left in the Army Library. We began with an 80-columnar pad and sharp pencils and a borrowed systems analyst who knew nothing of library operations. We worked evenings and week-ends, and we looked at what other libraries were doing.

We came up with an automated program for the procurement of subscriptions. It took time. We made mistakes. There was staff resistance to change, and many times it would have been very easy to have just given up. Finally we got the first program off the ground, and gradually it was accepted. As spin-offs from that one program, we developed a periodicals holdings file, management lists for the staff agencies for whom we purchase subscriptions as well as for our budget officer who must match obligations against expenditures, and many other programs which have helped us gain a better handle on, and control of, our resources.

We've experimented with various data bases to determine their value and cost effectiveness. Our management types began to accept the fact that we didn't aim to sit still. We reached the point, not long ago, when we felt we needed guidance. Contacts were made with the right people and we were able to let a contract to explore the feasibility of further automation of our library functions. The study will be completed within about a month, and it will have recommendations

and a suggested program that will span a 3 to 5 year period. Many libraries have expressed an interest in the completed study, and it will be made available through NTIS.

What I'm really trying to say is this: No one is going to come to you and ask if they can help you reduce the redundant tasks that all libraries must perform. No facility is so small or so large that it can't improve its procedures or utilize technology to some degree to better provide the information service for which it exists. But, any changes you make, you will have to *fight* for them. Convince your supervisors of the importance of what you want to do as well as your staff. In this day of tight budgets, it's even more

difficult to change, especially when the change is more likely to cost more initially. But changes *are* occurring, and in order to survive, we *must* change, and that is what the Federal Library Committee is all about.

Some of the things that we hope to get off the OCL tapes that we are developing from our use of the data base are bibliographies such as the one we recently published on women.

Another item that I wanted you to be aware of is that the survey of federal libraries begun in 1972 to which many of you responded with great agony is now available. It was recently released by Dr. Frank Schick.

## THE FEDERAL OCLC PILOT PROJECT

Mary Randolph, Associate Librarian  
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The Federal Library Experiment in cooperative cataloging (FLECC) started with eight libraries in January, 1974. It began operating under full steam in July of 1974 because that's when the time share part actually was accepted by the Ohio College Library Center. It was then that OCLC had programs that accepted time share telecommunications. The experiment went on for one year. The libraries that were going by a leased line had a six month jump ahead of the others, as far as getting to know the system was concerned.

As Jim said, we started with eight and now we have 40 libraries committed. We also have 41 terminals going right now, and 15 more coming on. Nine of those 15 are going to the Library of Congress, and eight are time share.

Currently we have terminals in Philadelphia, Carlisle, Pennsylvania; Summerfield, New Jersey; Denver; Ann Arbor, Peoria and of course all over Washington, D.C., and its metropolitan area.

The printout on usage which we received from OCLC showing the utilization of the network by the federal libraries for FY75 shows that we cataloged 62,966 titles through the Ohio College Library Center. Throughout FY75 we had an overall 54 percent "hit rate" meaning that 54 percent of the times that we put in or searched for bibliographic data, we got an answer on the screen.

A lot of you are sitting here today and thinking, "Well, you know, OCLC is not going to work for me because we're a very special library." How long have you been saying that? Are you thinking it because it's easier? You don't have to fight OCLC because you're special. At the Army Library, we think we're pretty special too. We're not as specialized in our collection as some libraries, but let's face it - all libraries are special to the people who work in them.

For the same period of time, FY75, the Army Library had a 78.5 percent hit rate. That is pretty phenomenal, because we did a

cost analysis before we started on the network, figuring that we'd hit about 60 percent. Thus our calculations about our budget were a bit askew because we had a greater hit rate. It's cheaper, actually if you don't have such a high hit rate, because when you input original cataloging it is virtually free - you don't pay for accessing the data base. You do pay for your cards, however, and you pay for searching.

OCLC is growing by leaps and bounds. A year ago I was saying that they have 282 institutions on. Two months ago they had 550 on, this morning they have 577. These institutions include academic, public, federal, just about any kind you can imagine. Something like 15,000 volumes a day are being cataloged through OCLC.

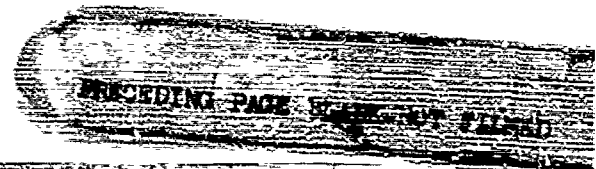
Currently the data base includes 1.5 million bibliographic records and it is growing at the rate of about 3,000 records a day. Think about it. Three thousand different records a day! Right now there are something like 4.5 million location symbols on that data base.

Imagine the eventual impact on interlibrary loans when, after some testing, that service is available.

There is a great deal of activity on the data base, and with it being so busy there is an ever-present danger of the data base integrity going "pfft," eroding badly. However, each of the 577 institutions is making a most sincere effort to keep the integrity of the data base as high as possible. We're doing it by using groups such as the FLECC users group, sometimes referred to as the Technical Group.

As you probably know, FLECC has a steering committee which attempts to set the policy. The policy is passed on to the users group which works at the ground level to make certain that the information is used intelligently and with the highest amount of professional integrity.

Within the system is a work coordinator, Lillian Washington, who spends about three-quarters of her time out of the office working



with libraries and librarians. She gets them started. She gets them over the initial shock of actually having a terminal in front of them, of figuring out what they really want on those cards. Then a users group takes over.

There is a permanent technical representative from each library in a users group, and we now have more than one users group. We get everyone together only as often as it's absolutely necessary. We don't want to waste anyone's time. Among the responsibilities of the users groups are training, problem solving, and continuing education. We've had several workshops and we will have more. We meet with a consortium which includes universities in the Metropolitan area. Sometimes they have expertise that we do not have, and all of us profit from knowledge sharing.

One of the most interesting and perhaps one of the best features of our users group is what we call the quality control group. When a report arrives from OCLC stating, "This library is obviously having trouble in this or that area because we have found these errors in the data base," it's up to the quality control people to get busy. They go to the library with problems and say, "We see by the

data that your library is experiencing trouble in this area and we're here to help you."

We have discussions in the users groups, and we make recommendations, whether or not OCLC likes them, or carries them out.

OCLC has several networks. There may be one in your area that you will want to contact. Among them we can mention quickly: Amigos Bibliographic Council in Texas, The Cooperative College Library Center, Consortium of Universities of the Washington Metropolitan area, five associated Junior College Libraries, and FLECC, which now is being referred to as the FLC/OCLC program. Also, we should list the Higher Education Coordinating Council, the Illinois Research Reference Network, NELINET, POLINET, Pittsburgh Regional Library Center, SALINET and SUNY.

One thing more. Systems Architects of Boston did a very thorough study of eight libraries in FLECC. It was done over a 17 week period and we believe it to be a valid study. The results indicated that the experimental procedure set up by FLECC was cost effective. It is now available for \$6.25 from NTIS, AD A013552/LK. Address: National Technical Information Service, Springfield, Virginia 22161.



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