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NUWC-NPT Technical Document 10,315
30 March 1993

AD A264 198

Proceedings of the 36th Military Librarians Workshop, 27-30 October 1992

Command Support Department



Naval Undersea Warfare Center Detachmen
New London, Connecticut

93-07892



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93-4-14-149

PREFACE

This document was compiled by the Library Division (Code 026) of the Command Support Department (Code 02) under job order 702C08.

REVIEWED AND APPROVED: 30 March 1993

B. S. Holland
Commander, U.S. Navy
Head, Command Support Department

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REPORT DOCUMENTATION PAGE

Form Approved
OMB No. 0704-0188

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1. AGENCY USE ONLY (Leave Blank)	2. REPORT DATE	3. REPORT TYPE AND DATES COVERED
	30 March 1993	Proceedings

4. TITLE AND SUBTITLE

Proceedings of the 36th Military Librarians Workshop, 27-39 October 1992

5. FUNDING NUMBERS

PR 702C08

6. AUTHOR(S)

Command Support Department

7. PERFORMING ORGANIZATION NAME(S) AND ADDRESS(ES)

Naval Undersea Warfare Center Detachment
New London, Connecticut 06320

8. PERFORMING ORGANIZATION REPORT NUMBER

TD 10,315

9. SPONSORING/MONITORING AGENCY NAME(S) AND ADDRESS(ES)

Naval Undersea Warfare Center Division
Newport, RI 02841-5047

10. SPONSORING/MONITORING AGENCY REPORT NUMBER

11. SUPPLEMENTARY NOTES

12a. DISTRIBUTION/AVAILABILITY STATEMENT

Approved for public release; distribution is unlimited.

12b. DISTRIBUTION CODE

13. ABSTRACT (Maximum 200 words)

This document contains the papers presented at the 36th Military Librarians Workshop, 27-30 October 1992, hosted by the Naval Undersea Warfare Center Division, Detachment New London.

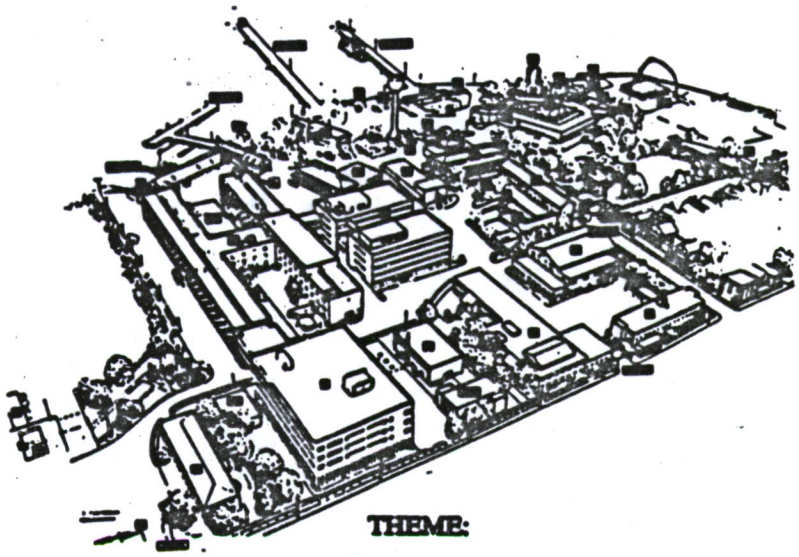
14. SUBJECT TERMS
Military Librarians Workshop

15. NUMBER OF PAGES

16. PRICE CODE

17. SECURITY CLASSIFICATION OF REPORT	18. SECURITY CLASSIFICATION OF THIS PAGE	19. SECURITY CLASSIFICATION OF ABSTRACT	20. LIMITATION OF ABSTRACT
Unclassified	Unclassified	Unclassified	SAR

36th
MILITARY LIBRARIANS WORKSHOP
27 - 30 OCTOBER 1992



THEME:

NEW AGENDAS FOR THE NINETIES

HOST:

NAVAL UNDERSEA WARFARE CENTER DIVISION, NEWPORT
DETACHMENT, NEW LONDON

NEW LONDON, CONNECTICUT

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FOREWORD

The main theme of our workshop was how to deal effectively with the "New Agendas For The Nineties." These new agendas encompass concepts such as downsizing, consolidation, and realignment. These new agendas came about due to the sinning of the Cold War and the defeat of Communism. How ironic this is since in the past, the victors were given the spoils and not expected to downsize, consolidate or realign.

The program committee had a unique opportunity in planning this workshop. Because the last Military Librarians Workshop was held in New England in 1969, we felt we had available a pool of untapped New England library resources. Mary Barravecchia was able to call upon her library school mentor, Professor James Matarazzo of Simmons College to be our keynote speaker. Professor Matarazzo was willing to speak on just about any topic we wanted him to speak on. The committee decided that with the advent of total quality management and the constant comparison with the Japanese in a competitive arena, that he should talk about his trip to Japan and his analysis of Japanese Corporate Libraries.

Committee members would like to thank our Commanding Officer, Captain Robert L. Mushen, for his welcoming address and for making available all of the Division's facilities and resources to support this workshop.

I would like to offer a special thanks to the two other members of the program committee, Mary Barravecchia and Lorraine McKinney. They were responsible for doing everything from making hotel reservations to helping me pick and wash apples on weekends. This workshop would not have been possible without their physical and emotional help.

Finally, I would like to concur with Serge Campion's recommendation to dedicate this workshop to Normand Varieur, our past chair. I met Normand at a serials workshop in Atlanta some twenty years ago and I have never met a man with such a dedication to his work and to his fellow professionals. During the planning of this workshop and the execution of that plan, Normand was in constant contact with the program committee and gave us great direction. It is extremely rare to find people who constantly give all of their energy for the common good.

David R. Hanna
Head, NUWCDIVNPT Library Division

PRESENTATION TO MILITARY LIBRARIAN'S WORKSHOP 27 OCTOBER 1992

by Captain R. L. Mushen

Good morning. This gathering has a truly international flavor. In addition to our 14 visitors from Canada, we have DoD representatives from Germany, Sweden, Panama, and Japan in attendance. So, may I add Bon Jour, Guten Morgen, God Morgon, Buenos Dias, and O-hi-o Go-zi-mas.

For those of you visiting this part of the United States for the first time, I must say that you have chosen the perfect time of year. It might be hard to sell you one of our icy Januarys or blistering Augusts, but we can boast with unrestrained pride about our New England October. It's cool and crisp and colorful.

I'm very happy that your organization has chosen the Naval Undersea Warfare Center Division Newport to host the 36th Military Librarians Workshop. The scientific and technical information field has undergone dramatic changes in this era of the computer revolution. As professional librarians meeting the challenges of modern technologies, you must be very excited at the prospect of substantive information exchanges with your colleagues.

There is a story about a 16th century librarian who defined his profession by saying that one must be <u>diligent</u> and <u>quiet</u>. Then he added, by way of reminder to his master, the Emperor, that if not of noble blood, he should be given a title to underscore the dignity of his office. Diligent and quiet can't begin to cover the required talents of today's librarian. But our 16th Century friend was "right on the money" when he said that librarians should receive special honor for the important function they perform. It is for that reason I am most happy to welcome you, and I guarantee that the Naval Undersea Warfare Center Newport Division, your host activity, will treat you in a most noble fashion.

I would like to tell you a little about your host activity. We are a division of the Naval Undersea Warfare Center (NUWC), which was officially established in January 1992 as a result of the Department of Defense consolidation efforts: NUWC has two major divisions: Keyport, Washington Division, on the west coast (the former Naval Undersea Warfare Engineering Station). And our Division, based in Newport, Rhode Island, of which New London is a part (the former Naval Underwater Systems Center). The Newport Division has 15 field sites and undersea test ranges at locations throughout the United States, as well as in Canada and the Bahamas. All of these sites together support 8000 employees.

As I said, NUWC is a new organization and we have a new mission: "to operate the Navy's full-spectrum research, development, test and evaluation, engineering and fleet support center for submarines, autonomous underwater systems, and offensive and defensive weapons systems associated with undersea warfare." In a nutshell, if it has anything to do with systems that conduct undersea warfare, it comes under our charter.

We are very proud of our organization, proud of our role in undersea warfare, and also very proud of the heritage of the entire Warfare Center. I have a particular fondness for the New London Detachment, perhaps because in the 1980's I spent two years there as Officer in Charge when it was part of the Naval Underwater Systems Center -- Newport Division's predecessor.

I understand you will not be visiting the actual Fort Trumbull site in New London during your stay here. As a tourist attraction, Fort Trumbull might not be considered particularly spectacular. But at the laboratory at Fort Trumbull, some truly spectacular events in sonar weapon research and development have taken place there during the last 50 years. I'd like to say a few words about them.

The New London Laboratory as we know it today, had its origins in 1941, when two laboratories were established to conduct research on the nature and behavior of underwater sound energy. The first laboratory, established on the present New London site, was the Columbia University Division of War Research. A sister organization known as the Harvard Underwater Sound Laboratory was established at the same time in Cambridge, Massachusetts.

The Columbia installation concerned itself with the developing passive detection devices, some of which were first used in the antisubmarine warfare phase of World War II in the Pacific. The highly successful sono radio buoy and submarine-installed listening sonars were developed at the New London site. Harvard University research, on the other hand, directed its attention to active antisubmarine warfare sonar development of the scanning type. It was there the word "sonar" (sound navigation ranging) originated.

In 1945, the sonar portion of the Harvard Lab was merged with the Columbia Lab at New London, creating the Navy Underwater Sound Laboratory, where sonar research and development continued for 25 years. In 1970, the "Sound Lab" merged with the Torpedo Station in Newport, RI, to create the Naval Underwater Systems Center. The new Center continued its work in sonar, with major breakthroughs in the area of towed array development. Weapon-related research and development conducted at our Newport Laboratory also brought about major achievements for the Center in the area of advanced capability torpedoes. As I said earlier, under a 1992 reorganization we became Undersea Warfare Center

Division Newport, where we are continuing with our tradition of excellence. John Merrill, a senior manager emeritus of New London, will share some historic facts about Fort Trumbull a little later this morning. I believe you will find them interesting. It's important to not to forget past achievements.

But our main focus must always return to the future. It is impossible to predict what the library of the future will be. But for the scientific and technical information field and indeed for all areas of government, it will be a resource-constrained environment.

1 We will be operating under a reduced budget

2 In light of that fact, you must develop new operating techniques

3 And in spite of that fact, you must maintain accessibility and user confidence

There will be a continued pressure on the Federal budget. Much of that pressure will be borne by the DoD. And in today's geo-political environment, even the once protected R&D budget will not escape the cuts. That is a fact we must face. It is the natural result of our recent international successes.

Nearly everything we do in the future will be driven by budget -- by the cost of getting the service. The topics listed on your workshop agenda reflect this fact -- how to manage in "lean times" how to operate in a "downsizing" environment.

As I said, the pressure will be on. It will be hard to keep our libraries, our information programs, from falling victim to this pressure. But we must continue to try by diligently and forcefully marketing new programs to all levels of management.

We must refocus our view of the library and its mission. We have come a long way from the archival tradition. Yesterday's function was to collect, based on probable use. Today, the function of a modern library is to manage data -- receive, store, sort, recall . . . data. The library is no longer autonomous. It is no longer administratively and programmatically isolated. R&D technology is taking phenomenal strides forward and information sciences must be an integral part of that progress. Our military libraries must be brought onto the team that works for mission success.

Libraries are only as good as the access to them is good. They can not be just a repository of information that the user cannot easily access. The good thing is that the information retrieval systems of today are powerful and efficient. But, at the same time, the computer revolution that made these more efficient information retrieval systems possible, also resulted in the burgeoning of the data to be retrieved. The volume of data

continues to increase and will increase at a greater rate now that the barriers between East and West have broken down. For example, much Russian technical literature will become available to the United States. We are already sharing in some scientific experiments. Russians have recently conducted some tests at one of our unique test facilities. At the same time that you must ensure easy access for the user, there will be massive storage requirements. The engineers and scientists who use your libraries are suppliers as well as customers. Teamwork is a key tenet of Total Quality Management. It is a symbol of the unified commitment of each element to quality standards. Networking, sharing of resources, and teamwork are the operatives of today's library.

I know you don't need to be reminded of all this. You must face these realities on a daily basis. But please remember that many of us know what you are dealing with, and appreciate how you are managing -- or should I say surviving -- in this uncertain environment. I hope this conference will serve to create new and useful alliances, reinforce pre-existing ones, and in general provide new spirit to meet the scientific and technical information challenges you will continue to meet in the future.

A story is told that Americans first discovered the importance of library science to the national defense during the Revolutionary War, when a small group of colonists, having run out of ammunition, rammed their hymnbooks into cannons and fired them at the British. There is some reason to doubt the complete truthfulness of this story, but the point I'm making is this. I spoke a few minutes ago of the critical role our Center plays in the U.S. national defense strategy by developing and building major undersea weapon systems. But what are the weapons that really keep us free? the torpedo Mk 48 that NUWC's designs and develops? the Patriot missile? the M-1 rifle? These certainly are important weapons in the nations arsenal; however our scientific and technical knowledge is our strongest, most enduring and -- in the final analysis -- ultimate weapon. The simple fact is that our national defense capability depends on the capability and accessibility of our technical information resources.

THE VALUE OF INFORMATION IN JAPANESE CORPORATE LIBRARIES

by James M. Matarazzo, Simmons College GSLIS

PURPOSE OF THIS STUDY

Information is an important part of doing business in Japan. A colleague and I traveled to Japan to study and to identify the approaches of Japanese firms in managing, acquiring, and disseminating the kinds of information they feel contribute to their success. The plan was to provide insight, perhaps for the first time, on the unique methods of information management at the exceptional firms selected for the study.

ORGANIZATIONS INVESTIGATED

In order to understand how the Japanese manage information, the investigators decided to focus on the corporate libraries and information centers in eight large organizations. The firms whose information practices we examined include:

Nomura Research, Toshiba, Sumitomo Marine and Fire Insurance Company, Nissan, NTT, Japan Development Bank, The Marketing Data Bank of the Japanese Management Association, and IHI Heavy Industry.

FINDINGS

During the course of this study, the authors found that these information centers play a substantial role in managing information within their organizations. Indeed, the libraries we visited collect, store, and disseminate information - and information is a highly valued resource in Japan.

Many of the problems which confound information systems researchers in the West, such as how to determine the value of information, are far less important in Japan. Since firms there place a high value on information, and since senior management has determined that there is value in having an excellent information center, information is considered a cost of doing business, and these information centers are well supported and heavily used.

It is a practice at many Japanese firms to rotate management through a variety of functions. The management of the information center is rotated in this fashion, and we believe this is a further indication of the high value placed on information. It provides management with direct, first-hand knowledge of the value of information and its use, as well as a

close view of the economics of information provision and distribution. In addition, by including libraries and information centers in the management rotation, it reinforces the importance of these limits.

Unlike many U.S. firms at which we have worked and studied, we observed many senior executives in Japan reading in their corporate libraries and information centers. During the course of our interviews at these firms we were assured that top management are frequent users. Many of the firms we visited have very heavily used information centers, and at several, every seat in the library was occupied.

Each of the information centers we studied was closely aligned with the strategic thrust of the firm. These libraries and information centers are designed and staffed to support the firm's direction. At one firm, where sales are key, 97 percent of the staff effort in the information center is directed at supporting salesmen in the field.

What the executives and managers at these firms have done is first to determine that information has value and second to make arrangements for the provision of information. Perhaps especially important, individuals in these firms share information. Much of the sharing is funneled to the library and the information center, evaluated and distributed to everyone at the firm. Thus, the reward system is structured to encourage information-sharing for the benefit of the organization as a whole.

This system makes maximum use of internal, external, and shared information. It certainly makes it easy for everyone at these organizations to exploit information. Executives and managers have taken responsibility for their information needs as well as those of their own staffs and have established appropriate mechanisms to meet these needs.

These firms manage information. In the U.S. information management and information technology are often misunderstood. While technology has changed the way information can be acquired, stored, and distributed, it is a tool that assists in the management of information in Japan. The crucial point is that the information is the focus in Japanese libraries, and not the technology.

While the technological applications are highly prized in these firms, the value of information technology is in its application to the management of internal and external information. Thus, information management is not viewed as a subset of a technological function.

IMPORTANCE OF THIS STUDY

As our economy becomes even more competitive internally and globally, the need for external business and scientific information will increase. As the technology is easier to use, organizations will channel their energies toward the management

of information and how it is best managed for success.

The authors believe that the models provided by Japanese corporate libraries and information centers are capable of adaptation to the U.S. Indeed, we present our findings to managers, especially information professionals, with an eye toward helping them become better information managers and develop effective management practices for information within their organizations.

IMPLICATIONS

For Western firms, especially American firms, there are a number of implications which can be drawn from this study. These are:

- Information management involves focusing on relevant information that is generated outside, as well as inside, the organization. The value of this information is often found in its timeliness, relevance, and effectiveness in advancing organizational goals.

- While Japanese culture encourages effective information management, firms in the West can improve their own information usage by establishing processes and policies for better managing all their information resources.

- There is little value in trying to cost-justify information management practices, since information is a necessary cost of doing business in today's global environment.

- Information services should deliver specific products and services tailored to the needs and strategies of the organization and not strive to be all things to all people.

- Executives and managers need to take responsibility for their own information needs and establish internal operations for meeting these needs.

As Peter Drucker recently wrote:

> We are just beginning to raise the vital question "What information do I need, and in what form, and when?" I am not suggestint that we ignore developments in hardware and software. But I am saying that, increasingly, hardware and software are going to be less important than the use we make of them defining and exploiting information.

Peter F. Drucker, "Viewpoint: What Executives Need to Learn" (Cambridge, MA: Arthur D. Little's PRISM, Fourth Quarter, 1990): 73-84.

For more information see:

Lawrence Prusak and James M. Matarazzo, Information Management and Japanese Success (Washington, DC: Special Libraries Associatin, 1992).

This research project was sponsored by Special Libraries Association, Ernst & Young, Disclosure Incorporated, Lord Corporation, and the Emily Hollowell Fund of the Graduate School of Library and Information Science at Simmons College.

MANAGING IN LEAN TIMES

by David W. Lewis, Head, Research and Information Services Department, Homer Babbidge Library, University of Connecticut

INTRODUCTION

I am pleased to be here. First, because a year ago *Library Journal* published an article I had written entitled "Eight Truths for Middle Managers in Lean Times". Any of you who have published know it is always a bit of a rush to see your name and ideas in print, especially after a good copy editor has had at your prose. But it is a special honor when what you write strikes a chord and results in invitations, like the one you have extended to me, to speak to colleagues and peers. So I thank you for the honor you have extended me this morning.

Secondly, it is always enjoyable to talk to groups away from home where you can pretend certainty about issues that befuddle you on a day-to-day basis, and you suggest truths without having to live up to them.

My talk this morning is entitled "Managing in Lean Times". I must confess that I don't know much about military libraries. My experience has been wholly in academic institutions. I will talk this morning from that perspective. I suspect, but do not know, that we have much in common. I hope you find my remarks useful.

I work for a state university less than a hour's drive from here. In case you haven't heard defense and insurance are Connecticut's two major industries. Neither is doing particularly well. I don't know if the nation has suffered through a recession for the last few years, but there is no doubt that my state has. In that last three years my library has lost 15% of its positions — nearly 20 people. Most were to early retirement, but when the governor was banging heads with the unions, we sent out lay off notices. This week the talk is of another six million cut out of the university's budget for next year. The last several years have been a difficult ones. Unfortunately, when I see my friends and colleagues from other states and other parts of the country, their stories are similar. No library I know of is doing well.

But as I see it, the current economic situation is only part — and probably the less important part — of our current problems. If we view the problem as simply surviving a temporary economic downturn, I fear that we will miss finding the answers we need. The first important thing I want to tell you this morning is that today libraries would be facing lean times even if our country were not in the midst on an economic recession. We, for better or worse, find ourselves at a moment in history that would challenge us regardless of the fiscal strength of the governments and communities that fund us.

Knowledge, or at least information, has become a commodity, and the perveying information has become a major industry. The technologies that have served us well for a hundred years are being replaced and we are all struggling to preserve the best of the old, and at the same time are desperately trying to find the means to invest in the future. The possibilities are confusing, both to us and those who fund us, and no one has enough money for both the new and the old. This dilemma is the true cause of the pressures we feel, and it is to these circumstances that we must respond.

This morning I would like to do two things.

1. First, I will outline the organizational realities that libraries and librarians currently face.
2. Secondly, I will suggest what I think we must do if we are to successfully confront this situation we find ourselves in.

It is funny, but even though I work for a state government that has been battered over the last several years. On most days I am an optimist. I have come to believe that the difficulties and dilemmas we face today will in the end make our libraries better, more effective, and more important organizations. And in the end we will find our jobs more satisfying. Unfortunately, I have also come to believe that the road from here to there will be difficult, and frankly not much fun.

PART ONE: THE ORGANIZATIONAL REALITIES

The organizational realities as I see them are four:

1. The tools of our trade are in the midst of radical transformation.

2. If you don't change the way you are doing things, the quality of what you do will decline.

3. Declining organizations continue to decline.

4. The only way to get resources is to convince the people with the money that what you are doing is important.

Let's look at each of these realities in turn.

THE TOOLS OF OUR TRADE ARE IN THE MIDST OF A RADICAL TRANSFORMATION

I don't want to dwell to much of this, because to me at least, it is an obvious truth. William Arms, the vice-president for academic services at Carnegie Mellon University was quoted in the *Chronicle of Higher Education* two months ago as saying, by the end of the decade "all science and engineering publications will be available electronically. A first-class science and engineering library without paper will be possible then." I don't know — but I am not betting against it.

Think about the changes in your own career. In 1978 Wilfred Lancaster published *Towards Paperless Information System.* That year I set up the first online search service at Hamilton College. We subscribed to BRS. Today my library's CD-ROM LAN is more powerful that BRS was then. I do today on two 386 LAN servers and a couple of dozen

workstations I do what fifteen years ago was done by one of the most powerful search systems in the world.

We all know the scholarly journal system in paper is a dinosaur. I learn more about my professional world from listservers than from journals . And the Internet is our frontier. As my favorite sage Paul Simon says, "these are days of miracle and wonder." Some times I walk through my reference area in awe at the tools I can put before the students and faculty at my university. Sometimes it seems to me to be magic.

IF YOU DON'T CHANGE THE WAY YOU ARE DOING THINGS, THE QUALITY OF WHAT YOU DO WILL DECLINE

This is a fundamental truth about all organizations. There is a popular bumper sticker, which I have noticed increasingly is finding its way into the offices of friends and colleagues, that says, "If all else fails lower your standards." The important thing to understand is that if you don't change the way you are doing things when either resources are declining or when demands are increasing — and if you are like me you are currently living with both — then the standards, the quality of your services, will decline whether you like it or not. This is not something you can choose. It is not a matter of free will. Quality is what will go — period.

This is not hard to understand. You can't do more the same way with less. The hard thing is to remember this on a daily basis, especially if you are in a small operation, where the failure reflects on you personally. You will just work a little harder. We'll just do this one more thing. It will work. You may get away with for a week or a month, but over the long haul you will come up short. In time, things will slip. You won't have time for quality. Standards will decline. It will happen. It is inevitable. And it will not be your choice. If you so not change the way you work, quality will decline.

DECLINING ORGANIZATIONS TEND TO CONTINUE TO DECLINE

Again, I take this as a fundamental truth all about organizations. Once decline begins, the organization will spiral down. Maybe slowly at first, but it will continue and before long it will be noticeable. In libraries the important reason for this is that we are service organizations. The most important resources in a service organization is staff who care about the public and the quality of what they do. As decline begins, these staff will feel it. They will know that they can not do the job for the users the way they did last week. It this situation they end up explaining failure rather than assisting with success. This not fun, and the people who can will go, and those who are left will "burn out".

Very quickly the users and the funders notice that your not doing the job the way you did and when push comes to shove you get a little less money. And so it goes —down and down. A little less money and the the decline continues. Importantly, in these times if you are not advancing, you are declining.

THE ONLY WAY TO GET RESOURCES IS TO CONVINCE THE PEOPLE WITH THE MONEY THAT WHAT YOU ARE DOING IS IMPORTANT

I use to say that there was no more money, but this is not really true. Universities, towns, and even Northeastern states, and certainly the federal government have money. The problem is that they don't have enough money to do what everyone thinks is important.

This means that you better be doing important things — very important things. And you better be doing them well. And the people with the money better be noticing.

There probably was a time when being a "good" thing was enough. But if there was, it is gone. Today you need to be able to show how you made a difference — specifically. Marketing, public relations, and lobbying are not unimportant, but what really matters is that you are getting the job done.

So, where are we. The truth is that:

1. If we don't change in the face of declining resources and increasing demands, quality of what we do will decline.

2. And if quality declines, it will continue to decline.

3. And if you are not doing important things well, you will not get any additional resources.

4. And the technologies you thought you understood are changing, and the means that once guaranteed the end, may not get you there any more.

Depressing? Yes. I hope my title didn't lead you to believe that this morning's talk would be uplifting affair.

My rule of thumb these days is that I have to have either money or leadership. Since I don't have much money, leadership is required. What I will talk about in the time I have remaining is simply good management practice, good leadership. I would probably make the same recommendations if we were to gather again in good times. The important thing to understand about our current circumstances is that today we don't have any choices.

Let me give you a laundry list of suggestions.

PART TWO: RULES FOR MANAGING IN LEAN TIMES

1. YOU HAVE TO CHANGE

You can't just go about business as you have done in the past. None of us can. It is probably a good thing — one of the redeeming aspects of contemporary librarianship — that we have no choice. The situation we are in forces us to move when we might otherwise be hesitant. Like Butch Cassidy and the Sundance Kid, we will find that jumping off the cliff is really not difficult when there are no alternatives.

I would argue you need to have some of your resources dedicated to change — to new programs. I don't care what you have to give up to make this possible. New programs and better ways of doing things are what growing organizations are made of. Put aside 10% or 20% of your resources for new programs or to invest in changes to current operations. Make one of these new ventures your highest priority. If the verb in any of our top five goals for this year is "maintain", you are in trouble. You're not growing. And if you don't grow you will die.

Of equal importance is the need to change to demonstrate that you are in control, that you have the power to shape what you do. It is the only way to empower yourself and your

staff. If you can't do anything else, move the furniture. If you don't like the way it looks move it back. Change is empowering, in these times you need to be empowered to survive.

2. STAY FOCUSED ON WHAT MATTERS MOST (DO IMPORTANT THINGS)

Since you won't have the money or the staff to do everything and you gave up our truly unimportant activities a long ago, you have to stay focused on what matters most. The things that are important.

This is very different than deciding what are the less important things that you will give up. A strategy that focuses on the what to give up will not work. Everything you try to forego will have a defender who will fight to the bitter end for what you hope to avoid doing. Rather what is required is to decided positively what you will do well. Get that done and don't worry about the other things you don't get to.

Doing important things is only possible if you know what matters most. To know what matters most you need to know who you are, who your clients are, and what they think is important. Every book on successful business strategy ever written says defining what business you are in is critical. It is. You need to get to know your users. It is what they need that is truly important. Most of us don't know our users very well.

Let's have a show of hands —

- How many of you have conducted focus groups of library users in the past year?
- How many of you have conducted "exit" interviews with users who are leaving your institutions in the past year?
- How many of you have done a user survey or questionnaire or a transaction log study of your online system in the past year?
- How many of you are certain you know what your users want?
- How many of you are certain you know what they need?

What does this tell us?

I will digress a little here to tell you what I know for certain about library users. By the time users come to they have exhausted all other alternatives. They are desperate. They have asked all of their friends. They have check their reprint files and their book shelves and have come up empty. No one goes to a library first when they need information or an answer to a question. I bet you don't and I know I don't. Why is this so?

It is so because libraries are time consuming and difficult to use, and most importantly because the results of investing time in using a library are uncertain. Studies of the accuracy of responses to reference questions repeatedly find that 50% to 60% correct responses is what libraries deliver. Availability studies repeatedly show that 40% to 50% of the documents that users seek are not available, even though most of the documents are owned by the library. If you have never done an availability study, I strongly recommend it, but it is not for the faint of heart.

The combination of at uncertain result and the time investment required to use a library means that the information sough needs to be very important and there needs to be no other way to get it before using the library is a sensible thing to do. As librarians we invariably undervalue the users time. In academic and public libraries we generally ignore it entirely. But I suspect it is true in other places. More importantly, we almost never see the

uncertainty in the way our libraries work, or understand how this uncertainty compounds the investment needed to produce a result. I wager that if you listen to your users they will tell you these things.

So much for the digression. Now back to the laundry list.

3. GET AND KEEP CONTROL OF YOUR RESOURCES

This has two parts. The first is that you have to have control of how you spend the budget that is allocated to you. If you have a budget, but you can't spend it the way you want to, its not your budget. You need to have flexibility. If you can only spend your online budget online and your book budget only on books, you don't have enough flexibility. These days you need room to maneuver. Fighting to gain discretion over resources is one of the most important battles you can wage.

The second part is that you have to be willing to brake with past practice. Remember that you have choices and that all of your choices have opportunity costs.

The opportunity cost of a project is the value you might have generated if you had done something else with the resources required for the project you choose. You should always be aware of what you might have done that would have of more value to your users. I find it valuable to list all of the things I might do; figure out which ones will give my users the most benefit, and work down the list until I run out of time and money. Another approach is to stop before you sign off on any invoice larger than $500 and ask explicitly, "Is this most important thing I can do with this money?" If it is not, do the other thing.

Even these days most libraries do have a fair amount of money. Not enough to do everything, but there is usually enough to do at least some of the important things. The hard part is to decide to do the truly important things and to give up what is established, but which provides less benefit.

4. DON'T HEARD CATS

This is also a resources issue. I have a colleague who likes to say that managing librarians is like trying to heard cats. It's an interesting image. You don't have to be a "cat person" to imagine the confusion and chaos and humorous helplessness of trying to get a dozen felines headed in the same direction. I suspect everyone who has managed independent professionals must, at least occasionally, feel this way.

But think about a pride of lions on the hunt. Its a very different image. Now some may say that the pride works effectively because all the males have been left at home. I don't know, but I prefer to believe that the pride functions effectively because the groups goals have been internalized by the individuals in the group. The talent and energy of each individual is direct toward a common aim. This is that way a library staff — or any group of professionals — needs to function if they are to be effective.

As a manager of professionals one of your most important tasks is to get the professionals who work for you to internalize the goals of the library. Then you can leave them alone confidant that they will exercise their professional judgement in ways the will further the work of the organization.

For me the only way to do this is planning. Some will say that planning in these uncertain times is not worth the effort. They are wrong. The most important part of a planning process is that it sets the goals that guide the work of professional staff. A good planning process also goes along way to having the goals internalized. You should set and review goals at least once a year, and do task level objectives more often.

An auxiliary benefit of setting and reviewing goals and objectives is that you get a clear picture of what you have accomplished. It is too easy these days to forget that some things really do get done. Make it a practice to remind yourself, your staff, and the people who fund you of what you have accomplished at least once every six months.

If you are hearding cats rather than leading a pride, the problem is yours. You had better change.

5. THE "VISION THING" IS EVERYONE'S JOB

It is easy to assume that vision is someone else's responsibility. Is it your bosses failure if the library's goals are not clearly articulated, or if they are they sound like apple pie and motherhood — "to serve the information, research, teaching, and other needs of the your community, the state, the nation, and the world." It's not your problem, right? Wrong!!

If your administrators don't have the energy or the time to provide leadership, then you, no matter where you are in the organization, have to do it. I've come to believe that these days even reasonably good administrators are too busy managing survival to worry about vision. In addition, they are often separated from the the day-to-day.

Vision needs to be firmly rooted in todays capabilities — in CD-ROMs, LANs, on-demand journal article services, and electronic mail. You want the future to be built upon what you think is important. And you are the one who knows. So vision is your problem. It is your problem to provide it where you can and to push it up the ladder. If you are not willing to accept this responsibility, I'm not sure much else matters.

An important corollary is that you need to come up with solutions. If you have to take a cut, make the case to do it your way, don't let solutions be imposed on you. Don't wine about what you can't do, propose what you're going to do with the resources that are left.

6. KEEP YOU MESSAGE SIMPLE AND REPEAT IT OVER AND OVER AGAIN

Having accepted the responsibility for vision, learn from Ronald Ragan — keep the message simple and repeat it at every opportunity. I have four messages for my boss:

1. The people in my departments work hard.
2. My department does what is says it will do; we can get the job done.
3. Demand for our services is up; our primary clienteles need what we do.
4. Given a choice we always prefer the electronic alternative because it will work better.

My boss has a lot to worry about, so I keep it simple and unambiguous. I suspect he gets tired of hearing this, but he is not confused about where I stand. When push comes to shove, he knows the choices I would want him to make. And usually, he he decides correctly. Administrators live busy and confused lives. You should work hard not to

unnecessarily add to the turmoil. You have to be an advocate. A clear message makes advocacy easier. So be clear and simple and consistent and never miss a change to get your pitch in.

7. MAKE SURE YOU CLEARLY DEMONSTRATE WHAT YOU CAN DO AND WHAT YOU HAVE ACCOMPLISHED

There is a concept in the management literature called "visibility of consequences". It means that you can see the results of actions — you can determine whether what you have tried works or whether it doesn't. In most libraries the visibility of consequences is remarkably low. Its almost impossible to tell whether anything we do matters. As a result most of what we do we do on faith. These days faith is stretched thin; it is not enough to sustain staff moral or to convince anyone to give you money.

Raising the visibility of consequences of your operation is key if you are to acquire more resources. You have to be able to show that the last time someone gave you some money you spent it well and that it had an impact. This is also useful in maintaining moral. Making the results of your staffs hard work visible is an important part of your job. They need to know that what they are doing matters and that you and the administration know it. Unfortunately, raising the visibility of consequences almost always means counting things — reference questions, CD-ROM slots booked, microform copies made, books cataloged, books reshelved. Many librarians hate counting. This dislike of quantification is misguided.

Every month I do a report of my department's activities. It is long and full of numbers. At the beginning I highlight a series of key indicators of our activity comparing this month with the same month last year. We can see that instruction is up and we know who did the sessions. We know that the number of CD-ROM slots booked by users are up. We knew that without counting because we watched the lines grow. But the fact that it was up 1,000 slots, or 35%, over last year makes it real to my administration.

A secondary benefit is that what you count and what you report is an easy and clear way to indicate what you care about. This is a valuable tool for informing your bosses and your staff about what matters to you.

8. REMEMBER THAT LIBRARIES ARE THE INSTITUTIONAL INFORMATION SUBSIDY

The ideas that follow are new to me and are not fully developed, but I offer them anyway.

Michael Buckland has written, in the book that gets my vote for the best 80 pages on library practice written in the last several years, *Redesigning Library Services: A Manifesto*:

> The long period of relative stability from the late nineteenth century up to the 1970s in the means for providing library service is just the kind of situation in which it becomes easy for the distinction between ends and means to become blurred. So long as there is but one principal means to an end (even with variations in details and in scale), more of an *end* is achieved by more on the *means* and the distinction between ends and means has little significance in practice. But this blurring of the distinction hinders dealing effectively with alternative means if and when — as now — they become available. (page 4)

We have new means and our job is to fit the power to the ends we serve. I would like to argue that end for libraries are is to be the organizational or community subsidy for information.

This is an economic argument, and I can make the argument more technically, but I will spare you that. The notion is fairly simple — by pooling resources an organization or a community creates a subsidized information source which, because of the subsidy is used at or near the efficient quantity and the benefit to the community or the organization is maximized. It can be shown that without a subsidy the likely result will not provide the maximum benefit to the community or organization. This is what has happened with most commercially published science journals.

For the past hundred years or so the most effective means of providing the subsidy has been a collection of publically available printed books and journals — usually in a library building, usually with librarians keeping watch.

The case I would like you to consider is that this is no longer the only and maybe not the most effective means of providing an information subsidy. Is free or almost free access to a commercial online service better than a collection of paper books and journals? A welfare economist will tell you that food stamps and better than soap kitchens. At what point is the library as we have known it the soap kitchen? At what point are credits towards the use of an online information services food stamps?

If what libraries do is to provide the information subsidy for our communities and our organizations, how best is that subsidy provided? Where in the system does a subsidy produce the most impact — the most benefit. I have no answers yet. But I am convinced that this will be one of the most important question librarians will need to ask, and to answer, over the next decade.

9. STAMINA IS REQUIRED

During the Second World War the army studied the men who had received battlefield promotions; they hoped to find out something about leadership under fire. What they discovered was that those who demonstrated leadership in battle were smarter than the average, but only by a little. They were older on average, but again this was not really a significant variable. One factor emerged overwhelmingly; the factor that mattered most in battlefield leadership was stamina. But if you are like me, you didn't need an army study to tell you that.

CONCLUSION

As I said at the beginning, I do not think getting from where we are to where we need to be will be easy or much fun. Having said that let me leave you with a more optimistic version: if we don't weaken, we have the tools at hand that will allow us to change our world and in the process to do remarkable and important things.

I wish you all luck.

Thank you.

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FORT TRUMBULL - NEW LONDON, CONNECTICUT: A NAVY HIGH TECHNOLOGY SITE, 1917-1918

by John Merrill

FORT TRUMBULL - COLONIAL PERIOD

In 1775 with increased military action against the colonies by the British, the Connecticut Council of Safety recommended fortifications be built for the [illegible] New London on the west bank of the Thames River and Groton on the east bank. At that time, New London with a population of about five thousand was the third largest town in the Connecticut Colony.

During the next two years, two earthworks type forts were constructed by relays of citizens and recruits from the countryside. The fort on the New London side was located about two miles north of the mouth of the river where it flows into the Long Island Sound; the fort site on the east side of the river or Groton Heights was opposite and just slightly to the north. This first New London fort was south of the town. Today, the fort area is surrounded by New London on both the south and west. The rocky point location for the fort rises at some places to about thirty five feet above the river bank. In early times, the location was called Point Mamacock. Later is was sometimes referred to as Fort Neck.

It has been suggested that in 1637, the same site was the location of the first English houses in the area which later became New London. The house or houses are said to have been built at the initiative of a Captain Stoughton. In June 1637, Stoughton with one hundred twenty men from Massachusetts Bay Colony arrived at Pequot Harbor (New London) on an expedition to exterminate if possible the Pequot Indians.

The fort on the New London side of the river was a rectangle about eighty feet on a side with earthworks on the north, east and south sides and open to the west. The heavy cannon were cast in Salisbury, Connecticut about 75 miles away in the northwest corner of the colony near the New York Line. The first fort at Point Mamacock was named in December 1775 for the current colonial governor of Connecticut, Jonathan Trumbull. The fort on the high ground on the east bank in Groton was named Fort Griswold for the then deputy governor, Matthew Griswold.

Fort Trumbull was manned and in March 1778 was strengthened and repaired, while additional batteries were added. On September 6, 1781, Benedict Arnold, British brigadier general, led an expedition against Forts Trumbull and Griswold. Arnold a native of nearby Norwich, Connecticut and former Continental Army brigadier general was well acquainted with the locale. Captain Adam Shapley, Fort Trumbull's Captain of Artillery, shot one volley, then followed orders to spike his guns. He then took his 23 men across the river to aid Fort Griswold which was also under siege. Less than a month later on October 19, the British armies surrendered at Yorktown, Virginia.

After the revolution, Fort Trumbull continued under the aegis of Connecticut. During President Washington's second term, in 1794, Sieur de Rochefontaine, who fought with Washington's Continental Army, was appointed Civilian engineer to fortify certain harbors along the coast including New London, Connecticut. Money was authorized by the 3rd Congress to upgrade the Fort. Details of garrisoning for both peace and war were established. In October 1798, the Connecticut General Assembly ceded the Fort to the United States Army. This stewardship continued until 1910.

NINETEENTH CENTURY

Starting in the 1830's, the United States undertook the building of a series of strategically located forts. The forts were to provide long term security against invasion. Collectively they were referred to as the permanent system.

A new Fort Trumbull was included in this new fort system. It was to be located in the area nearby the site of the 1775/77 Revolutionary fort. It was located on a hillock slightly south of the original construction. The new fort would be constructed of granite from the nearby quarries and in the time of Egyptian Revival style which was currently popular at the time. Increased land was purchased for the War Department by and Act of Congress. Further land was also ceded to the United States. By the end of the century, the total area of the fort was about twenty acres.

Senate appropriations in the order of $400,000 were approved in 1836 for the new fort. Construction of the granite fort was begun in 1836 and completed in 1854. An original painting of the fort by Seth Eastman in the 1870-75 period was hung in the Capitol in Washington, DC.

As the century moved on, Fort Trumbull was overtaken by technological events. Coast artillery to resist invasion changed in capabilities such as range and placement. New forts and emplacements moved closer to the sea. After the

turn of the century, Fort Trumbull and the adjoining real estate became available government property.

TWENTIETH CENTURY

Fort Trumbull and the adjacent acreage have coves on the north and south sides of the promontory. The coves are manageable for small boats, and piers on the river can accommodate a wide range of ships. Extensive nautical use of the fort area began in 1910 with the arrival of the United States Revenue Cutter Service at Fort Trumbull.

Revenue Cutter Service* ships, shore personnel and cadet corps became the primary tenant at Fort Trumbull (no army). The following year, this use of the Fort Trumbull area was formalized with a transfer of Fort Trumbull from the War Department to the Treasury Department. In 1914, the Revenue Cutter Service's officer school at the Fort was designated as the service's academy. This location for the academy was used until 1932, when the present United States Coast Guard Academy was opened at a site also on the west bank of the Thames River in New London, about two miles further north. Overall, the Coast Guard has had a continuous presence since 1910. The kind, size, and scale of the activities have varied.

WORLD WAR I

After the outbreak of World War I in August 1914, Germany's first merchant steamship sinking by submarine occurred October 26, 1914 bringing attention to this form of warfare. America's attitude toward the German U-boat sinkings hardened when on May 7, 1915, the British liner Lusitania, on its way from New York to Liverpool, was sunk off the coast of Ireland by two torpedoes fired from the German submarine U-20. The Lusitania sunk in twenty minutes. In the sinking, over one thousand lives were lost including 128 United States citizens.

Concern regarding the U-boat menace and United States military preparedness led to the establishing of the Naval Consulting Board in July 1915. The Board brought together some of the countries senior inventors and engineers (including antisubmarine considerations. The Board's structure and deliberations did not include the membership of either the American Physical Society (physicists) or the National Academy of Sciences.

The U-boat sinkings continued and by the end of 1916 Germany had 102 U-boats. During 1915 and 1916, unrestricted German submarine warfare by the U-boats was an off-on affair somewhat dependent upon the American diplomatic pressures and their reception by the German government and military.

The Naval Consulting Board addressed the submarine threat with a Special Problems Committee investigating submarine detection. By 1917, a research activity for the development of sound detection devices was in operation on the coast of Massachusetts east of Boston at Nahant. Industrial scientists and engineers from General Electric, American Telephone & Telegraph, and the Boston based Submarine Signal Company were engaged in the research and development efforts.

NEW LONDON AREA 1917

The declaration of war against Germany on April 6, 1917 generally increased the scope and scale of several activities in the area. The Navy with twenty first line submarines instituted the United States Navy Submarine School in Groton across the river from New London at the site of the Navy's New London Coaling Station. The Coast Guard transferred to the Navy for the duration of the war which increased the activity at Fort Trumbull. The Electric Boat Company*, a submarine builder since the turn of the century, owned a subsidiary the New London Ship and Engine Company in Groton. Diesel engines for ships and submarines were produced at that location since 1911. Orders for submarine diesel engines for new construction for both United States and Great Britain provided further stimulus to the industrial activity.

NATIONAL ACADEMY OF SCIENCES (NAS)

A year earlier, George Ellery Hale, one of the country's leading academic scientists as spokesman for the National Academy of Sciences, offered the services of the membership to President Wilson. Until this time, the academic physicists had not been involved in the search for solutions to military technological problems. In April 1916, the President accepted the Academy's offer to help. In response the NAS set up the National Research Council made up of some NAS members and military representatives.

On January 9, 1917, Germany renewed its unrestricted submarine campaign. The following month the Navy asked the National Research Council to develop submarine detection devices. The committee addressing this effort was chaired by Robert A. Millikan, a well known physicist from the University of Chicago on duty as an Army officer. By the end

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*In 1915, the United States Revenue Cutter Service and the United States Lifesaving Service were brought together to form the United States Coast Guard, continuing under the aegis of the Treasury Department.

of June 1917, the Navy authorized the National Research Council to start research at New London with a staff of academic professors. An initial staff of six academic scientists and Millikan met at the Mohican Hotel in New London to discuss a submarine detection device that had been recently brought form France. The academic scientists who came to the Fort Trumbull area to work occupied buildings on the cove south of the Coast Guard facilities at Fort Trumbull.

Fiscal support for the initial research and salaries at New London was from academic and professional scientific organizations. Vannevar Bush, one of the researchers, was supported for his work in New London on submarine detection equipment by a J. P. Morgan firm. Academic institutions represented included Harvard, McGill, Yale, Wesleyan, MIT, Cornell, Chicago, Rice, Columbia, and Swarthmore.

By early July 1917, Max Mason, a member of the New London research team and a mathematician from the University of Wisconsin, had conducted experiments both in the lake at Madison, Wisconsin and on a dock at New London with an underwater sound detector he invented. This detector was considered in some circles at the end of the hostilities to be the best of those available to the allied navies. Many of the researchers had come to New London from significantly scientific and academic careers and after the closing of the research activity in late 1918 went on to continuing scientific achievement in several fields of science. Two would receive Nobel prizes: . A. Millikan in 1923 and P. W. Bridgman in 1946.

*Construction of submarines at the Groton location by the Electric Boat Company began in 1925.

President Roosevelt, as assistant secretary of the Navy during World War I, also had involvement with the research activities at Fort Trumbull. Early government support for the work was limited. In October 1917, Roosevelt was concerned with the transfer of funds for research on submarine detection devices. The Navy released $300,000 in support of the research. On October 12, the Navy took over the research effort; and the location was designated the Navy Experimental Station at New London.

Research and experiments at the Station included Navy aircraft planes and dirigibles. The seaplanes were located at the cove south of the Fort. Training of Navy personnel in operating the detection equipment, listeners school, was another aspect of the activities at Fort Trumbull. By

November 1918, the Station included laboratories and test facilities for thirty-two professors, three submarine chasers, three yachts, a destroyer, and more than 700 enlisted men.

A destroyer, USS Jouett (DD41), arrived at New London on January 15, 1918 for experimentation with antisubmarine devices. The Jouett continued experimental work at New London until June 4, 1918. The Jouett was fitted with the most sophisticated World War I non electric binaural listening system. The destroyer was able to track a target submarine at ranges of 500 to 2,000 yards while it was operating at speeds of 20 knots.

In 1950, in his autobiography Millikan observed regarding the Experimental Station, "long before the war closed, the New London Station had practically absorbed the Nahant Station and become one great center of antisubmarine and other naval experimenting, all done after the beginning of 1918."

The Fort Trumbull site for the submarine detection research provided a waterside location with reasonable access to open water and proximity to the Navy's Submarine School across the river several miles to the north, while the Electric Boat Company's submarine engineer subsidiary was within view on the east bank of the river in Groton.

The end of the War in November was followed by the closing of the Navy Experimental Station. However, many of the assemblage of scientists* who comprised the resident, visiting and technical managers of the research at Fort Trumbull would during the next two decades grow in stature and prominence at both the national and international level, some in academia and some in industry. In 1940, when the submarine threat again became more menacing, they provided the core of the leadership which again returned the Fort Trumbull area to a high technology site.

A theme promulgated by Hale in engaging scientists' participation in the war effort was need for independence in the work in support of the military. A. Hunter Dupree, in 1957 Science in the Federal Government, noted, "As the war went on, more and more of the NRC's program went over to

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*During World War II, some of the important scientists and engineers who had experience during the antisubmarine research of 1917-1918 and became involved in the extensive antisubmarine and pro-submarine research, development and implementation include: M. Mason, R. A. Millikan, F. B. Jewett, E. H. Colpitts, and Vannevar Bush.

military control... less capable of initiating projects, depending increasingly on the assumption that the military knew what to ask for." The need for independence was not lost on Vannevar Bush, one of the 1917-1918 researchers, in 1940 as he organized the national scientific and engineering resources to meet the German threat.

ORGANIZING THE WORK OF THE LIBRARY IN AN ERA OF DOWNSIZING

by Robert Leaver, Senior Consultant, Organizational Future

Preamble

Listen to this talk from the perspective of a consultant. These are the questions I would pose to a client if he/she were called into a library to help out. The questions reveal what I would look for to help a library move forward in an era of downsizing. As we proceed, keep in mind that to downsize is to grow small. Growing small is a strategic process and an opportunity to do things differently.

Questions to Pose in Managing Change and Strategic Planning

The questions correspond to the visuals that follow.

1. Is the client aware that change is the new norm?

   We are living in an era where change is permanent white water. Stability is the exception and chaos the rule.

2. Where is the library in the cycle of birth, zenith, and decay?

   The organizational life cycle is natural, inevitable and forever. You do not pass through the cycle just once; it is repeated over and over. Healthy organizations welcome the movement through all three phases and realize that decay cannot be bypassed. Decay is rich compost for new growth.

3. Is there a powerful vision bubbling within the library?

   Vision is the achievable dream. Vision describes what the organization will accomplish, it is not a slogan like "be the best." A sound vision must paint images, tell stories, speak to the heart, and state intended results.

4. Which structure will best support the vision?

   Structure is the way work is organized and the lines of accountability laid out. There is no one right structure; it is customized to the vision. A variation on, or combination of, two structures is most prevalent. These typical structures are the Greek temple (a functional

bureaucracy) and the basket weave (a flexible, cross-functional way of working). Libraries must have a little of each.

5. Is the time horizon of each level of the library articulated?

   Does the director hold (as she should) a 20 year vision? Are there redundant levels? The rule is that no organization needs more than seven levels and seven levels are required only if the person at the top has a 20 year vision. If the number of years in the highest level vision is less, reduce the number of levels. With a 3 to 5 year vision, design only four levels.

6. Are accountability and authority clear?

   Do people know the weight they carry and the results for which they must account? What decisions are they authorized to make? Would a position description that details the role and boundaries of the position make sense? A position description defines the space in which a worker can roam, unlike a job description which specifies all of the processes or activities a person must undertake.

7. Is the client ready to form action teams?

   A basket weave structure is more conducive to teams than a Greek temple. Teams help when a library realizes that no one person has all of the truth essential to shaping the whole picture. Through a circle each truth is honored and thus multiple truths form the basis of teamwork.

8. Is the client ready to work with the creative tension of paradox?

   Paradox brings together two apparently irreconcilable statements. When the statements are alone each has merit; put them together and trouble appears to be brewing. Yet, in paradox, the essences of the two statements are "secretly at one with each other." Go to the middle of the statements and work with the tension you will feel there. Paradox is essential for shaping the complexities of a structure or workplace culture.

9. How can you work with the differences embedded in the psyche of people?

   People think and plan differently. This is the message of Carl Jung's "psychological type," James Hillman's "Four Divine Natures," and the work of the Myers Briggs Type Indicator.

10. How do you teach the axiom that everyone changes at their own pace?

    Some people accept immediately -- start with them instead of trying to convince the resistors. Use the early acceptors to teach the next group and so on, ultimately building a wave of change. Change is a transition from an ending to a desired future. To get to the "goodies"of the new end state, you have to pass through the neutral zone (the wilderness or the bog). In any change process people will be at all points on this path.

Containing and Directing the 4 Divine Natures

Typical distinctions, attitudes :

EXTERNAL	INTERNAL
Object is primary	Self is primary
How do I relate to "that" out there ? – Push your energy into the world	How does "that" out there relate to me ? – Pull energy wanted from object
Breadth, activity	Depth and contemplation

Ways of processing and deciding :

PERCEIVING (open)	JUDGING (closed)
Positioned to receive lots of information	Making decisions based on strategically collected information
Reality comes to you	Moving to affect reality
Flexible and changing	Organized and structured

Our Four Divine Natures - the "whole psyche" in which a person moves and imagines

SENSATION - 5 senses	INTUITION - 6th sense
• Attending to physical reality and matter	• Attending to the possible, especially spirit and vision
• Here and now -- the visible	• The light, the invisible, the swift
• Facts, details -- the concrete	• Focus on things as they could be, often saying : how can we improve ? What's the better way ?

opposite ways of perceiving

The Time of Management

Elliot Jaques

Principles :

- All human activity has duration. A job always has a completion time -- a what, by when.
- The longer the "by when" you are required to work in, the heavier your job responsibility.
- People working at the same time span will always feel they are worth the same amount.
- Individuals work best in hierarchies based on time horizons.
- For each level of management, there is a natural time boundary.
- This time orientation is the basic blueprint for the way individual creativity grows.
- As a person matures, his time horizon grows longer.

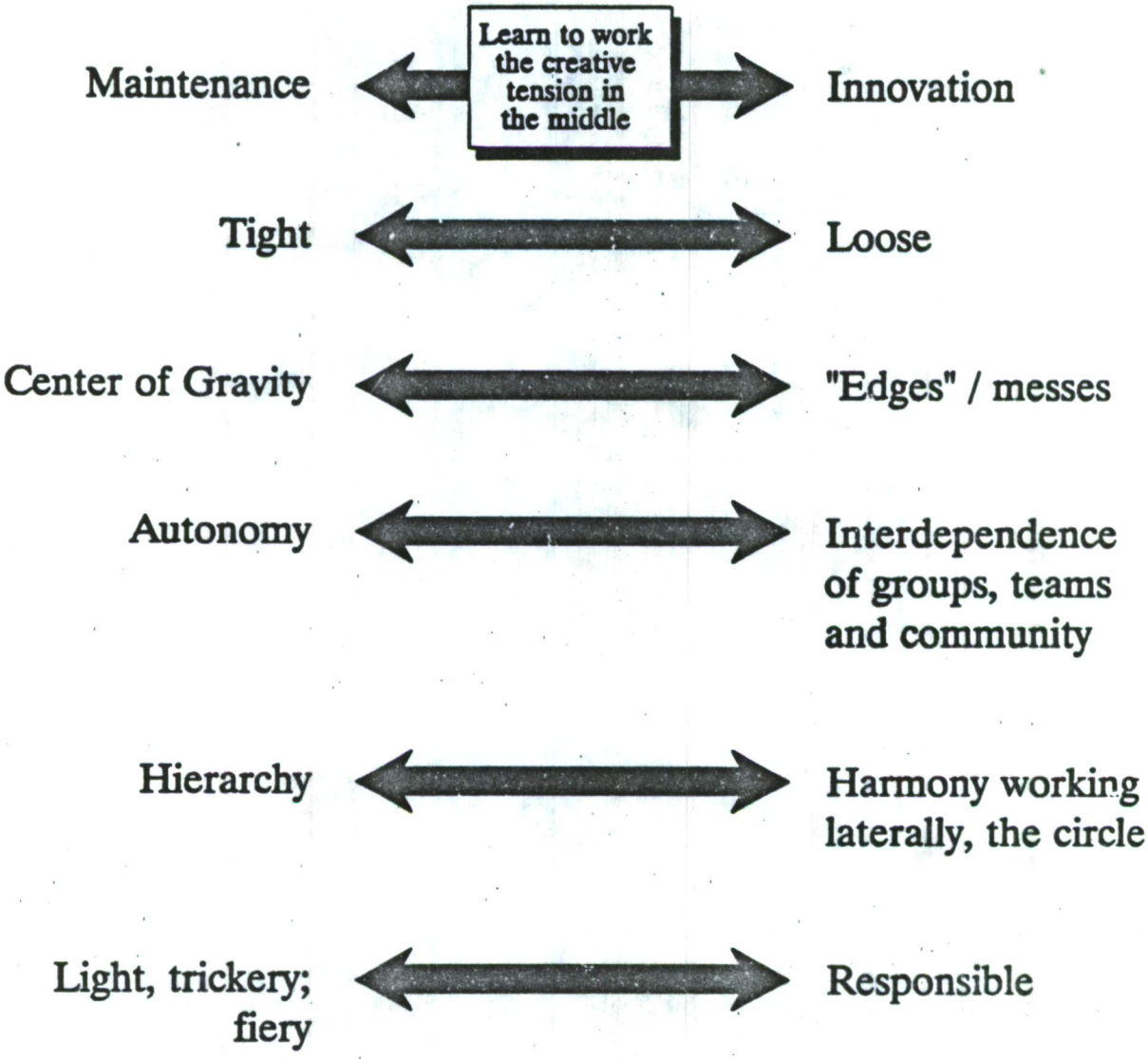
Application :

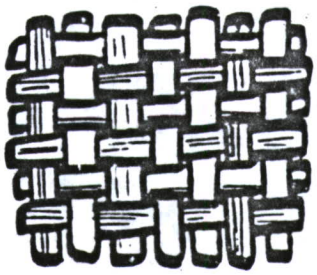
The Grid of Management Creativity

Time Frame	Planning Context	Job Title
Mode 8	40-50 year VISION	Agent of social change (create ideas, new movements and new industries)
Mode 7	20 year VISION	CEO
Mode 6	12-15 year CONCEPTUAL FRAME	Executive VP
Mode 5	7 year OVERALL PROGRAM	Vice President
Mode 4	3-5 year PROJECTS	General Manager
Mode 3	1.5 year TRENDS	Head Teacher
Mode 2	6 month TASK AGGREGATES	Teacher
Mode 1	1 day to 1 month TASKS	Operations Clerk / Receptionist

Adapted from : Managing the Fourth Dimension by Steve Forbis. Tarrytown Letter #50 June 1985.

Structural / Cultural Paradoxes

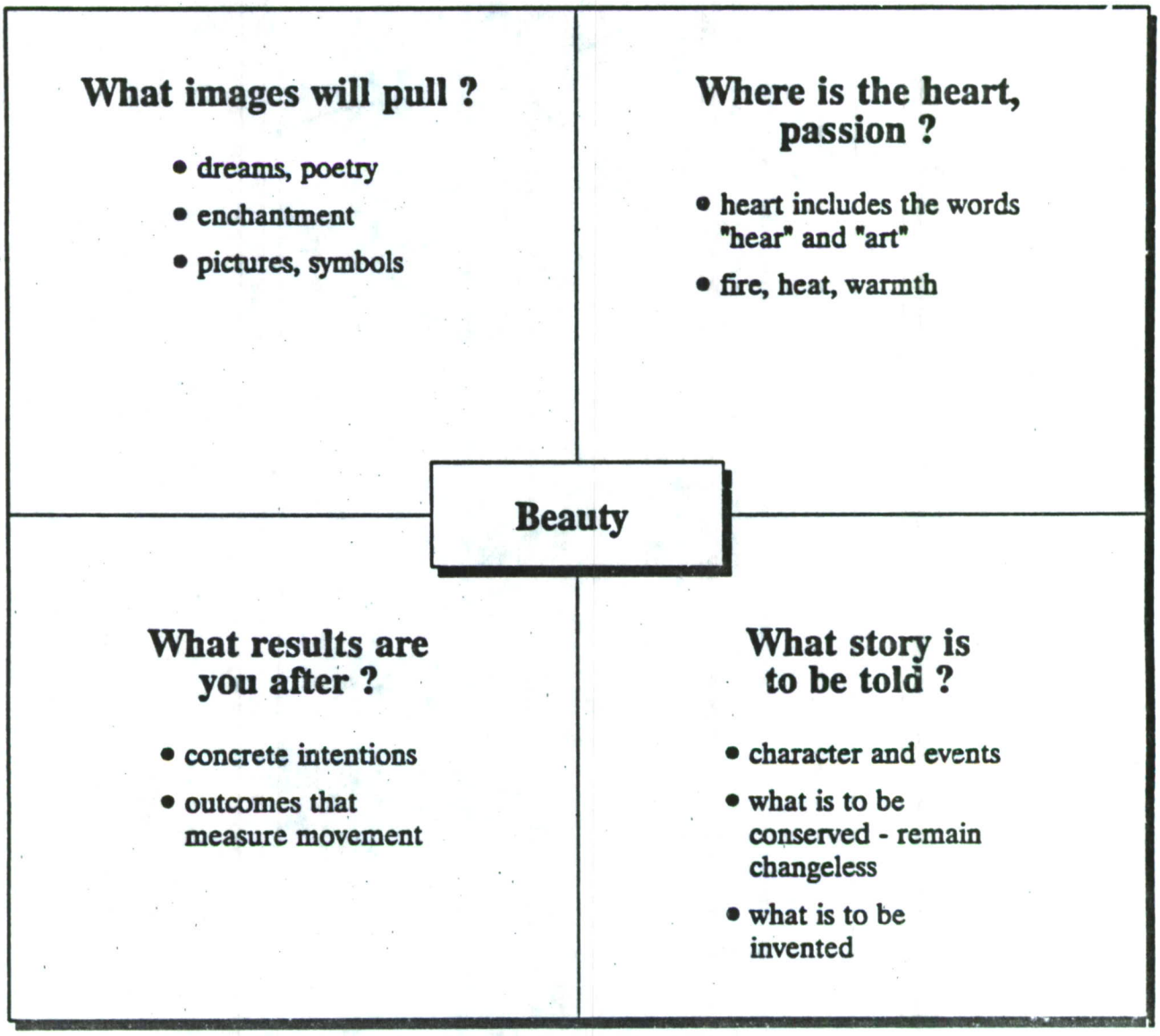




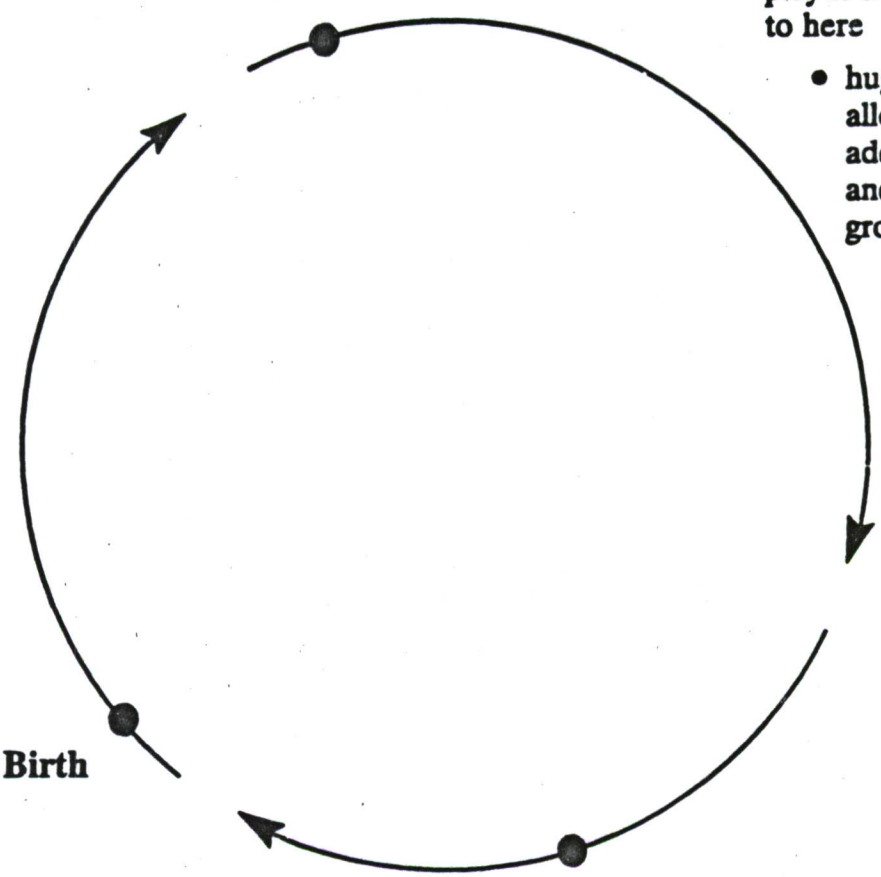
Basket Weave

- Dual authority with a team culture
- Information and decision making is up, down and lateral, more dynamic than static
- Project or job oriented
- Difficult to produce a depth of expertise
- Found where speed of reaction is essential, power is located at many points in the net
- Efficiency comes from mobilizing the right resources

4 Corners of a Vision



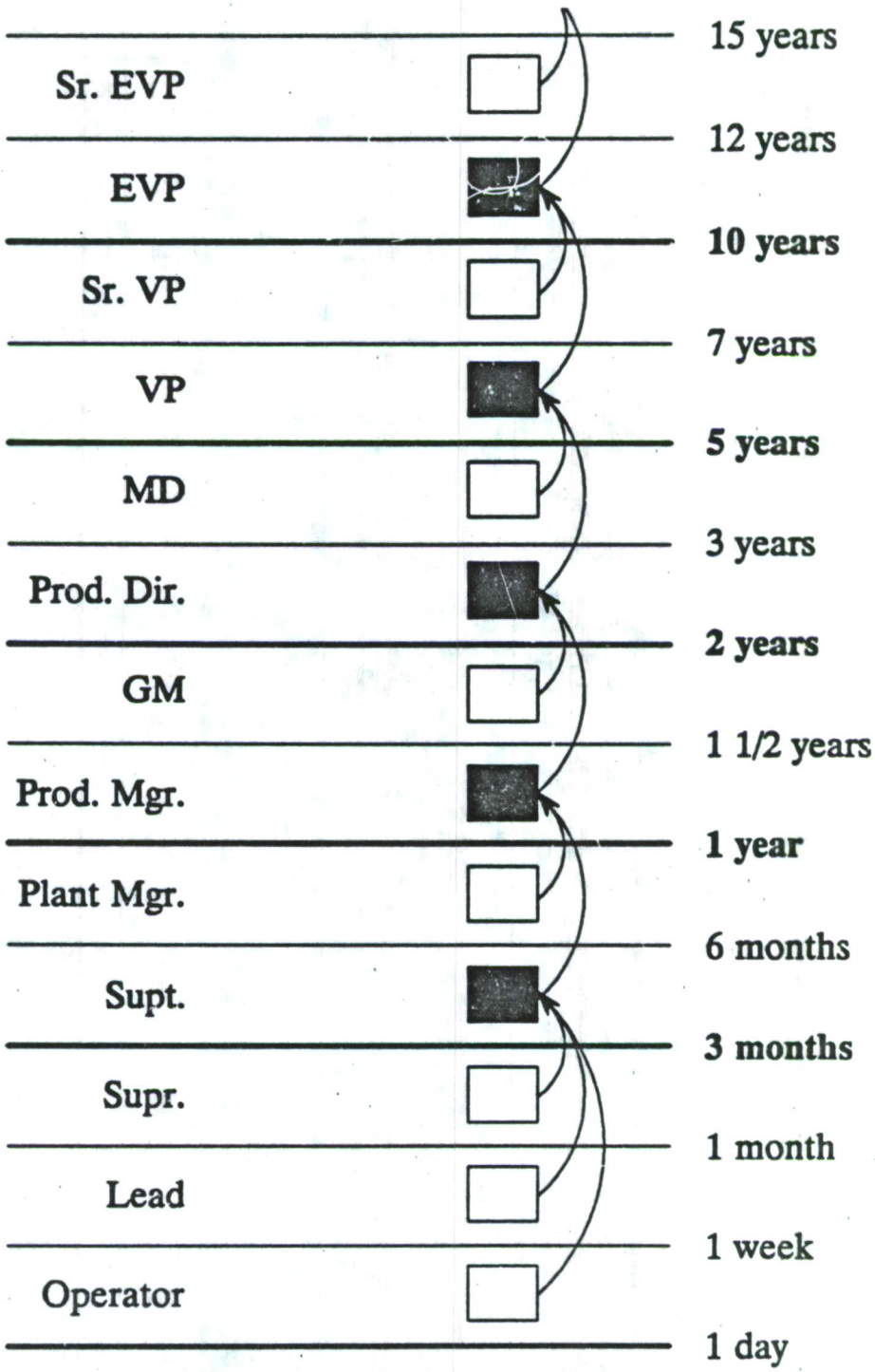
Organizational Life Cycle - Learn to Transverse the "Peaks and Vals"



- tendency is to play it close to here
  - hugging zenith allows you to add programs and grow for growth's sake
    - so, you can focus on expansion rather than drop into inevitable decay

- build resiliency by moving around the circle

- soul of the place
- make rich compost from which new life can be born


15 years
Sr. EVP
12 years
EVP
10 years
Sr. VP
7 years
VP
5 years
MD
3 years
Prod. Dir.
2 years
GM
1 1/2 years
Prod. Mgr.
1 year
Plant Mgr.
6 months
Supt.
3 months
Supr.
1 month
Lead
1 week
Operator
1 day

Accountability, Authority, Responsibility and Power

Formal Structure - the chart

Accountability

- What the position demands of you
  - What you are called to account for
  - What will your feet be held to the fire for
- The work or outputs you are held accountable for
  - Not who you report to

Authority

- What decisions are yours
- Where you can initiate action in others
- The length of your tether
  - How far can you roam
- What you can do
  - Quantity
  - Within what quantity standards
  - With what time
  - With what resources

Informal Structure - Embedded in Power

Responsibility

- Commitment you make
- Risk you take
- Your ability to respond to challenge
  - What is within your conscience that you will do

Taking Power

- When you are responsible you push authority to it's limit
  - Or exceed it to make things happen
- Responsibility is the source of results, not accountability and authority

Power is ...

- Ability, skill, influence to act of affect something strong
  - Might
  - Vigor
  - Energy
  - Force of character
- Not finite
  - Bad theory says I've "got" or "take" power
  - You "don't" or "can't" have it

The Position Description

1. Work function
2. Accountable results
3. Strengths
4. Motivators
5. Boundaries
6. Must do's
7. Resources at an individual's disposal
8. Authority to make decisions
9. Consultative decisions
10. Who the individual can talk to freely
11. Collaborators
12. Responsibilities pending
13. Learning challenges
14. Big forgets

Forming Action Work Teams

Customer as Driven

- Driven by what the customer wants
- Align work toward customer, not the bosses

Intention - Reduce Management Time

- Teams (eventually) become drivers of change
  - Reducing time spent reviewing, checking, controlling
  - And digesting info. for others
- Simultaneously tighten and loosen
  - Identify key variables for hierarchical control
  - Identify key variables for teams to run with it, independent of mgmt.

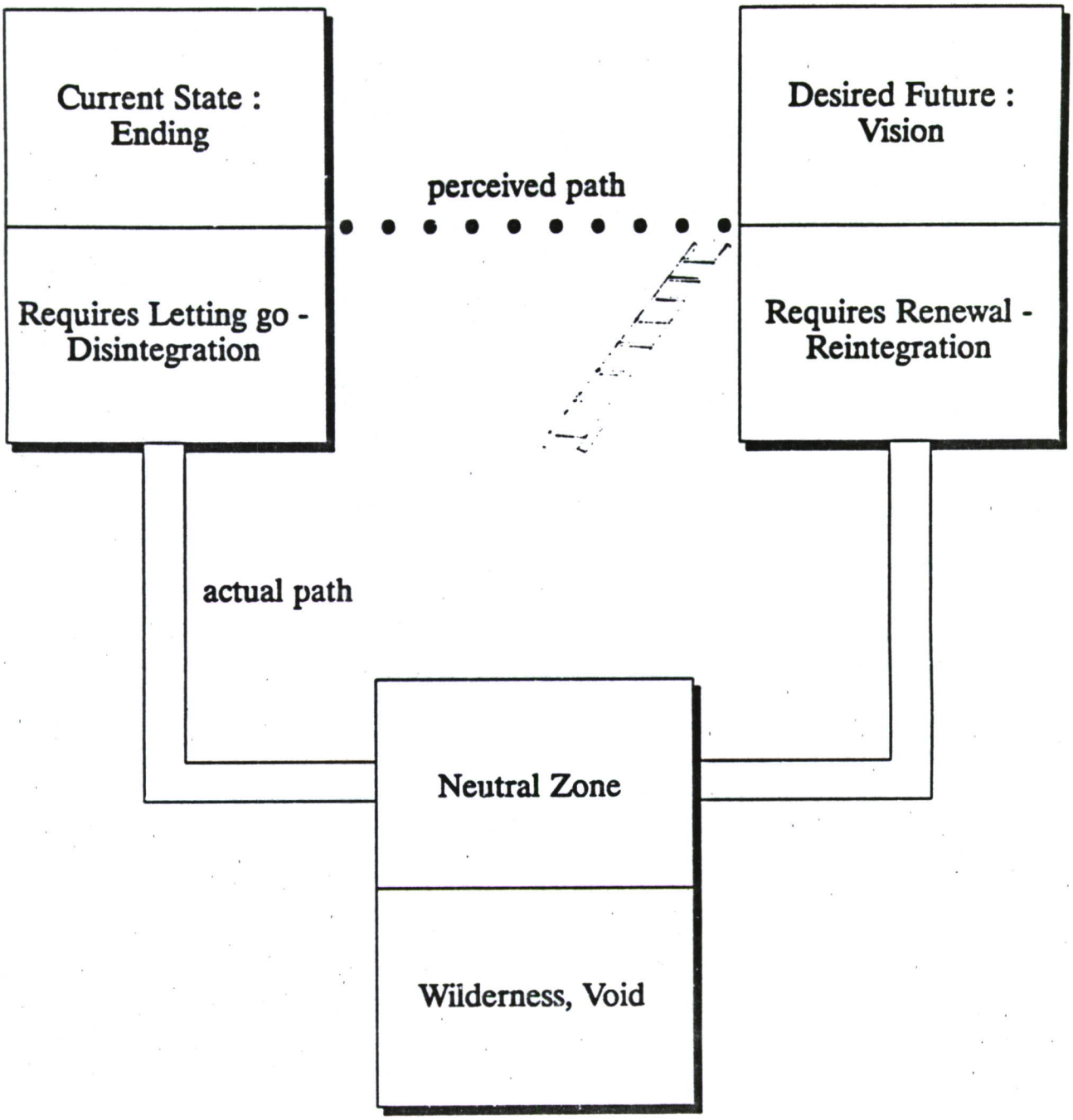
Assign a Task as a Full Process

- Focus on a full process
  - e.g., reduce all expenses in a process
- Best to have teams in parallel, working on many steps
  - Rather than several teams (with fewer steps) in the same process flow

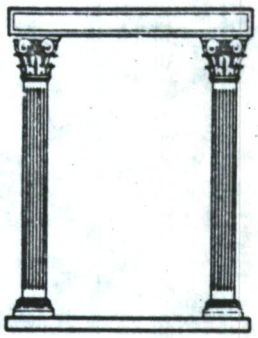
Charge : do it

- Teams don't just study and recommend
- Authorized to decide - things within boundaries
  - Requires decision maker as leader of team
- Enough authority to negotiate and leverage the workplace

A Transition Leader Carves a Path



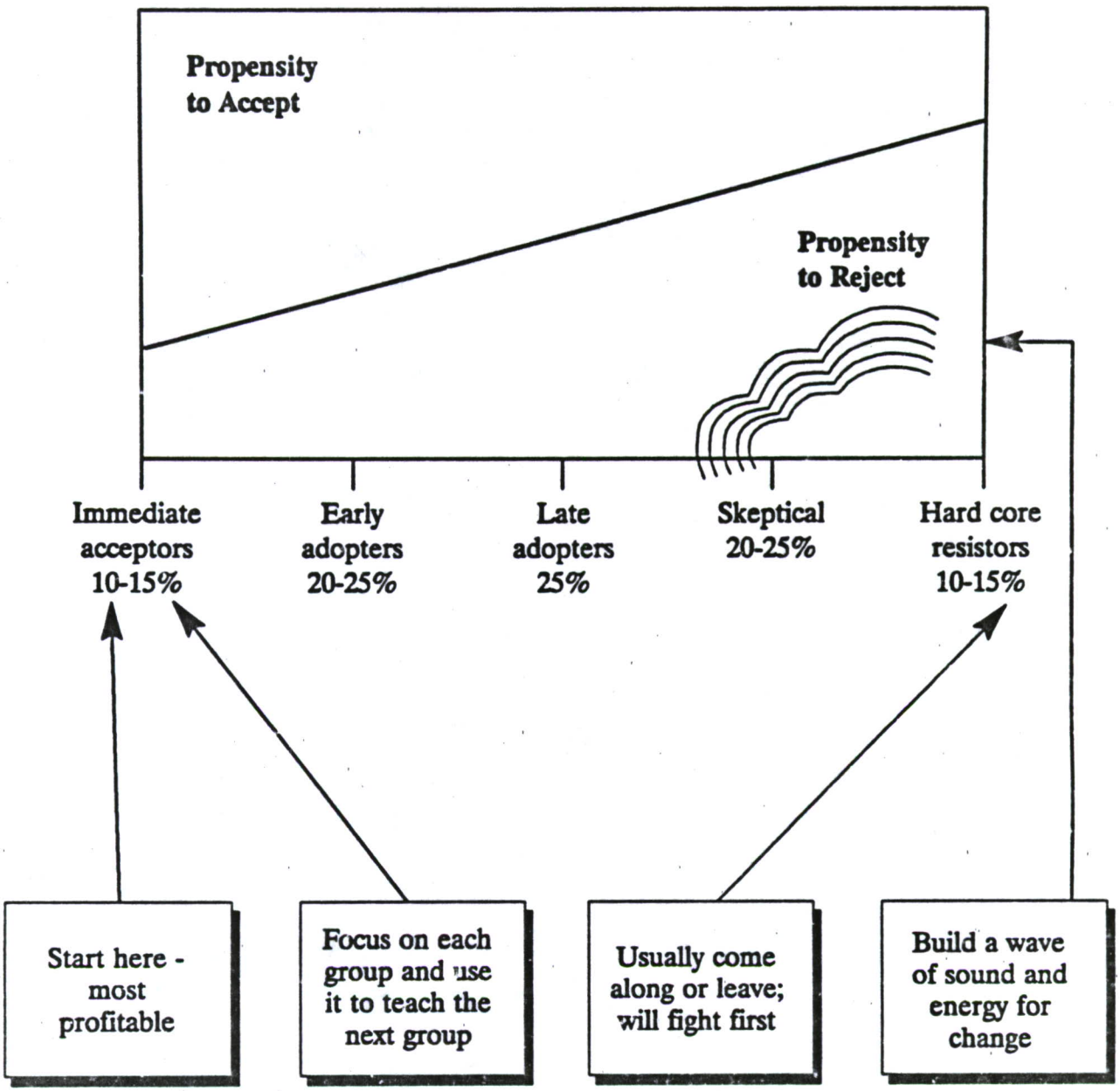
From Bill Bridges work on Transitions



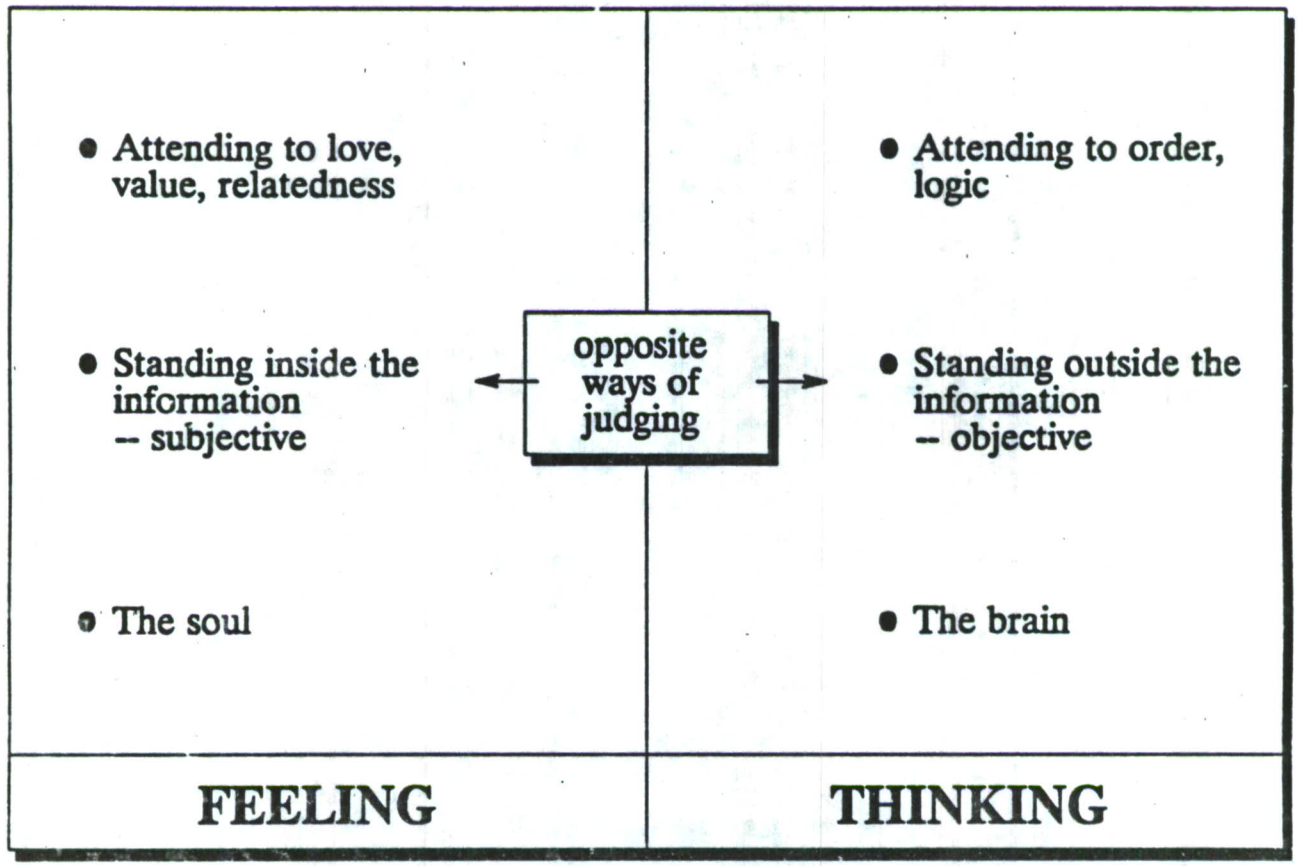
Greek Temple

- Single authority and unity of command, coordination from the top
- Strength in each function and specialty
- Information and decision making is vertical
- Efficiency from rationally allocating responsibility for work
- Work is controlled by roles, procedures and rules; power is at the top

Orchestrating Networks to Move Change



Our Four Divine Natures - the "whole psyche" in which a person moves and imagines



FY 92 AIR FORCE LIBRARY REPORT

by Annette Gohlke, Randolph Air Force Base, TX

Fiscal year 1992 has been an exciting and challenging year for the Air Force Library and Information System. The forces of man and nature hammered out changes at a rapid and never-ending pace. The year started off with a bang.

The eruption of Mount Pinatabo in the Philippines buried the library in ash and hastened the closing of Clark AFB, one of the most important Far East bases since World War II. Eleanor Ballou, one of the historically great military librarians, kept the library open as an essential activity until most personnel were shipped out. She then packed her bags, ending almost 20 years in the Philippines, and took over the helm of the library at Hickam AFB. Hawaii has an active volcano, so we'll continue the saga next year.

The Air Force completely reorganized in FY 92. Strategic Air Command (SAC) merged with Tactical Air Command (TAC) to form the new Air Combat Command (ACC), now the largest command. Air Force Logistics Command (AFLC) and Air Force Systems Command (AFSC) merged to form Air Force Material Command , the third largest command. Military Airlift Command absorbed five additional bases from SAC and was renamed Air Mobility Command. We lost two command librarian positions, but the command librarians played musical chairs and found new jobs and challenges.

Joe Burke left his position as head of AFLC libraries to become the assistant to Eva Haas in Europe, replacing Barbara Wrinkle who became the director of the Geophysical Library at Hanscom AFB. This started a chain reaction. Gail Hodge left MAC headquarters to head up AFMC's 22 libraries. Mary Lou Sauer phased down SAC and moved over to AMC. Alice Roy, TAC Command Librarian, stayed at Langley and took over the helm of ACC which now has 33 libraries. Jeanette Hoel, assistant command librarian at SAC, packed up the SAC library records and moved to ACC as the new assistant.

In the midst of all the change, Tony Dakan, director of AFLIS for 16 years decided to retire on 1 May 1992. His assistant of eight years, Annette Gohlke, was selected as the new director. Barbara Wrinkle, recently of Hanscom AFB and USAFE moved south to become the new assistant director.

The creation of the four big "super" laboratories in FY 91 found the research and development libraries reorganizing in FY 92 and beyond. It will take several years to merge functions and collections and relocate. The four super-lab libraries include Armstrong Laboratory, Brooks AFB, Texas, Fred Todd, director; Phillips Laboratory, Kirtland AFB, New Mexico, Barbara Newton, director; Rome Laboratory, Griffiss AFB, New York, Michael Heines, director; and Wright Laboratory, Wright-Patterson AFB, Ohio, Carolyn Ray, director.

Las year, we reported a 20 percent vacancy rate in our libraries. This has been reduced to only four vacancies at bases which are not scheduled to close in the near future. Base closures and relocation of Air Force librarians has filled many of the vacancies.

During FY 92 libraries at Eaker AFB, Arkansas; England AFB, Louisiana; George AFB, California, and Torrejon AB and Zaragoza AB, Spain were closed as announced by Congress. In addition, natural disaster closed the libraries at Clark AFB, Philippines, and Homestead AFB, Florida. The closing of the PACAF library service center at the end of FY 92 closed a chapter in the annals of Air Force Library service which spanned fifty years - from World War II through the Korean and Vietnam conflicts, and Desert Storm. Seven more bases are scheduled to close in FY 93.

AFLIS now has 145 libraries, 11 academic, 20 technical, 113 general, and one special. In addition, it operates one library service center in USAFE, three bookmobiles, 33 branch libraries, and 212 field libraries. Service is provided to over 500 remote sites and embassies around the world.

Morale, Welfare, and Recreation (MWR) services, the umbrella for the Air Force Library and Information System, merged with Services this year. MWR includes officer and enlisted clubs; recreation, bowling, fitness, arts and craft, youth and child-care centers; outdoor recreation; and golf courses. Services has added dining halls, billeting ope.ations, and mortuary affairs. Morale, Welfare, Recreation, and Services (MWRS) is now an expanded people program, in fact it is a womb to tomb operation.

The MWRS reorganization has some positive and some negative impacts on general libraries and librarians. Librarians which historically have always headed divisions and reported directly to MWR chiefs, are now branches in the Recreation Flight. The Recreation Flight includes outdoor recreation, arts and crafts, supply, libraries, and the recycle, recovery, resource program (RRRP). It appears that librarians have "lost ground" on this one. Other standard recreation programs belong to other "flights". For example,

sports and fitness and recreation centers are in the military flight, while bowling and golf are in the business flight. Child and youth activities are now in their own separate flight.

A positive factor has also resulted from the new flight structure. Strong library managers now have a chance for upward mobility, and many are now actively pursuing positions as flight chiefs. As librarians are selected for these positions, new librarians can be hired. This is badly needed since Air Force, like the rest of civil service, has an aging workforce. Flight chiefs with library experience can then serve as mentors to the new librarians.

Despite all the changes, many good things happened in Air Force libraries and to Air Force librarians during 1992. Sixteen librarians received certificates and monetary awards in the thirty-seventy Air Force Public Relations Awards contest for their exceptional public relations programs during FY 91. One technical, one academic, and 42 general libraries received Certificates of Excellence for meeting or exceeding the 1991 Air Force Library Program Excellence standard. These 44 libraries met the required criteria demonstrating strong planning, programming, automation, fiscal management, collection development, and staff training efforts; had aggressive goals and objectives to improve services; and provide exceptional mission and education support. Fred Todd, director of Armstrong Laboratory Library, received the Texas Star Award at the 83rd Special Libraries Conference in San Francisco. His distinguished service and dedication to the Texas Chapter contributed significantly to chapter achievements and effectiveness.

Barbara Newton, director of Phillips Laboratory and next year's MLW hostess, was elected vice-chair, chair-elect of the International SIRSI users group. Marsha Dreier, director of the base library at Cannon AFB, New Mexico, was elected vice-president/president-elect of the Armed Forces Librarians Round Table. Carolyn Ray, Director of Wright Laboratory Technical Library is the newly elected chair/chair-elect of Military Librarians Division.

The Air Force library headquarters team sponsored a three day pre-conference workshop before the American Library Association Conference in San Francisco. Despite drastic cuts in TDY funds, 117 librarians participated. The workshop, dedicated to and attended by Tony Dakan, was the last of five "Path to Mission Excellence" workshops. The 1992 theme, "Targeting Tomorrow" offered five mini-workshop sessions on total quality service, building quality teams, guerilla marketing concepts and methods, leadership development, and coping with less resources. In addition, all librarians participated in three round table sessions,

putting their new or increased skills to use by identifying problem areas in twelve broad topic areas and recommending actions which need to be taken at base, command and Air Force levels to improve or resolve them.

The FY 92 central appropriated fund allocation used to support central procurement for libraries remained static until a 15 percent increase from end-of-year funding was received. The windfall was a real blessing since we're scheduled for exactly a 15 percent cut in FY 93. Faye Miller, acquisitions librarian at Air Force headquarters, worked hard to save over $1.6 million with central procurement, so we squeaked by another year and were even able to fund a full text CD-ROM serials service for all general and some academic and technical libraries.

Central funds were also used to purchase numerous publications and videos to support the Air Force Transition Assistance Program. Re-tooling people for new jobs is big business with current drawdowns in both military and civilian personnel. Air Force libraries are providing another outstanding service to customers.

Air Force libraries continued to move forward in using available technologies to improve services and productivity. Fifty to 75 percent of all libraries are using OCLC and on-line searching services; interlibrary loan and document delivery; and integrated library or circulation systems. Some libraries are using vendor on-line ordering software to order books and subscriptions on-line. Almost all libraries offer CD-ROM products, and many have public access computers with a variety of software.

The headquarters team developed and issued the first three Library Management Information System (LMIS) modules to all libraries, aptly named FUNMAN, COMONMAN and OCMAN by Robert Lanning, our young computer guru. FUNMAN and COMONMAN manage funds at the base and command levels. OCMAN manages office book and subscription accounts which librarians manage. The LMIS modules are designed to automate common management functions in Air Force libraries.

And finally, I'm proud to report the Air Force librarians continue to be responsive to their customers' needs and demands. They are providing innovative services of the highest quality and they continue to play a vital role in accomplishing Air Force mission objectives. Their enthusiasm is profoundly contagious and contributes to the high quality of their library staffs. The continual interaction with their professional colleagues fuels their energies and keeps their spirits high - even in the face of constant change.

It is almost certain that the future will bring more change. There will probably be more command and functional

consolidations, new organizational names, and a new way to do business. Librarians will be challenged to be better trained, and more knowledgeable, flexible, and adaptable. Air Force librarians will continue to treat chaos, crises and changes as challenges. They will continue to serve in the same tradition of those who led the way - with spirit, dignity, and dedication.

ARMY UPDATE

by Louise Nyce, Pentagon Library, Washington, DC

I represent the library management function, Policy Directorate Office, director of information systems for command, control, communications and computers (ODISC4). I'll brief the army's current initiatives within the library program and discuss library integration within the total IMA program.

Integration is the primary function of the "BIG FOUR": The Secretary, Under Secretary, Chief of Staff, and Vice Chief of Staff. Increased program integration of activities at all levels, both from a DOD and IMA perspective can be expected. Congressional reviews and legislation, defense management reviews, OSD program actions, total force downsizing and integration, and top-down, bottom-up changes will impact the program. The only constant will be change.

Change within the army is not new. The Army has had a major reorganization in process every five to ten years since 1940. Two major initiators for organizational change are the Congress and the Secretary of Defense. Historically, the Goldwater-Nichols DOD Reorganization Act of 1986, Public Law 99-433, served to eliminate duplication of effort between the secretariat and the army staff requiring full integration of the two staffs into one HQDA component. It also elevated the information management function from the army staff to the secretariat.

Key personnel within ODISC4 are LTG Peter A. Kind, DISC4, Mr. Anthony Valletta, Vice Director, DISC4, Col. Richard Broome, Acting Director of Army Information, Ms. Linda Dean, Deputy Director for Policy, and Mr. David Mitchell, Information Management Division. The library program is a part of the information management division within the policy directorate, under the Director of Army Information.

The Policy Directorate performs the functions for the Library Program Manager, Policy Developer, Reviewer, and Technical Expert for the Army-wide Library Management Program. The Professional Development and Training Directorate performs career program, training and development, and educational functions within the consolidated CP-34 career program. Libraries play an increasingly important role in the information mission area. In June 1991, General Gordon Sullivan, VCSA, signed the IMA future message emphasizing the importance of integration of IMA elements within a global environment. In March 1992, LTG Hilmes, then DISC4,

approved making libraries a full discipline within the IMA and a new logo was produced and distributed integrating libraries into the IMA.

Full coordination among librarians and other information mission area personnel is essential for a successful program. Librarians, DCSIMS, DOIMS, and functional proponents must work closely together to gain full information regarding the army's future. The IMA policy development chart shows actions, beginning with the IMA future message, to be taken towards integration of functions. DRMD 918 will further impact on integration of IMA functions at the DOD level.

Integration is an important part of networking and will play an active part in implementation of the electronic gateway to army libraries (EGAL).

Libraries represent a variety of user groups and are resourced by their user communities. School libraries are usually organized within a training directorate under the school commandant. Medical libraries are organized under the clinical medical division under the hospital commander. Law libraries are organized under the installation Staff Judge Advocate. Technical libraries are organized within their parent agency. General libraries are usually organized under the installation's Directorate of Personnel and community activities under the installation commander.

The IM community, tasked with the overall coordination of the IMA disciplines plays an important role in library management. All staffing of HQDA actions occurs through IMA channels. If communication breaks down among the players concerned, the mission fails. The IM and library communities share a common interest in keeping an open line allowing both to receive full information.

The installation DOIM is the assessable unit manager for the IMA internal management control program. This responsibility requires assurance that performance standards of operating managers include internal control responsibilities (AR 11-2) and that internal control checklists are completed when scheduled (DA CIR 11-91-2). Library internal control checklists address completion of requirements for library property accounts (AR 735-17) including a physical inventory of accountable materials every 3 years, proper establishment and of library property accounts, staffing of the contemporary military reading list, and completion of required annual reports (AR 25-1).

Change will be constant as we move towards the future. Many players negotiating the issues of downsizing, limited resources, rapid technological changes and mission responsiveness will effect our future. Emphasizing our value to our commanders and communities will be imperative to the strength and success of the Army Information Management Program.

CANADIAN SERVICE UPDATE

by Gretchen Cheung, Chief Librarian, College Militaire Royal de Saint-Jean, Richelain, Quebec, Canada

It is always a pleasure for Canadian military librarians to come together here at MLW. This is the only opportunity we have, most years, to meet and share our experiences. We are, as always, grateful for your warm and gracious hospitality.

Canada has been very much in the news recently. Some baseball fans will think I am referring to the World Series victory by the Toronto Blue Jays last Saturday. Important as that victory was for our prestige in the sporting world, the referendum on changes to Canada's Constitution has been just about the only topic in the news in Canada for the last few months. The consequences of the defeat of the proposed changes are unknown, and we can only conclude that Canada, like many another nation these days, is living through interesting times.

Within the Canadian Armed Forces and the Department of National Defence, we are certainly feeling the effects of the recession and the end of the Cold War. Canadian military librarians have been challenged over the past year to take a proactive stance in the face of downsizing and budget cuts or freezes. At National Defence Headquarters (NDHQ) the integration of library services and records management under the leadership of Janice Hatt is an example of the trend towards the convergence of the provision of published and internal information services. However, this merger has been slowed by the difficulties the personnel classification staff have been having in fitting the new positions into the traditional classification scheme.

On the scientific and technical side, DSIS (Director, Scientific Information Services) is busy implementing a long awaited information management system, despite the staff cutbacks experienced at this NDHQ agency. DSIS is also experimenting with publishing its database, which has been named CANDID, on compact disc. Mike Schreyer, DSIS, will be hosting and AGARD Technical Information Panel in Ottawa in the fall of 1993.

One casualty of the recession was the Canadian Institute for International Peace and Security (CIIPS) which was closed down this year as a government cost-cutting measure. One agency's loss is often another's gain. In this case, Cathy Murphy at Canadian Forces College, Toronto, saw a window opportunity and won the competition to obtain this important collection and the database. The College will thus maintain and expand on this important Canadian information resource.

The directors of the libraries at the three military universities and the two post graduate schools have been working together on common projects for a number of years. At the moment they are in the final phase of acquiring a new automated library system which will be known by the acronym DEELS (Defence Education Establishment's Library System), and should be implemented in 1993.

Downsizing is definitely a reality for the Canadian Armed Forces, with the decision to reduce the force from 84,000 to 75,000 members. The civilian side has been less severely cut back by 1,000 positions to 32,000 employees. For the Canadian military universities, this has meant a slight decrease in enrollment but, so far, no loss of staff positions. There is also much discussion about closing some of Canada's 34 military bases but these decisions for the most part have been postponed until after the next federal election. Canada's bases in Germany will, however, be closed by the mid nineties.

In these times of change it is reassuring to know that the Canadian Armed Forces is, as always, dedicated to the mission of peacekeeping. Canadians have been on every UN peacekeeping mission since the very first one in 1947. Canada is currently providing over 10% of the worlds peacekeeping forces and over 4,000 Canadians are serving abroad with 15 different UN contingents. The training provided by MLW will be helpful in enabling Canadian military librarians to continue to meet the information requirements of the Canadian Armed Forces.

REPORT OF NAVY AND MARINE CORPS LIBRARY ACTIVITIES

Presented by Kathy Wright, Naval Command, Control and Ocean Surveillance Center, San Diego, CA

NAVY LIBRARY OVERVIEW

The big news in the Navy library community this year is that Stan Kalkus retired as Librarian of the Navy this summer. Stan is now splitting his time between teaching library courses at Charles University in Prague and spending summers in Newport, Rhode Island. The process of selecting a replacement has begun. Dr. Dean C. Allard, the Director of Naval History, has requested a waiver to fill the position at the GM-14 level and is optimistic that the waiver will be signed. Dr. Allard anticipates that a new Librarian of the Navy will be in place sometime after the first of the year.

Because the next Librarian of the Navy could have a major impact on the future of Navy and Marine Corps libraries, an ad hoc committee, consisting of eight Navy librarian leaders who represent the broad interests and concerns of these libraries, was formed to assist in both justifying a replacement and in defining the role of the new Librarian. The committee sent out a survey questionnaire to approximately 50 Navy and Marine Corps librarians to solicit their opinions. Most of the librarians receiving the questionnaire responded promptly and positively, and the results were forwarded to Dr. Allard for review. This was also an opportune time to re-examine priorities, needs, and goals for Navy and Marine Corps libraries to strengthen their positions for the future.

As a result of extensive reorganization within the Navy this past year, a large number of Navy and Marine Corps librarians were involved in issues related to mergers, moves, closures, and, of course, downsizing in general. (And everybody has a new name!) Many library managers have been faced with problems related to acquiring additional libraries and their accompanying personnel, often at remote locations. Consolidating the holdings of established libraries, often with different cataloging practices, as well as making necessary changes in other procedures and policies (such as purchasing) to develop a new, workable organization, can be a very difficult, time consuming, and stressful process.

Major shifts in the missions of the Navy laboratories have also caused librarians in these organizations to re-consider the

subject emphasis of their collections, review periodical holdings, and re-evaluate the type and level of service provided to users. These consolidations, closures, and shifts in mission are also resulting in large amounts of excess library materials with no good, established process for making the materials available to others in the Navy or DOD library community.

In spite of the doom and gloom connected with reorganization and consolidation, there are some bright spots on the scene. Next spring, the Marine Corps University Research Center Library in Quanitco will move into a new $14 million building on the Potomac River. When the new building opens, the collections of three recently merged libraries will be accessible through their online library system MCCAT. The library at the Naval Postgraduate School in Monterey will soon be moving into a new extension that will more than double their present space, and the Naval War College in Newport will undertake a study to examine their space needs during FY93. The academic libraries aren't the only ones moving into new quarters. The Navy Experimental Diving Unit in Panama City will soon move into a new environmentally controlled building that will more than double their current space; and, because of compact shelving, their storage capacity will increase six times. The Naval Command, Control and Ocean Surveillance Center, RDT&E Division (NRaD), in San Diego, is also adding a 2000 square foot extension which will be completed next February.

Technology has also played a major role in Navy and Marine Corps activities this past year. Many libraries are installing new automated library systems, replacing aging systems, or upgrading existing systems to provide better service to their users. Several libraries are now developing "libraries without walls," where users can sit at their desks and tap into their library's catalog or access other information resources (such as databases on the Internet, CD-ROM networks, etc.). Several exciting projects are in progress, and I'd like to briefly describe a few of them:

1. At the Naval Research Laboratory, Laurie Stackpole reports that more than 40,000 unclassified reports are now stored on 12-inch optical disks. Documents can be retrieved by an online search, viewed on a workstation, and printed for retention. Also at NRL, its new campus-wide information retrieval system, InfoNet, was made available to all employees in August. Information currently searchable on InfoNet includes the library's book catalog, various CD-ROM databases, and remote services available on the Internet (such as OCLC's First Search). NRL has also formed a study team to encourage journal publishers and others to provide journals electronically for simultaneous network access.

2. Joan Buntzen at NRaD reports that their library has also continued to expand its electronic library, NCat, which is accessible by all Center employees from their offices. NCat

includes the library's book catalog, Current Contents, and catalogs from two major California universities. In addition, NRaD is evaluating CARL's UnCover, RLG's CitaDel, and Faxon Finder, all available through the Internet, as possible additions to NCat. NRaD is also working with Information Handling Services to set up a CD-ROM network test in which IHS's military specifications and standards will be available to all Center employees at their desks.

3. Pearce Grove reports that the Marine Corps purchased a $1 million automated storage file server which will be electronically tied to MCCAT. Eventually, MCCAT can then be used by any Marine Corps installation in the world to locate, view, and print more than 240,000 documents. 76 Marine Corps doctrine publications and the 3-volume set Conduct of the Persian Gulf War have already been scanned into the system. Recent overseas experiments were successful, and it is anticipated that MCCAT will eventually be available to other DOD libraries as well.

Navy librarians have also been busy with various professional activities this year, and I'd like to briefly highlight just a few. Gerry Meyer at the National Naval Medical Center in Bethesda is trying to develop a network of Navy medical libraries to improve resource sharing. Kathleen Schollenberger and her staff at the Naval Ship Systems Engineering Station in Philadelphia hosted the annual CONSATL (Council of Navy Scientific and Technical Librarians) meeting. Bob Schnare, director of the Naval War College library, is now travelling with a group of research librarians who will be visiting and exchanging ideas with colleagues from libraries in St. Petersburg, Kiev, and Budapest. Two Navy librarians received special awards this year: Jim Aylward, Naval Education and Training Center, Newport, received the Armed Forces Round Table Achievement Citation, and Marilyn Smith from the Naval Supply Corps School in Athens received the Newsbank Scholarship for 1992.

NAVY GENERAL LIBRARY PROGRAM

Marge Homeyard from the Naval Education and Training Command reports many changes in the Navy General Library Program during the past year, with downsizing being a key activity. 55 ship and 18 shore libraries were disestablished, but the Marine Corps libraries were able to hold firm. The Program now supports 152 Navy and Marine Corps shore libraries, 430 ships, and more than 300 remote or isolated naval units. Fewer closures are anticipated for FY 93; and two new Navy libraries at Staten Island, NY, and Everett, WA, are actually in the planning stage.

In spite of the downsizing issue, there are three positive items of particular significance to Navy general libraries:

1. As a result of some recent policy changes, general

libraries now have the option of using both appropriated and nonappropriated funds for the purchase of library collection materials, and fees and fines may now be charged. The public law which requires monetary collections to be returned to the U.S. Treasury is under study for a more beneficial solution.

2. For 1993 and beyond, general libraries are looking forward to being 1 of 10 elements selected to be part of the Navy's Morale Welfare and Recreation Core Program. Program standards for general libraries will emphasize adequate staffing and increased automation and technological capabilities.

3. The General Library program has also been working with the Training Command to develop a learning resources center concept which provides not only informational and leisure time books but also materials and assistance to help sailors onboard ship to improve job and educational skills. Central to this program is a Navy produced CD-ROM with more than 200 General Military Training courses as well as basic skills courses. Information resources, including an online encyclopedia, directories, dictionaries, and almanacs, are also available. The lack of standardization in the searching continues to be a problem (as it is for others who use many different databases), and finding space on a ship for a computer that can be dedicated to free time use is also a problem.

SUMMARY

Navy and Marine Corps librarians have seen many radical changes this past year because of various reorganizations, consolidations, and the DOD drawdown. We've been forced to deal with organizational change, including changing user populations, and to reconsider the ways we have traditionally provided service to our users. These changes, coupled with the rapidly occurring advances on the technological front, offer real challenges to librarians in the military community. We're not only asked to do more with less, we're also challenged to do better with less.

THE GOVERNMENT-OWNED, CONTRACTOR-OPERATED LIBRARY EXPERIENCE

by Marilynn Harned

INTRODUCTION

Federally Funded Research and Development Centers (FFRDC) are Government-Owned, Contractor-Operated (GOCO) Organizations

FFRDC SPONSORSHIP AND ADMINISTRATION

FFRDCs are usually sponsored by one of the following agencies:

Office of the Secretary of Defense
Department of the Air force
Department of the Army
Department of the Navy
National Institute of Health
Department of Energy
National Aeronautics and Space Administration
National Science Foundation

Sponsoring agencies rarely administer the FFRDCs they sponsor. The administration function is commonly performed by industrial firms, universities and colleges, and other non-profit institutions. Further, not all FFRDCs sponsored by the same agency are administered by the same type organization, as evidenced by DOE labs: Oak Ridge National Laboratory (Martin Marietta - industrial); Los Alamos National Laboratory (University of California - university); Pacific Northwest Laboratory (Battelle Memorial Institute - non-profit).

BROOKHAVEN NATIONAL LABORATORY

Brookhaven National Laboratory (BNL) was established in 1946 to do research on the peaceful aspects of nuclear science. Since that time, the mission has broadened considerably to include basic and applied research ranging from high energy physics and nuclear physics through basic energy sciences to applied research in environmental and energy technology. The Laboratory currently operates under a contract between Associated Universities, Inc. (AUI) and the U.S.. Department of Energy (DOE).

AUI was founded in 1946 by nine northeastern universities -- Columbia, Cornell, Harvard, Johns Hopkins, Massachusetts Institute of Technology, Princeton, University of Pennsylvania, University of Rochester, and Yale -- and is governed by a Board of Trustees. The majority of the Trustees have primary affiliation with the founding institutions; however, AUI is

an independent corporation, not a consortium, so individual Trustees do not represent their home institution on the Board.

The Laboratory provides access to major research facilities that are too large for individual institutions to construct or operate. At these facilities university, industry, and government scientists and engineers, as well as BNL staff, conduct fundamental and applied research in physics, chemistry, biological sciences, mathematics, medicine, oceanography, atmospheric sciences and selected energy technologies, either on a continued employment basis or during leave from universities, research institutions, industry, or government.

Before becoming a national laboratory, the BNL site was Camp Upton, an Army induction and training camp for U.S.. soldiers during World Wars I and II. In 1944, it became a hospital for veterans. Now, the 5,000 acre site in central Long Island, New York contains 350 buildings and other structures. At present, there are approximately 3,300 employees and an almost equal number of visiting scientists and students from universities, research institutions, government and industry work at BNL each year.

There is an academic coloration to the policies applicable to the scientific staff. The policies are equivalent to those at a university, making the transition from the campus to the Laboratory familiar and comfortable.

POLICY MANUALS

Just as Navy Instructions and Army Regulations establish administrative rules, DOE Orders are comparable. Just as the Navy Instructions are adapted to individual laboratories, commands and other organizations, the DOE Orders are interpreted on a local level and published in Laboratory operational manuals which detail the policies and procedures of the Laboratory, There are many manuals other than those used by the Technical Information Division (TID), but those which give TID direction are:

Supervisors' Personnel Manual - issued by the Personnel Office; contains basic policies affecting all employees, chapters included are: Employment; Compensation; Payroll; Leave Policies; Insurance and Retirement Benefits; Site Security, Property Protection and Management; Employee Programs and Services.

Scientific Staff Manual - issued by the Office of Scientific Personnel; contains those Laboratory policies and procedures which directly affect members of the scientific staff; compliments the Supervisors' Personnel Manual.

Employee Guide - issued by the Personnel Office: included are Employee Handbook; Equal Opportunity Program; Insurance and Retirement Program; Salary Administration Program; and brochures for the Suggestion System, Employee Assistance Program, Employee Relations Program, Brookhaven Employees' Recreation Association, and Laboratory Security.

OPERATIONS MANUALS

BNL Safety Manual - published by the Safety and Environmental Protect Division; covers policies and regulations concerning personnel, materials, equipment, environments and other factors which affect safety of Laboratory operations.

Standard Practice Instructions - issued by the Director's Office; contains other than Supervisors' Personnel Manual policies, such as travel regulations and allowances.

Procedural Guide for Secretaries - created by and for secretaries as a guide to administrative policies and procedures; is a "how to" reference, with illustrations; includes topics such as Travel, Staff Services, Technical Publications, and Proposals.

ORGANIZATIONAL NEWS AND REPORTS

Brookhaven Bulletin - published on a weekly basis by the Public Affairs Division; is the Laboratory newspaper; reports organizational and extracurricular news of interest to the Laboratory community.

Brookhaven Highlights - published by the Public Affairs Division; an annual report which highlights the Laboratory's activities for the fiscal year.

HIRING

Laboratory job vacancies are established through a Forman process which includes management and budget approval, all completed prior to the initiation of recruitment. The process begins with the issuance of a Request for Personnel (Form 17), often referred to as a requisition. The requisition is first approved by the department head, then moves on for additional approval by the Laboratory Budget Office, and the Manager, Personnel and Labor Relations. When requisite approvals have been obtained, the position is announced in the Brookhaven Bulletin. The purpose for such publication is to give notice of an available position and to satisfy Laboratory placement policy. Final vacancy selection is not permitted until at least one week following publication.

PLACEMENT POLICY

The laboratory placement policy is to select the best-qualified candidate for an available position. Consideration for available positions is given in the following prioritization:

- present employees within the department/division, with preference given to those within the immediate work group
- present employees within the Laboratory;
- outside applicants.

When a vacancy is not filled from within the department the Employmer Manager will assign the open requisition to a Personnel Representativ That person will consult with the department on job specifications ar will then coordinate the recruitment procedures.

Some vacancy announcements only seek applications from Laboratory employees. However, employees are not eligible for transfer during the first year of Laboratory employment (or following a transfer), unless the transfer is initiated by the Laboratory for operational reasons.

Present employees, from outside the department, who are interested in being considered must complete an Employee Transfer Request Form (Form 2683). The Personnel Representative will review all transfer requests, supply the department with pertinent applicant background information and arrange for any interviews. At the completion of the interviews, the department will advise the Personnel Representative. If there have been no qualified employee candidates, the Personnel Representative will begin recruiting outside.

Pertinent applicant background information from suitable outside candidates is supplied to the department. Interview schedules are established. At the completion of interviews, the department advises the Personnel Representative of its choice of the best-qualified candidate.

The Personnel Representative completes background and reference checks; provides the applicant with information on Laboratory policies and benefits; and schedules the physical examination.

Following a satisfactory completion of pre-employment procedures and receipt of all necessary approvals, the Employment Manager makes a formal written offer of employment on behalf of the department head. This offer specifies the job classification, rate of pay and employment category of the proposed appointment, and incorporates any special arrangements, e.g., reimbursement of travel and household goods relocation expenses. A mutually agreed upon starting date is usually established at this time.

POSITION CLASSIFICATION AND PAY

Positions are classified by the level of job complexity, based on the nature of the duties and level of responsibilities. Jobs are then measured against others at the Laboratory and in relevant job markets to ensure that salary assignments are competitive with those of similar organizations and other relevant job markets.

Most job classifications have a job family. These are sequences of related job classifications which share the same nature of work, but have different salary grades within the same work category schedule based on the level of work. Job families define a logical sequence for promotion. The librarian positions are:

- Library Assistant
- Senior Library Assistant
- Librarian
- Senior Librarian
- Supervising Librarian

The Database Specialist and the Systems Specialist on the TID staff are both in the job family of Staff Specialist

Positions which are recognized in the library world as library technicians are:

- Office Services Assistant
- Senior Office Services Assistant

While growth is expected in most jobs, there is no guarantee that progression with a job family will continue indefinitely even when an employee demonstrates superior performance in all assigned responsibilities. Promotions within a job family are not based on service time or time within that classification.

SALARY SCHEDULES

The salary structure for nonscientific-staff is divided into five schedules:
- Engineer/Scientific Associate/Computer Analyst
- Administrative
- Technical Support/Supervisory
- Clerical Wage
- Technical Wage

Each of these schedules is further divided into a number of salary grades to which job classifications are assigned according to market and internal value. Each salary grade has a pay range which is divided into three parts: the growth area, the midpoint, and the merit area.

Salaries within the pay range for the classification are determined by performance and the level of proficiency and expertise exhibited by individual employees. For recently hired or promoted employees, the salaries are usually in the lower part of the range. As employees develop skills and experience, the and experience, the salaries tend to move closer to the middle of the range. The clerical and technical wave employees who show satisfactory progress received periodic increases through the lower portions of the range, as recognition of the growth.

PERFORMANCE APPRAISAL

Job performance of each employee is appraised annually. The primary objective is to ensure communication between employee and supervisor about major job responsibilities, performance expectations, current job performance and individual development goals. It is also designed to assist supervisors in making personnel decisions affecting salary, promotion, discipline and reassignment.

The performance appraisal process ensures that the performance of ea employee is evaluated at least annually, but does not imply that a p increase is given each year. Individual pay decisions are based on performance, position in range, and salary increase budget.

Poor performance, lack of progress in skill development, or inability to master job requirements may result in an employee receiving a reduced increase, or no increase at the time of salary review.

SALARY REVIEW

Salaries are reviewed annually, this usually occurs during the summer, with the effective date of salary and classification changes scheduled for October 1.

Throughout the year, the Personnel Division participates in regional and national salary surveys in order to develop a proposal for salary increase fund for the next fiscal year and to determine movement of salary ranges. The salary increase fund and salary structure movement proposal must be approved by the Laboratory Director, the AUI Board of Trustees, and the Department of Energy.

When these proposals have been approved, or negotiated, review materials are prepared by Personnel and distributed to each of the departments. The review package includes salary increase and promotion guidelines, new salary schedules, and a listing of each departmental employee along with relevant salary information. Also included are salary increase allocations for each department and the recommended distribution of the salary increase funds.

PROMOTIONS

Employee promotions are of two types:

- in recognition of increased responsibilities, skills or expertise
- as a reclassification to a classification which more accurately reflects the duties and responsibilities assigned.

Some result from substantial change in job duties; for example, from a non supervisory to a supervisory position. Others may be based on the ability to perform increasingly complex work rather than on the fact that the basic nature of the job itself has changed. Most of the latter promotions occur at the time of the annual review.

TRANSFERS

Transfers from one position to another may occur either at employee or department request; however, as discussed previously, employees are normally not eligible for transfer during the first year following being hired or transferred, unless the transfer is initiated by the Laboratory because of operational requirements.

Department heads have the right to reassign employees within the department, as dictated by work requirements. The employee maintains classification and pay levels.

TERMINATIONS

Termination usually occur upon voluntary resignation, but can be the result of reduction in force, unsatisfactory job performance or attendance, or "for such other reasons as the Laboratory deems appropriate." A minimum of two weeks' notice is expected.

TRAINING

On-Site

A variety of non technical training is offered in an effort to facilitate the development of administrative and managerial skills. Some sessions are specifically designed for supervisors and managers; others are more general, in areas such as productivity improvement, time management, problem solving, technical writing, and public presentations.

Tuition Refund

Regular full-time and eligible part-time employees who successfully complete formal study may be reimbursed for all or part of the tuition fee paid, subject to conditions, such as obtaining approval prior to registration and pertinence to job.

SECURITY

The Laboratory is not open to the public. Entrance is restricted to persons having official business and properly sponsored visitors. Each employee receives a photo identification card and vehicle identification stickers.

The speed limit on-site is 30m.p.h. Parking or speeding violations carry a $50.00 fine which is charged to the offender's department operating fund and put into a general Laboratory fund.

HEALTH & SAFETY PROGRAMS

Employee Assistance Program

This program helps employees who are experiencing mental health problems and provides employees and management with information and training on mental health and job-related issues. The Employee Assistance Program (EAP) addresses a broad spectrum of issues including: Family/Marital, Alcohol/Drug, Personal/Emotional, and Interpersonal/Social.

BENEFITS

The range of benefits includes health, dental, long term disability, travel accident and life, as well as retirement.

Health Care Plan options include the AUI group medical insurance plan one of several Health Maintenance Organizations.

Dental Assistance Plan coverage is limited to one carrier.

Long-term Disability Insurance is optional.

Travel Accident Insurance is provided at no cost to employees; the policy provides twenty-four hour accident protection while personnel are on authorized business travel.

Life Insurance coverage of approximately the employee's annual salary is provided at no cost.

Retirement Plan coverage is funded through the Teachers Insurance and Annuity Association and the College Retirement Equities Fund (TIAA-CREF), which offer fixed-rate and variable investment options, as well as a variety of annuity options at retirement.

TECHNICAL INFORMATION DIVISION

The Technical Information Division mission is to provide research library services, publications processing, and editing services. The staff includes 21 full-time employees and one part-time employee.

In addition to the Research Library, there are several satellite libraries on site. Some of these are small reading rooms, serviced by secretarial or administrative personnel within the department; others are more formidable, staffed by a professional librarian with clerical assistance. The Research Library provides all acquisitions, technical processing and the interlibrary loan services, and most on-line literature searching for the Laboratory. The systems specialist is resident in TID also.

The division Manager is assisted in making policy decisions by the Research Library Advisory Committee (RLAC). Each major department has a representative on the committee, most are scientists.

LIBRARY OPERATIONS WORKING GROUP

This group is composed of the library directors from DOE labs, who meet once a year. The programs and format vary according to the host, but at each meeting each director gives an annual activity report for their library.

A CAMPUS WIDE INFORMATION UTILITY AT THE NAVAL RESEARCH LABORATORY

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INTRODUCTION

The Ruth H. Hooker Research Library and Technical Information Center meets the information needs of Naval Research Laboratory's (NRL) research community, consisting of about 3,500 Federal staff and about 1,200 contractors. Since 1983, end users have been able to search the Library's online catalog both on site and remotely over the campus-wide network, known as NICENET. However, all other online searching continued to be performed by library reference staff, primarily using DIALOG, STN and DTIC. This situation began to change in 1988 when the Library introduced CD-ROM databases for end-user searching in both its reference area and its Microcomputer Software Support Center. Users responded favorably to the CD-ROM products, enjoying the freedom to explore that comes with performing their own searches.[1]

In 1990, the Library conducted a user needs analysis to develop specifications for a replacement automated library system. This analysis was instrumental in establishing support for the development of a campus-wide information system for in-office access to library-based CD-ROMs and other in-library and external resources. As a result of interviews with 46 individuals representing a cross section of research interests, the Library was able to demonstrate that scientists throughout the laboratory wanted access to information resources from their own computers and workstations. Several key findings emerged, namely, that the Library should implement a system to:

- Provide subject and author access to journal articles as well as books;
- Allow users to request materials as part of an online search;
- Offer access to multiple databases, both bibliographic and informational;
- Store full text files, such as journal articles or handbooks, for downloading;
- Provide access to the catalogs of other libraries and to external databases.

While proceeding with plans to meet some of these objectives by identifying and procuring a state-of-the-art library system, the Library began to look at other approaches that could complement the capabilities of existing commercial library systems. Added support for these

efforts came from the involvement of the Library in the Working Group tasked with planning for a fiber optic upgrade to the existing campus network backbone. The Working Group endorsed the concept of a library-provided information utility to:

- Provide researchers with access to local computer systems;
- Act as a gateway to remote systems;
- Integrate these functions with library materials and services;
- Make all this information available to researchers at their computers or workstations.

DESIRED FUNCTIONALITY OF AN INFORMATION UTILITY

To demonstrate the benefits of such an information utility, it may help to describe how a scientist might use electronic information. The scenario underlying the information utility concept, which at NRL is named InfoNet, envisions a scientist working at her computer writing a research paper. She gets to a point where she needs more information about the work of a colleague. She sends an E-Mail message to one of her peers and gets an almost immediate response, citing two published papers mentioning Dr. X whose work is also of potential interest. The scientist is able to immediately query the InfoNet to find out if the cited articles are available. One is in the library collection in electronic format and is available for immediate downloading; the other is in the collection and will be faxed to her computer terminal within hours.

The scientist then decides to search one of several bibliographic databases available through InfoNet for papers by Dr. X. She finds only one and decides to learn more about Dr. X by searching a biographical database from a commercial information utility linked to the InfoNet, e.g., DIALOG. She finds Dr. X is affiliated with a major research institution. While she is on DIALOG, she also performs a citation search on Dr. X's paper and finds it has been cited by a colleague whose work she greatly respects. Satisfied that Dr. X is a highly regarded professional, she returns to the Library's online catalog through the InfoNet, where she finds that the journal in which Dr. X has most recently published is not one to which the Library subscribes. However, she sees on the InfoNet that individual articles reside on a remote server at a university accessible through InfoNet and are available for viewing.

It turns out that Dr. X has written about a related area, one which the NRL scientist is not terribly familiar. So at this point after printing out the Dr. X's article at her printer, she decides she would like to find out if there is anyone at NRL who can bring her up to speed. She performs a subject search on a database of NRL publications and searches the CD-ROM database of Work Unit Summaries. She finds two fellow NRL scientists who she thinks could help her. She consults the online personnel locator for their E-Mail addresses, sends them messages, and returns to work on her paper. All this took considerably less than one hour and was

accomplished without her leaving her computer. The information utility supported all her information-seeking activities with a menu-driven user interface and pre-programmed access to remote systems.

In 1990, when this concept was being developed, it was not easy to see how the Library would make much of this happen. While access to the existing or replacement library system was straight forward, end user access to other Laboratory databases and to remote computers as a part of a suite of library services did not appear easy. There seemed to be only three possibilities: the Lawrence Livermore model, with dedicated gateway software running on a local computer;[2] the DTIC Search Maestro and CompuServe model, with gateway software running on a remote computer; and the library system model as exemplified by the STILAS (Scientific and Technical Information Library Automation System) Remote Interface Module.

However, several diverse developments were taking place in the early 1990's. Taken together, three of these provided the Library with a framework to move aggressively toward the information utility concept.

ADVANCES IN NETWORKING INFORMATION

One encouraging development was the in-library networking of CD-ROM databases at installations such as the Nimitz Library at the U.S. Naval Academy.[3] This work showed it was possible to provide menu access to multiple CD-ROM products and allow multiple users to simultaneously search a single CD-ROM. If it is possible to do this on an in-library LAN, would it not be possible to provide the same capability over a campus-wide network?

Another encouraging development was the work going on at many universities to implement Campus-Wide Information Systems (CWIS). Institutions such as MIT,[4] RPI,[5] Dartmouth,[6] Carnegie Mellon,[7] and Case Western Reserve[8] were providing students and faculty with access to a wide variety of informational material and databases over their campus networks. Offerings were wide ranging and varied from university to university. Typically the CWIS offered access to course descriptions, class schedules, event calendars, campus publications, and often one or more bibliographic databases. In many cases, the CWIS was operated by the computer center and developed independently of the Library. In other cases, such as the RPI InfoTrax and the Carnegie Mellon Mercury Project, it was being developed as an extension of existing library resources, showing that it was feasible to conceive of a library-operated information utility.

The final enabling development was the rapid expansion of the Internet. Suddenly it seem everyone was on the Internet. Not only was the NRL NICENET tied into the Internet, but information providers, such as OCLC and DIALOG, had an Internet address. The sell-out sessions at meetings such as SLA and ALA were the sessions on using the Internet; journal articles about what was on the Internet aLounded.[9] Not only was there more information available than most people had ever conceived of, now it was possible to quickly and easily get to it.

ENVIRONMENT

To accomplish the goal of making a local information utility for use at NRL, the Library and its contractor, Kestrel Associates Incorporated, had to deal with three basic issues. The first of these was the MS-DOS operating system adopted by most commercial CD-ROM publishers. The second was the wide variety of equipment in use at NRL, including: hundreds of dumb terminals that provide access to the Laboratory's mainframe computers, a SMTP and DECNet E-Mail system and administrative files; a few thousand PC compatible and Macintosh computers, in heavy use in both research and administrative areas; and a large number of VAX, SUN and other UNIX workstations used by researchers. The third was the need to provide gateways to remote information utilities, both at NRL and throughout the world, running on a variety of systems.

IMPLEMENTATION PLAN

From a management perspective, a phased implementation to the InfoNet design appeared the most promising. This modular sort of approach allowed functions to be brought online and thoroughly tested before being integrated with the system as a whole. As a result, problems could be more easily isolated and identified and system-wide disruptions would be infrequent.

A problem often associated with the phased approach to system implementation is that it can lead to a myopic view of the system, i.e., each module might be seen as an end unto itself. The final product may function more as a number of small systems, each accessed independently and providing its own services rather than achieving the final objective of a fully integrated system. In developing the InfoNet, this myopic syndrome was avoided. Each phase was viewed from both a small systems perspective and from the broader viewpoint of how it would integrate with the InfoNet system. "While a detailed knowledge of LAN technology is an asset, it is far more important that a LAN administrator have a clear conceptual overview...."[10] The ultimate goal for the InfoNet was clear: unify electronic information resources under a single menuing system, and make the system accessible to researchers in their offices and laboratories and independent of client computing platform.

The InfoNet was brought online in three distinct phases:[11]

Phase I: implement a library LAN with networked CD-ROM databases and office productivity software, e.g., word processing, local E-Mail,[12] database management, etc. for PCs and Macintosh microcomputers;

Phase II: integrate the library LAN with the campus-wide network to provide NRL with network access to CD-ROM databases independent of computing platform, provide staff with

Internet E-Mail,[13] and make campus-wide and Internet information resources and database accessible from within the library under a single menu driven system;

Phase III: provide the campus-wide network with a menu driven system which includes: MS-DOS based CD-ROMs, library information databases running under SUN UNIX (i.e., the library's Online Public Access Catalog and a NPL Authors' Citations Database), DEC VMS based Management Information Databases run by NRL's MIS Branch, and information resources and databases accessed on the Internet.

The InfoNet can be accessed from anywhere on NRL's campus-wide network, regardless of computing workstation or dumb terminal.[14] In brief, the InfoNet links to the FDDI/Ethernet campus backbone primarily using the TCP/IP suite of protocols. UNIX workstations and dumb terminals use native Telnet to access the InfoNet while computers which lack native TCP/IP support, e.g. MS-DOS users, use free Telnet software distributed by the library and modified for InfoNet usage.[15] Macintosh users take advantage of native AppleTalk protocols to access the InfoNet and are supplied with software distributed by the library for AppleTalk connectivity. The InfoNet consists entirely of off-the-shelf PC hardware and software, with a few minor software modifications.

To provide enhanced client access to Internet information resources and databases, the InfoNet makes extensive use of state-of-the-art "Knowbot" (Knowledge Robot) prototypes, such as Gopher,[16] NNTP,[17] WAIS,[18] and Archie.[19] Knowbots are "programs that, once activated, wander through the [Internet] looking for information and [return] it to their electronic masters."[20] The Knowbot prototypes query unrelated host systems and display the information to the end-user in a standard and familiar format. By separating the client search software from the database host, end-users are no longer required to learn the interfaces of unrelated systems. (Unfortunately, CD-ROM publishers do not support Knowbots at this time.) These programs are continuously updated and help to tame the Internet. In so doing, they have made world-wide information systems increasingly accessible. Recent statistics on InfoNet usage have shown that Internet search applications now represent half of all searching performed on the InfoNet.

CD-ROM DATABASES

DATABASE LICENSING

CD-ROMs are almost always licensed to the customer and usually restrict the use of data far beyond that of copyright law. Since CD-ROMs are licensed to the customer and not sold, the publisher is at liberty to restrict the use of the product in the license, assuming there is agreement from the customer. Unfortunately the publishing industry lacks any kind of standard licensing agreement and individual publishers vary greatly in how they license their products. Generally speaking, however, licenses usually restrict the copying of data from the CD-ROM onto other media and usually require that the product be returned or destroyed after either a new disk is sent

to the customer, or the subscription is canceled. Moreover, network licensing agreements often control the number of users, workstations, buildings, and/or sites connected to the network and restrict the use of modems for remote network access.

Publishers seldom understand how networks disseminate information or what possibilities exist for controlling information access. For example, the majority of the NRL research community is spread out over approximately 150 low-rise buildings, interconnected by a campus network. The actual number of computer workstations attached to the campus network exceeds the total number of employees. Although over ninety percent of employees are at a single site in Washington, D.C., NRL has facilities and employees in other states. Further, many researchers continue their work at home in the evenings and on week-ends and holidays. As a result, the common conditions applied in CD-ROM licensing agreements are not viable in such an environment. To compensate for this, licensing terms must usually be negotiated with each publisher individually with network access to CD-ROM databases limited usually to no more than five simultaneous users controlled through metering software. In addition, the InfoNet restricts network access to IP (Internet Protocol) addresses used at NRL. The cost for a concurrent license varies, but it is seldom more than twice the price of a stand-alone version and permits around five simultaneous users. For many vendors, multi-site and dial-in access licensing has yet to be developed and the InfoNet will be breaking new ground as we move into the next phase of implementation.

When discussing network licenses with CD-ROM vendors, it is important to emphasize the needs of the administrators and end-users and not to succumb to the wishes of the publishers should the two be inconsistent. It is in the best interest of both the library and the publisher that an equitable arrangement be negotiated. Few CD-ROM vendors understand either the possibilities or the limitations of networking CD-ROMs and therefore any network license agreement that does not conform to the library's needs should be negotiated. In almost every case CD-ROM publishers were receptive to the suggestions of the NRL library; licenses and pricing were altered to reflect the needs of the InfoNet.

CD-ROM SEARCH ENGINES AND NETWORKING

Most CD-ROM search engines are not well adapted for use on a campus-wide network because such networks commonly use the TCP/IP suite of protocols. These protocols follow standards which are often ignored the CD-ROM search software. The result is that end-users sometimes run into difficulties using the search software. Some of the problems which NRL has encountered include:

Most CD-ROM search software assume a stand-alone PC and send 25 lines of text. However, TCP/IP terminal emulation is limited to 24 lines, regardless of whether the end user is utilizing a PC or any other type of system; therefore, the commands the search software puts on the 25th line are invisible to the end user on a TCP/IP network.

Color codes are often used to indicate cursor position. Some search software generate highlighting via color code changes rather than standard inverse video control characters; the result is that end users cannot see changes in menu selections or even determine the position of the cursor.

The use of "alt" keys is also non-standard in TCP/IP networks. No TCP/IP networking packages support "alt" keys on PCs, and non-PC keyboards do not even possess "alt" keys. In addition, only Function keys "F1" through "F5" are fully supported by most TCP/IP networking packages. As a result, end users must learn complicated key combinations to execute even simple search commands.

The search software often restricts the end user to searching only one CD-ROM database at a time. While this is both acceptable and appropriate in a stand-alone environment, this is highly inefficient and cumbersome on a network.

Although most software conforms to both the ISO9660 and the Microsoft MSCDEX standards, a few search engines, like that of Online Software, Inc., circumvent the standards and communicate information directly to the CD-ROM drive. This precludes use on TCP/IP based networks.

To compensate for search software dependence on "alt" keys and non-standard function keys, the library distributes software for PC-compatible and Macintosh microcomputers. MS-Kermit is free MS DOS based TCP/IP software from Columbia University and has been modified by the NRL Library to emulate a PC keyboards. For Macintosh users, ONLAN MAC is distributed as part of the license agreement for Novell Access Servers and provides full PC keyboard and monitor capabilities on a Macintosh connected to the InfoNet. In addition, UNIX and dumb terminal users are provided surrogate keys which have been remapped at the host to provide keys not found on their native keyboards.

The use of these techniques on InfoNet make the CD-ROM search engines usable on all platforms. However, applying these techniques is not always intuitive for the use nor are the results fully satisfactory. The real solution to the problem is for CD-ROM publishers to conform to networking standards when designing CD-ROM search software.

PLANS FOR THE INFONET

The Library staff takes advantage of three primary tools for planning InfoNet development and improvements: usage statistics, end-user comments, and industry surveys. Statistics are recorded automatically on a per application basis every time any of the InfoNet's resources are accessed and serve as essential elements for focusing collection development efforts. Comments from InfoNet users about missing features and information are recorded for careful consideration. Library staff continuously monitors the networking and publishing community

for new products and directions. From these sources it has been determined that the InfoNet needs to concentrate efforts on the following areas:

- Dial-in and remote access to all the services of the InfoNet both from home and from NRL sites in Monterey, Orlando and Mississippi;
- Support for a X-Windows interface;
- "Electronic stacks" of journal images in full-page format;[21]
- Additional sophisticated "Knowbots" to search the Internet.

CONCLUSION

Recent advances in technology have made it possible to bring information to the researcher where he or she needs it most: at the desktop and on the researcher's computing platform of choice. For NRL, the InfoNet serves as a networked information utility which unites information resources from a variety of computing hosts under a single menuing system, and which itself is accessible to all NRL computing platforms. The InfoNet itself is easily expanded and consists entirely of off-the-shelf PC and networking hardware and software. The InfoNet proves that CD-ROM databases can be integrated with campus-wide networks and made available to users independent of computing platform, although not all search features can be used by all varieties of computers. The InfoNet also proves that researchers have a need for facilitated access to the Internet and the InfoNet can meet those needs using state-of-the-art information-seeking software.

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THE NATIONAL TRANSLATIONS CENTER: PAST, PRESENT, ISSUES AND FUTURE

by Karl R. Green, National Translation Center

INTRODUCTION

In 1992, more than half of the world's scientific and technical information will be published in languages other than English, continuing an increasing trend. Historically, these foreign languages have been Russian, German, Japanese and French, but now include increasing representations of such languages as Chinese, Portuguese, Korean, Arabic, and Hungarian, Czech and other East European languages. The information contained in this research can be crucial for American scientists and policy-makers, and the only consistent method of access is through translations. Translations, however, present certain problems in the context of scientific and technical research. First, they are quite expensive. A translation of a Japanese patent of say 8 to 10 pages typically costs $400. The work of the talented translator who commands both the languages and the technology is deservedly compensated at a professional level. Second, as a practical matter, the translations typically take several weeks to produce, which can cause delays in the work of the engineer or medical researcher.

Today, I want to talk about the National Translations Center at the Library of Congress, describe its origins, current operations, the issues which we are facing today, and the future of the Center as we believe it can be.

THE NTC - WHAT IT IS AND WHAT IT DOES

The National Translations Center is the national clearinghouse for unpublished English-language translations of scientific and technical literature, gathered from both Federal government and industrial sources. The Center does not perform translating services itself but instead gathers existing translations, primarily from U.S. corporations and federal agencies, catalogs them in the MARC format, distributes machine-readable records to a wide variety of destinations including Dialog and OCLC, and provides full-sized copies on demand within 24 hours of receipt of the order. Most of the translations received at the Center are of journal articles and patents, but there are representations of technical reports, standards, and conference papers, among other types.

THE HISTORY OF THE CENTER

The Center originated during a time of great demand for translations. During and at the end of World War II, literally tens of tons of scientific and technical paper documentation were gathered from Nazi Germany and after being declassified were made available to American industry. Many survey documents and indexes were created by British and American industrial intelligence organizations in English to provide general information and overviews, but the detailed practical documents useful to scientists and engineers were distributed in German. Rivalry with the Soviet Union and intense interest in their industrial and military state of development intensified the demand for translated information on a timely and economical basis. The National Translations Center was formed under the auspices of the Special Libraries Association in 1952 at the John Crerar Library in Chicago in an effort to share unpublished translations of this flood of material on a systematic basis and thereby utilize the limited translating resources of the United States in a more efficient manner. The mission of the Center was to gather unpublished translations, identify further sources of existing translations, organize and index these documents, ensure that the bibliographic information was widely distributed, perform searching services, and provide copies on demand for a minimal fee. Through the ensuing years from 1952 until 1988 the Center remained in Chicago in association with the John Crerar Library in several different locations and faithfully performed this herculean task. Printed indexes were issued, announcing translations grouped by general subject, and cumulations allowed effective quick access to individual journal titles and authors. In 1969, the Special Libraries Association published Consolidated Index of Translations into English, a compilation of 17 different indexes covering information on more than 142,000 different translations made available from 1953 through 1966. A succeeding index, Consolidated Index of Translations - II, covered an additional 250,000 items from the years 1967 through 1984, cumulating the information covered by the center's printed monthly index, Translations Register-Index. By 1989 more than 400,000 translations of journal articles, patents, conference papers, standards, and other forms of technical information had been gathered by the Center and locations for an additional 600,000 translations had been identified. A card catalog with more than 1,000,000 entries, by author, translation number, and journal citation had been created and was being used to locate translations. In an important step, the Center ceased publication of their index and joined with the International Translations Center in Delft for the years 1987 and 1988 to produce a combined product, World Translations Index, which lists translations into major Western European languages rather than only English. World Translations Index was made available online through Dialog in 1989 and continues to be produced as a printed product by the ITC.

In June 1988, support for the operations of the NTC was to be discontinued effective January 1989 on the basis that insufficient income was derived from the operations of the NTC to justify its continued operation within an academic framework. The operators of the NTC at this time sought a successor organization and contacted the Federal Library and Information Center Committee among a wide range of other organizations. Following staff communications at the Library of Congress, and also following an LC staff team visit to Chicago, analyses, and discussions, the assets of the NTC were offered to the Library as a gift. This offer was accepted

in January 1989 and the transfer was effected. The NTC began public operation as a fee-based service at the Library of Congress on May 15, 1989.

THE PRESENT - PRODUCTS, SERVICES, AND MARKETING EFFORTS

The Center operates the Library of Congress based on two fundamental principles. First, the presence of the NTC in the Library will not affect existing free services. Second, the NTC is a fee for service, cost recovery operation, paid for by the users of the NTC services.

The question of why the Library of Congress has chosen to support the activities of the National Translations Center has been raised in both public and private forums. The NTC is a valuable national resource which is important in assisting American industry to gain and maintain knowledge of international developments in technology. By sharing translations, the cost of re-translating is saved and the time of translating is eliminated. In addition, these translations are the most important current foreign language scientific and technical information. These are the patents and journal articles which individual American scientists and engineers have identified as critical in their current research and have been willing to commit substantial resources to translate. In effect, we have a board of review of thousands of working scientists and engineers.

The NTC provides service within 24 hours of receipt of the order, and has the capability of document delivery by fax and express mail. As a consequence, delivery of information is expedited, giving the requestor a critical advantage and assisting our national competitive position. While prepayment is required, we can establish deposit accounts and accept both Mastercard and VISA credit cards.

The items in the NTC collection are deposited under an assumption of confidentiality. Information which would identify the organization originating the translation is obliterated, thereby ensuring the privacy of the industrial concerns which are participating. In addition, the customers of the Center have the assurance that information concerning their transaction will not be disclosed. The general confidence in the Library of Congress as a fair and ethical organization makes it a particularly appropriate location for a joint government and industrial effort like the National Translations Center.

As a cooperative effort among corporations, federal agencies, universities, professional societies, and other interested parties, the National Translations Center has survived since 1952, despite at times facing exceedingly adverse situations. We regard the Center as underutilized and offering great potential for public benefit if properly developed and publicized.

The National Translations Center currently has six permanent staff members, the head, three technical information specialists who provide both cataloging and reference support, a program assistant who provides administrative support and product management and a clerk/typist who works with both acquisitions and document delivery.

Current products and services consist of fee-based searches of the NTC database and card files and providing copies of these translations on demand. Fax transmission, express mail, and

airmail for foreign deliveries are also available at additional cost. Copies of older printed indexes are still available dating from the earliest years of the Center.

In order to apply modern methods of scientific and technical communication to the treatment of unpublished translations, multiple steps for developing a fuller product line for the NTC, increasing the scope and responsiveness of distribution of the translations, and increasing the acquisitions of the Center have been pursued within the past fiscal year.

The Center, in coordination with other elements of the Cataloging Distribution Service of the Library of Congress, has developed a monthly distribution service of machine readable records in the MARC format. This service is designed to promote the widest possible distribution of the citations through other announcement sources such as abstract journals and commercial or non-commercial on-line services. Two products are now available, a retrospective tape of MARC records for materials cataloged since the Center moved to Washington (approximately 18,000 citations) and a monthly subscription service to supplement this base tape. We estimate that monthly tapes will include about 1,000 citations per issuance for the first year and increase to 2,000 monthly for the second year.

As a related and necessary activity, an intense marketing effort has been initiated to increase and extend acquisitions of unpublished translations, primarily focussing on the federal sector but also with significant attention to the traditional private sources of supply. A mailing of 50,000 pieces has already been executed and further efforts are continuing. Areas of specific subject interest and origin will be targeted for in depth exploration as the acquisitions effort evolves.

In coordination with the acquisitions effort, the Center is pursuing a direct mail campaign for encouraging utilization of the NTC, focussing first on, subject areas where we are particularly strong such as chemical engineering, aerospace, metallurgy, and electronics, and second on appropriate focussed groups such as DTIC and Dialog users.

We are supplementing the acquisitions and sales direct mail efforts with space ads in scientific magazines, exhibits at technical conferences, journal articles, press releases, and in general any possible way of communicating this important message to the widest possible audience.

THE ISSUES FOR THE NATIONAL TRANSLATIONS CENTER

While it seems clear that there are distinct possibilities of distributing a large number of translations and making a significant impact in the United States, there are two interrelated major barriers which must be addressed.

The first concern is compliance with the photocopying permissions requirements under the copyright law. The National Translations Center maintains a record of translations copied and reports this copying to the Copyright Clearance Center, Inc., tendering fees for items copied monthly. The CCC in turn distributes these royalties to the original publishers of the foreign

language publications. As a result of this action copying and distribution activities of the National Translations Center are in compliance with the provisions of the United States Code. We wished to accommodate the provisions of copyright law without ignoring opportunities to join together and to share our scarce linguistic resources. As we have recently witnessed, a large corporation in the U.S. was successfully sued for improper copying procedures. The Center, on the other hand, recently received a letter from the CCC congratulating us on our leadership in compliance.

Concern with this issue has generated a secondary impediment. While the federal government translates a very large number of scientific and technical papers in its routine work, many of the translations are not made available for further general distribution. Resolving the copyright issue and clarifying the rights and rewards of the copyright holders, translation producers, and translations users can increase effective use of these hidden resources of the federal government.

There are those who say that machine translation will rapidly make the function of the NTC obsolete. However, today and now, machine translation does not offer cheap, easy, accurate and reliable access to the many languages of science. MT is a valuable tool for specific applications and certainly offers great promise for the future.

Some questions have been raised about these translations offered by the National Translations Center. Does the Library of Congress guarantee them? We do not. However, what we offer are practical translations which have been done by professional translators, we do not accept class exercises. The translations have further been used by a scientist or engineer in their work and have been reviewed from a practical as well as linguistic standpoint.

THE FUTURE - DIRECTIONS IN SERVICES, PRODUCTS, AND ACQUISITIONS

In order to increase the capacity and speed of the Center's document delivery operation, a sophisticated stand-alone, microcomputer-based optical disk storage, retrieval, and copy-on-demand facility including multiple fax ports is in the process of continuing study, but will not be pursued without a clear need and a detailed cost/benefit analysis.

We will be continuing to coordinate our efforts in increasing acquisitions within the United States, and from other sources of English language translations. We wish to continue to promote the use of the Center and will continue to refine our understanding of where translations are done and who can use them. We will emphasize gathering translations in high tech areas.

The National Translations Center has the potential for assisting American industry, for improving the resources of federal laboratories, and for making highly sophisticated technical information available to every college and university in the country. We can only carry out our mission if we have the full cooperation of federal agencies, universities and corporations. We welcome your contributions of translations and your advice.

OCLC FOR MANAGERS

by Robert Cunningham, Senior Manager, Library and Information Services, NELINET

The Online Computer Library Center (OCLC) in Dublin, Ohio, operates the world's largest bibliographic database. OCLC is used by catalogers to speed and simplify the cataloging process, by interlibrary loan librarians to find and retrieve books and materials not found in their local library, by reference librarians interested in searching through a collection of over 26 million items with keyword and Boolean logic, and by the library patron who is looking for information.

This presentation outlines the main features of OCLC's core products:

FirstSearch,
an on-line reference service with an end-user interface designed specifically for library patrons

EPIC,
a full-featured on-line reference system that provides subject access to a variety of databases for the expert searcher

PRISM,
providing the vast bibliographic resources of the OCLC On-line Union Catalog for cataloging and interlibrary loan

First,
enabling libraries to provide full holdings information to serials in the Union Listing component

NELINET provides information and support to all libraries in New England for products from OCLC and beyond.

OCLC for Managers

Robert Cunningham, trainer

NELINET

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Newton, Massachusetts 02162

(617) 969-0400
(800) NELINET

Outline

A. FirstSearch

B. EPIC

C. PRISM

D. First

Objectives

1. To introduce the OCLC systems

2. To show who uses what OCLC system

3. To show how systems can be accessed

4. To understand costs

FirstSearch

What is it?

FirstSearch is an patron centered online reference system.

FirstSearch is made special by:

- WorldCat: The OCLC Online Union Catalog (over 26,000,000 bibliographic records)
- Popular online reference databases

Who uses it?

Library Patrons.

- It's so simple that training is not required.
- Simply walk up and use it to answer your questions.

Reference Librarians.

- It's a fast and easy way to do a reference search without regular practice or systematic reading of online searching documentation.

How can I access it?

OCLC Dedicated Line. Same as PRISM.

OCLC Dial Access. Same as PRISM.

Internet. If your institution has an Internet connection, telecommunications charges can be eliminated.

How much does it cost? See the Price List.

From 50 to 90 cents per search depending on your initial order.

FirstSearch is sold:

1. In open blocks of 500 searches

2. In card blocks of 500 searches, 50 cards, 10 searches per card

3. In card blocks of 500 searches, 20 cards, 25 searches per card

Minimum order: $450 for 500 searches (90 cents each)
Best price order: $36,000 for 80,000 searches (50 cents each)

How do I sign up?

- Complete the FirstSearch Initial Order Form.

- Return the form to NELINET.

- Call Mary Ellen Heinen at NELINET for more information.

Searching Rules:

1. <enter> enters commands or backs you up

2. su:money
   gets you the word "money" from subjects, titles, and notes.

3. au:walt whitman
   gets you the author "Walt Whitman."

4. ti:life on the mississippi
   gets you the title "Life on the Mississippi."

5. + at the end of a word gets you that word and its plural or possessive form.

6. And or Not can be used as Boolean operators

7. n
   put this between 2 words to define how "near" you want 2 words to be--on either side of each other

8. w
   put this between 2 words to define how "with" you want 2 words to be--in the given order

9. w
   put this at the beginning of a search to get a word index.
   w sh=cars
   scan the word list for the subject heading "cars" in WorldCat.

   w au=bush, george
   gets you the right form of name

FirstSearch Example 1

Question: What books are there on the Navy in the Korean War.

Search WorldCat: korean and war and navy
(limited to English language and the years of 1990-)

ACCESSION: 22778882
AUTHOR: Connolly, John B. 4n
TITLE: Underway : tour of a tin can sailor /
PLACE: Baton Rouge, La. :
PUBLISHER: Connolly,
YEAR: 1990
PUB TYPE: Book
FORMAT: iii, 291 p. : R!19Z59 @
SUBJECT: Connolly, John B. -- 4n
United States. -- Navy -- Biography. -- 1n
Korean War, 1950-1953 -- Personal narratives, American.
LIBRARIES: DC dlc
LA LEB LSL

FirstSearch Example 2

Question: Find information on Walt Whitman and war.

Search the Modern Language Association Bibliography: whitman and war

NUMBER:	Accession: 90-1-7623. Record: 34010.
UPDATE CODE:	9001
AUTHOR:	Hutchinson, George B.
TITLE:	Whitman's Confidence Game: The 'Good Gray Poet' and the Civil War
YEAR:	1990
SOURCE:	South Central Review: The Journal of the South Central Modern Language Association (SCRev), College Station, TX, 77843-4227. Article in: vol. 7 no. 1, 1990 Spring
PAGES:	20-35
STANDARD NO:	ISSN 0743-6831
LANGUAGE:	English
PUB TYPE:	journal article
DESCRIPTORS:	American literature; 1800-1899; Whitman, Walt; Leaves of Grass; poetry; and prose; treatment of American Civil War
LIBRARIES:	MA hul HLS AL AAA ABC AR AFU AKC AKH AZ AZS AZU CA CLU CUI CUS CUT CUY ...

FirstSearch Example 3

Question: Find information on Mystic, Connecticut.

Search MLA Bibliography: connecticut and mystic

NUMBER:	Accession: 82-5-2179. Record: 28908.
UPDATE CODE:	8201
AUTHOR:	MacArthur, Keith R.
TITLE:	The Research behind the Restoration: Mystic's Lifesaving Craft
YEAR:	1976
SOURCE:	*National Trust for Historic Preservation. Wooden Shipbuilding & Small Craft Preservation. Washington, DC: Preservation, 1976. 100 pp.
PAGES:	63-70
LANGUAGE:	English
PUB TYPE:	book article
DESCRIPTORS:	material culture; technology; shipbuilding; United States; restoration; study example Connecticut; Mystic Seaport

EPIC

What is it?

EPIC is an online reference system. EPIC is made special by:

- The OCLC Online Union Catalog (over 26,000,000 bibliographic records)
- Popular online reference databases
- NISO standard command search language
- Detailed keyword and Boolean indexing
- Affordable charges
- EasyNet to 450 more databases
- A variety of display and print formats

Who uses it?

Reference librarians.

Answering reference questions is EPIC's primary use.

Catalogers.

Subject access to the OCLC Online Union Catalog makes EPIC an auxiliary reference tool for cataloging.

How can I access it?

Dedicated Line.

Your OCLC terminal is connected to the OCLC network through a Sprint modem. There are monthly charges. Drawback: only one record can be displayed or printed at one time.

Dial Access.

Your microcomputer is connected to the OCLC network through a modem to the Sprint telephone network, via CompuServe or the local OCLC dial access node. There are hourly charges.

The Internet.

Using your institution's Internet connection allows for a decrease in telecommunication charges and Sunday access as well.

How much does it cost?

See "The EPIC Service Price List."

Costs:

EPIC Authorization Number Annual Fee
Connect Hour Charge
Display Format Charges
Print Format Charges
Save Search Charges
Selective Dissemination of Information Charges (SDI)

How do I sign up?

Complete:

NELINET EPIC Service Payment Form
The EPIC Service Order/Change Form

Return forms to NELINET.

Call Mary Ellen Heinen at NELINET for more information.

Basic Commands:

f

Find, or searches for an answer

d

Displays the result of a search

s

Scans an index

and

Boolean "and" searches for both terms in the same record

or

Boolean "or" searches for either term

not

Boolean "not" searches for one term without the other

?

Substitutes any number of characters within or at the end of a word

#

Substitutes a single character within or at the end of a word

EPIC Example 1

Question: Find an early book on military science.

Search the OCLC Online Union Catalog:

f military science and ln=eng and yr -1700

AN: 26169455
AU: Du Praissac, Sieur.
TI: The art of warre, or, Military discourses of leavying, marching, encamping, and embattailing an armie; of building, defending, and expugning forts and fortified cities; of ordinance, petards, and fireworks; of the severall duties of officers and souldiers; of the Grecian and Romane Militia, and forming of battaillons; &c.
ED: by the Lord of Praissac ; Englished by I.C.
YR: 1639
LN: English
PT: Book
PH: 202, [4], 8 p. : ill. ; 19 cm. (8vo)
PB: Printed by Roger Daniel ... and are to be sold by John Williams at the Crane in Pauls church-yard in London,
PL: Cambridge [Cambridgeshire] :
SU: Military art and science Early works to 1800.
Attack and defense (Military science)

EPIC Example 2

Question: Give me information on the Ozone layer problem.

Search Readers' Guide to Periodical Literature:

f ozone and layer and warming

AU: Weisburd, Stefi.
TI: Ozone and global warming: what to do?.
SO: Science News v. 131 (Feb. 7 '87) p. 86 Sci News
SN: 0036-8423
PL: United States
PD: 1987
RT: art
AC: feature article
SU: Vienna Convention for the Protection of the Ozone Layer (1985).
Montreal Protocol (1987)
Greenhouse effect.

EPIC Example 3

Question: Is Elvis really alive?

Search Periodical Abstracts:

f elvis and alive

NO: 00787961
AU: Herbert, Suzanne Golubski
TI: Demented Tabloid Run by Aliens!
PD: 920400
JO: M v9n7 p43-48 Apr 1992 ISSN: 0746-5076
JC: IMMM
LG: Long (31+ col inches)
AV: M Magazine, P.O. Box 57099, Boulder, CO 80322-7099
AT: Feature
SF: Photograph
AB: The outrageous "Weekly World News" tabloid is profiled. The paper has an irreverent style with a titillating mix of the macabre and the absurd, and it was the first to proclaim that Elvis is still alive.
DE: Newspapers; Company profiles
CO: Weekly World News

PRISM

What is it?

PRISM is the new way to access the OCLC Online Union Catalog for producing cataloging records.

Who uses it?

Catalogers.

PRISM is used by catalogers for cataloging. Search for the newly acquired book. Find the cataloging record. Add your call number. Produce cards for your card catalog, or export into your local online catalog.

Reference Librarians.

Search for authors and titles using a search-only authorization.

Interlibrary Loan Librarians.

ILL may find Title Browse searching helpful for finding difficult ILL titles. (ILL will use PRISM on 14 December 1992.)

Collection Development and Acquisitions Librarians.

PRISM is used for confirmation and cooperative collection development.

How can I access it?

Dedicated Line.

Your OCLC terminal is connected to the OCLC network through a Sprint modem. There are monthly charges.

Dial Access.

Your microcomputer is connected to the OCLC network through a modem to the Sprint telephone network, usually via CompuServe. There are hourly charges.

Which is better?

If you use OCLC 7 hours a week or less, dial access will cost less.

How much does it cost?

Searching.

Each search costs $.23.

Telecommunications, Dedicated Line.

Monthly fee of $243.60 for 1 terminal and 1 modem. When you use your existing dedicated line you are adding no additional costs.

Telecommunications, Dial Access.

$.14 per minute, or $7.92 per hour.

How do I sign up?

Nonmembers should call Joan Stapleton at NELINET for a cost estimate and forms.

Members should fill out the OCLC PRISM Access and Authorization Form.

Searching Rules:

1. Search at Home position
2. Use F11 to send commands (not Enter)

Getting out of trouble:

1. F3 returns to a blank screen
2. CTRL Break unlocks a locked keyboard
3. REMOVE
   If the computer asks you if you want HLP or CANCEL or REMOVE or ???, you have confused it. Move your cursor to REMOVE and tap F10.

Moving Around:

1. F4 to page down
2. F5 to page up
3. F9 to Forward to the next record
4. SHIFT F9 to move Back to the previous record
5. CONTROL F9 to Go Back to the previous list

Search Keys:

People: (4,3,1)
Stephen Jay Gould is searched:
goul,ste,j <F11>

Groups of People (Corporate Bodies): (=4,3,1)
Medical Library Association is searched:
=medi,lib,a <F11>

* Beware of the Stop List

Titles: (3,2,2,1)

Gone with the Wind is searched:
gon,wi,th,w <F11>

Scanning Titles: sca ti (full title)

The Journal of the American Medical Association is searched:
sca ti journal of the american medical association <F11>

Scanning People in the Authority File: sca pn (full name)

Stephen Jay Gould is searched:
sca pn gould, stephen jay <F11>

* If you get stuck in the AF (Authority File) CHOOSE the OL (Online Union Catalog) to return to the Online Union Catalog and to scan more titles:

cho ol <F11>

Search Qualifiers:

Year: /1991

Stephen Jay Gould from 1991 is searched:
goul,ste,j/1991 <F11>

Type of Material: /rec

Stephen Jay Gould sound recordings is searched:
goul,ste,j/rec <F11>

PRISM Example 1

Question: Find me the proceedings of the Military Librarians Workshop

Search: =mili,lib,w

```
OLUC  dc =mili,lib,w
Record 10 of 29
 NO HOLDINGS IN TQL - 4 OTHER HOLDINGS
  OCLC:  23294985              Rec stat:    n
Entered:    19910326    Replaced:  19910326      Used:    19910426
▸ Type: a      Bib lvl: m          Source:   d          Lang:  eng
  Repr:        Enc lvl: I          Conf pub: 0          Ctry:  vau
  Indx: 0      Mod rec:            Govt pub:            Cont:
  Desc: a      Int lvl:            Festschr: 0          Illus: a
               F/B:     0          Dat tp:   s          Dates: 1990,
¶
▸   1  040      SCA ǂc SCA ¶
▸   2  090      ǂb  ¶
▸   3  049      TQLL ¶
▸   4  111 2    Military Librarians Workshop ǂn (34th : ǂd 1990 :
ǂc Fort Monroe, Va.) ¶
▸   5  245 10   Libraries : ǂb a vision for the 90's and beyond :
proceedings of the 34th Annual Military Librarians Workshop,
October 9-12, 1990 / ǂc Edwin B. Burgess, editor. ¶
▸   6  260      Fort Monroe, Va. : ǂb U.S. Army Training and
Doctrine Command, Library and Information Network (TRALINET)
Center, ǂc [1991] ¶
▸   7  300      1 v. (various pagings) : ǂb ill. ; ǂc 28 cm. ¶
▸   8  500      Title from cover. ¶
▸   9  650   0  Military libraries ǂz United States ǂx Congresses.
¶
▸  10  650   0  Libraries ǂx Automation ǂx Congresses. ¶
▸  11  650   0  Artificial intelligence ǂx Congresses. ¶
▸  12  700 10   Burgess, Edwin B. ¶
▸  13  710 10   United States. ǂb Army Training and Doctrine
Command. ¶
```

PRISM Example 2

Question: Find me the biography of Stormin' Norman

Search: sca ti stormin norman

```
OLUC  ti "STORMIN NORMAN AN AMERICAN HERO"
Record 1 of 1
NO HOLDINGS IN TQL - 264 OTHER HOLDINGS
OCLC:  23527201              Rec stat:    a
Entered:    19911120  Replaced:  19920418       Used:    19921022
▸ Type: a      Bib lvl: m          Source:              Lang:  eng
  Repr:        Enc lvl:            Conf pub: 0          Ctry:  nyu
  Indx: 0      Mod rec:            Govt pub:            Cont:
  Desc: a      Int lvl:            Festschr: 0          Illus: a
               F/B:     0b         Dat tp:   s          Dates: 1991,
   ¶
▸   1  010      91-218738 ¶
▸   2  040      DLC ǂc DLC ¶
▸   3  020      0821735624 : ǂc $4.50 ($5.50 Can. : 3.99 (U.K.)) ¶
▸   4  043      n-us--- ¶
▸   5  050 00   E840.5.S39 ǂb A75 1991 ¶
▸   6  082 00   355/.0092 ǂa B ǂ2 20 ¶
▸   7  090      ǂb  ¶
▸   8  049      TQLL ¶
▸   9  100 1    Anderson, Jack, ǂd 1922- ¶
▸  10  245 10   Stormin' Norman : ǂb an American hero / ǂc Jack
Anderson and Dale Van Atta. ¶
▸  11  260      New York, NY (475 Park Ave. South, New York 10016)
: ǂb Kensington Pub. Corp., ǂc c1991. ¶
▸  12  300      191 p. : ǂb ill. ; ǂc 18 cm. ¶
▸  13  600 10   Schwarzkopf, H. Norman, ǂd 1934- ¶
▸  14  650  0   Generals ǂz United States ǂx Biography. ¶
▸  15  610 10   United States. ǂb Army ǂx Biography. ¶
▸  16  650  0   Persian Gulf War, 1991. ¶
▸  17  700 10   Van Atta, Dale. ¶
```

PRISM Example 3

Question: How many Eisenhower manuscripts are on OCLC?

Search: eise,dwi,d/amc

OLUC dp eise,dwi,d/amc Records: 57

Rec#	Name	Title	Publisher	D
1¶	Eisenhower, Dwight	ALS, [to Mamie Geneva Doud Ei		
2¶	Eisenhower, Dwight	ALS [on picture postal card o		
3¶	Eisenhower, Dwight	AMs [illuminated manuscript]		
4¶	Eisenhower, Dwight	Business and club life in San		
5¶	Eisenhower, Dwight	Business and club life in San		
6¶	Eisenhower, Dwight	Document,		
7¶	Eisenhower, Dwight	Dwight D. Eisenhower :		
9¶	Eisenhower, Dwight	Dwight D. Eisenhower Presiden		
9¶	Eisenhower, Dwight	An enlisted reserve for the r		
10¶	Eisenhower, Dwight	Frederick Faust papers : addi		
11¶	Eisenhower, Dwight	James Agee-David McDowell Pap		
12¶	Eisenhower, Dwight	James F. Byrnes papers.		
13¶	Eisenhower, Dwight	Letter		
14¶	Eisenhower, Dwight	Letter,		
15¶	Eisenhower, Dwight	Letter and photographs		
16¶	Eisenhower, Dwight	Letter, 1932 Oct. 7, Washingt		
17¶	Eisenhower, Dwight	Letters, [to Mamie Geneva Dou		
18¶	Eisenhower, Dwight	Letters. Additions.		
19¶	Eisenhower, Dwight	Newsletters,		

FIRST

What is it?

First is the current system used for

- Interlibrary Loan (until 14 December 1992)
- Union Listing (until several months from now)

Who uses it?

Interlibrary Loan.

The First System is used by ILL to borrow and loan library materials.

- Search for the book the patron wants.
- Choose the library that can supply the book.
- Create a workform to request the book.
- Search the Name-Address Directory to find ILL policies, names, and addresses.

ILL uses the Message File to follow borrowing and lending through the system.

Union Listing.

Union listing users add and maintain serials records and other records online. This allows borrowers to know exactly what a library has.

How can I access it?

Same as PRISM.

How much does it cost?

Same as PRISM.

How do I sign up?

Same as PRISM.

Searching Rules:

1. Search at Home position
2. Use F11 to send commands (not Enter)

Search Keys:

Author or Person: (4,3,1) Same as PRISM.

Groups of People (Corporate Bodies): (=4,3,1) Same as PRISM.

Titles: (3,2,2,1) Same as PRISM.

Author/Title Combination: (4,4)
Walt Whitman's Leaves of Grass is searched:

whit,leav <F11>

People in the Authority File: ([4,3,1)

Search Qualifiers:

Year: /1991 Same as PRISM.

Type of Material: /rec Same as PRISM.

Moving Around:

1. 1 (etc.)
   1. To see another item in a list, type its number followed by F11.
2. F4 to see the next screen
3. F5 to see the previous screen, or list
4. F9 to see the ILL Message File

Interlibrary Loan Search Keys:

1. dh to Display Holdings
2. bib to move to the Bibliographic record
3. ulneul to display union list holdings for the New England Union List

   spy,,,/ser <F11>
   ulneul <F11>

   Gives you a list of who holds what volumes of Spy magazine in the New England Union List of Serials.

Name-Address Search Keys:

Organization Name: (:3,2,2,1) Start with a colon!

Central Plains University Libraries is searched:

:cen,pl,un,1 <F11>

* Beware of the Stop List.

OCLC Symbol: (:xxx.) Start with a colon! End with a period!

TQK is searched:

:tqk. <F11>

First Example 1

Question: What is the phone number and who can I talk to at the Naval Undersea Warfare Center?

Search in OCLC's Name-Address Directory: nav,un,wa,c

```
 NACN:  6808 DATE MODIFIED:  920311   DATE LAST USED:  000000 ¶
 ¶
▸ 1 ATTN OF:   0 Mr ǂf Jerome ǂm J ǂl Barner ¶
▸ 2 TITLE      0  ¶
▸ 3 ORGANIZ      Naval Undersea Warfare Cent Detachment ǂt LIBR ¶
▸ 4 PO/ST        New London Lab ǂa B-80  Room 2065 ¶
▸ 5 CITY/ST       ǂc New London ǂs CT ǂp 063205594 ǂn US ¶
▸ 6 IDENTITY      ǂo NUS ǂo FLC ǂg FEDL ǂz OCL ¶
▸ 7 COMMUN       203 ǂp 440-4695 ¶
▸ 8 AFFIL'N      OCLC ǂa FEDLINK ǂa Federal Libraries & Info Cent
Group Access ¶
▸ 9 POLICIES      ¶
▸10 FAX POLICY    ¶
▸11 MESSAGE       ¶
▸12 STATUS       CHG ǂb Naval Underwater Systems Center Tech Libr
ǂd 920311 ¶
```

First Example 2

Question: Which libraries own The Naval Units?

Search OCLC's Online Union Catalog for the book:
nav,un,,/bks
Then display the holdings: dh

```
 Screen 1 of 2      ¶
▸NO HOLDINGS IN TQK - FOR HOLDINGS ENTER dh DEPRESS DISPLAY RECD
SEND
 OCLC: 20894133     Rec stat: p Entrd: 891221        Used: 921022
¶
▸Type: a Bib lvl: m Govt pub:   Lang:  eng Source:   Illus: ab
 Repr:   Enc lvl:   Conf pub: 0 Ctry:  pau Dat tp: s M/F/B: ^0
 Indx: 0 Mod rec:   Festschr: 0 Cont:
 Desc: a Int lvl:   Dates: 1990,     ¶
  ▸ 1 010      89-13864 ¶
  ▸ 2 040      DLC ǂc DLC ¶
  ▸ 3 020      0918678528 ¶
  ▸ 4 050 00   VA10 ǂb .N363 1990 ¶
  ▸ 5 082 00   359.3/1 ǂ2 20 ¶
  ▸ 6 049      TQKK ¶
  ▸ 7 245 04   The Naval units / ǂc Ashley Brown, editor, Jonathan
Reed, editor. ¶
  ▸ 8 260      Harrisburg, Pa. : ǂb National Historical Society, ǂc
c1990. ¶
  ▸ 9 300      176 p. : ǂb ill. (some col.), col. maps ; ǂc 29 cm.
¶
  ▸10 490 1    The Elite ¶
  ▸11 500      "Published in Great Britain in 1986 by Orbis
Publishing"--T.p.
verso. ¶
  ▸12 650  0   Navies. ¶
  ▸13 650  0   Submarine warfare ǂx History. ¶
  ▸14 650  0   Naval history, Modern ǂy 20th century. ¶
  ▸15 700 10   Brown, Ashley. ¶
  ▸16 700 10   Reed, Jonathan. ¶
  ▸17 830  0   Elite (Harrisburg, Pa.) ¶
```

```
▸ALL LOCATIONS -  FOR OTHER HOLDINGS DISPLAYS ENTER dh[group],
dhs, OR dhr,
DISPLAY RECD, SEND;  FOR BIBLIOGRAPHIC RECORD ENTER bib, DISPLAY
RECD, SEND

STATE     LOCATIONS ¶
 AL      AAU ¶
 CA      SBD ¶
 DC      dlc NHC ¶
 FL      sot ¶
 GA      GSL ¶
 IL      IHR ¶
 KY      KEU ¶
 MA      HLS MRQ ¶
 MD      UNA ¶
 MN      MPI ¶
 MO      MCB ¶
 NJ      ACN ¶
 OK      OWJ ¶
 SD      lve SBR ¶
 WI      gzd ¶
```

First Example 3

Question: Which libraries in New England hold the serial, Sea Power?

Search OCLC for the serial: sea,po,,/ser
Then search the New England Union List of Serials: ulneul

```
▸NO HOLDINGS IN TQK - FOR HOLDINGS ENTER dh DEPRESS DISPLAY RECD SEND
 OCLC: 3324011      Rec stat: c Entrd: 771007        Used: 921021 ¶
▸Type: a Bib lvl: s Govt pub:   Lang:  eng Source:   S/L ent: 0
 Repr:   Enc lvl: I Conf pub: 0 Ctry:  dcu Ser tp: p Alphabt: a
 Indx:   Mod rec:   Phys med:   Cont: ^    Frequn: m Pub st:  c
 Desc: a Cum ind:   Titl pag:   ISDS:    1 Regulr: x Dates: 1971-9999 ¶
 ▸ 1 010     sn85-12065 ǂz 72-616931 ¶
 ▸ 2 040     DLC ǂc OLA ǂd OLA ǂd NSD ǂd m.c. ǂd DLC ǂd NSD ǂd DLC ǂd
AIP ǂd
NSD ǂd NST ǂd NSD ǂd HUL ǂd m/c ǂd NST ¶
 ▸ 3 012      ǂe s ǂi 8509 ǂj 1 ǂk 1 ǂm 1 ¶
 ▸ 4 022 0   0199-1337 ¶
 ▸ 5 032     375220 ǂb USPS ¶
 ▸ 6 042     nsdp ¶
 ▸ 7 050 00  VA49 ǂb .N28 ¶
 ▸ 8 082 1   359 ǂ2 11 ¶
 ▸ 9 049     TQKK ¶
 ▸10 130 0   Sea power (Washington, D.C. : 1971) ¶
 ▸11 210 0   Sea power ǂb (1971) ¶
 ▸12 222  0  Sea power ǂb (1971) ¶
 ▸13 245 00  Sea power. ¶
 ▸14 260     [Washington, D.C. : ǂb Navy League of the United States, ¶
 ▸15 300     v.  :b ill. (part col.) ; ǂc 28 cm. ¶
 ▸16 310     Monthly (semimonthly Apr.) ǂb <, Apr. 1984-> ¶
 ▸17 321     Eleven no. a year ¶
 ▸18 321     Monthly ǂb <, Feb. 1974-> ¶
 ▸19 350     $15.00 (U.S.) ǂa $20.00 (surface mail, foreign) ǂa $25.00
(air mail, foreign) ¶
 ▸20 362 1   Began with: Vol. 14, no. 8 (Sept. 1971). ¶
 ▸21 500     Description based on: Vol. 24, no. 8 (Aug. 1981); title
from cover. ¶
 ▸22 510 2   Predicasts ¶
 ▸23 510 2   America, history and life ǂx 0002-7065 ǂb 1972- ¶
...
 ▸26 550     Official publication of the Navy League of the United
States. ¶
 ▸27 610 10  United States. ǂb Navy ǂx Periodicals. ǂw cn ¶
 ▸28 650  0  Naval art and science ǂx Periodicals. ¶
 ▸29 710 20  Navy League of the United States. ǂw cn ¶
 ▸30 770 0    ǂt Almanac of seapower ǂx 0736-3559 ǂw (DLC)   83645621 ¶
 ▸31 780 00   ǂt Navy ǂw (OCoLC)2264745 ¶
...
```

NEW ENGLAND UNION LIST AND GROUP ACCESS CATALOG

Sea power (Washington, D.C. : 1971)
Sea power.
ISSN: 0199-1337 CODEN: OCLC no: 3324011 Frequn: m
Regulr: x
ITEMS MARKED + HAVE FULLER HOLDINGS. REQUEST LINE NO. TO VIEW THESE. ¶
¶
▸ 1 + GNA (9204,0,4) 1981-1989:11; 1991:05- ¶
▸ 2 + GOA (9207,0,4,6,Retains current year plus 2 years.) ¶
▸ 3 + GPG (8811,0,4) 1987:04- ¶
▸ 4 + GQH (9205,0,4,6,Retains current 2 years.) ¶
▸ 5 + GQL (9102,0,4) 1989- ¶
▸ 6 + GVQ (9008,0,4) 1980- ¶
▸ 7 + RYE (8702,0,4,6,Retains current 5 years.) ¶
▸ 8 RYS (8809,0,4,6,retains 6 years only) ¶
▸ 9 SST (8804,0,5) 18-21; 23-25 1975-1978; 1980-1982 ¶
▸ 10 + UMI (9112,0,4) 27- 1984- ¶
▸ 11 + UNH (8910,0,4,6,Retains current year.) ¶
▸ 12 + UTE (9208,0,4) 1985- ¶
▸ 13 + YRP (8812,0,4,6,Retains current 4 years.) ¶

25 October 1992

ELECTRONIC NETWORKS: INTERNET AND BITNET

by Carolyn House, Member Services Librarian, NELINET

This presentation outlines the three major "services" of Internet: e-mail, ftp and telnet. Benefits of each are described and tools for more easily accessing sources on the network are discussed.

The internet is an international network of networks that are comprised of university, government, commercial and private computers. They communicate with each other using TCP/IP (Transmission Control Protocol/Internet Protocol), which are protocols that allow dissimilar computers to speak to each other.

E-mail provides the ability to communicate electronically with friends and colleagues world-wide. It also enables a user to participate in electronic discussion groups on topics ranging from library reference and cataloging to gardening and recipes.

File Transfer Protocol (ftp) provides the capability to connect to a remote computer site and get a file from that site. Free copies of shareware software, data files and Internet documentation are examples of resources available via ftp.

Telnet is the ability to logon to a remote computer and use its resources as if you were at that location. Telnet provides connections to library catalogs, Free-Nets, free information databases and commercial services around the globe.

Traveling the Internet is exciting, though not yet intuitive. To facilitate navigation through the network, tools such as WHOIS, ARCHIE, HYTELNET, and GOPHER have been developed. WHOIS databases contain information about users; they are used to find e-mail addresses. ARCHIE databases provide ftp site, directory and file name information. HYTELNET provides telnet address information, as well as instructions for using telnet sites. Gopher is a menu-driven front-end to many of the sources and services of the Internet.

Electronic Networks: Internet and BITNET

We have chosen to focus this workshop on two major electronic networks, Internet and BITNET. These networks are very popular in the library community because of their research and education goals. There are many other electronic networks in the world, such as Prodigy and Compuserve, but networks such as these serve more commercial purposes. Many of you are already very familiar with the concept of electronic networks - OCLC has been providing services on their electronic network for over twenty years. The difference between OCLC and Internet or BITNET is the OCLC network is *proprietary*, which means you may only use and access OCLC services on their network. With BITNET and Internet you have access to hundreds of different services.

BITNET became popular in the early 1980's in research institutions as a method of collaboration. BITNET allows the user to send electronic mail messages, to batch data file transfers, and conduct interactive messaging. BITNET allows a user to send and receive electronic mail messages and data files and perform interactive messaging (think of it as a phone conversation except you use the computer to communicate). BITNET offerings are strongest in the area of *servers*, providing access and administration for services such as electronic journals and discussion groups (listservs). BITNET has been overtaken by the more sophisticated Internet network. BITNET sites still exist, and gateways have been developed to connect BITNET and Internet sites.

The Internet is an international collection of computer networks, mostly based in the U.S., using the Internet Protocols (TCP/IP). These protocols allow different computer systems to communicate with one another. The Internet offers electronic mail, transfer of program and data files (FTP), and allows a user to login to a remote computer and use the resources on the remote computer (Telnet). The Internet was started with by the Department of Defense in the early 1960's with ARPANet and expanded with National Science Foundation grants and oversight. The National Science Foundation decided on a major upgrade and expansion of this network in 1987, and the growth of the network has exploded since that time.

One does not need both Internet and BITNET access. Internet users can reach the resources of both BITNET and Internet. BITNET users can communicate using e-mail with Internet and BITNET users (thanks to highspeed links established in the BITNET II project), but a BITNET user cannot use FTP and Telnet. Some users have both services, since historically BITNET preceded Internet access in many research institutions.

To ensure that the Internet is constantly upgraded to meet the demands of an expanding user base, to provide access to a wider constituency of users, and to make sure that libraries are not left out of the equation, the past two years have seen the development and passage of the High Performance Computing Act of 1991, more commonly known as the "NREN" bill. This law and related pending legislation will provide funding for the National Education and Research Network, which would include an upgrade of the present Internet, expanding access to libraries and K-12 schools. The money hasn't been doled out yet for these purposes. The National Science Foundation will not be gradually get out of the business of operating and expanding the Internet. Librarians need to pay attention to this legislation, since who is going to pay for your library or information center's access to Internet, and how much it will cost, will depend this funding.

Beyond the Walls: The World of Networked Information

This video was produced at Syracuse University in cooperation with NYSERNet, the New York state mid-level regional Internet provider. This video and an instructional workshop package may be purchased from NYSERNet, 111 College Place, Syracuse, NY 13244 (315-443-4120) for $95.00.

GLOSSARY

address	There are two separate uses of this term in internet networking: "electronic mail address" and "internet address". An electronic mail address is the string of characters that you must give an electronic mail program to direct a message to a particular person. See "internet address" for its definition.
anonymous ftp	The procedure of connecting to a remote computer as an anonymous or guest user, in order to transfer public files. See also FTP.
archie	A service which tracks the contents of over 800 anonymous FTP sites, allowing you to determine what files are available and from what source.
ARPANET	Advanced Research Projects Agency Network: A pioneering early 1960's network funded by ARPA. It served as the basis for early networking research as well as a central backbone during the development of the Internet.
ASCII	A standard coding technique for representation of information for computer usage and transmission. "7 BIT ASCII" contains 128 possible character values from hexadecimal 00 to 7F. "8 BIT ASCII" or "Extended ASCII" contains 256 possible character values from hexadecimal 00 to FF.
Async	A character-at-a-time communication technique.
backbone	High speed connection within a network which connects shorter, usually slower circuits. Also used in reference to a system that acts for a "hub" of activity.
bandwidth	The difference, in Hertz (Hz), between the highest and lowest frequencies of a transmission channel; the greater the bandwidth the "faster" the line.
BBN	Bolt, Beranek and Newman, Inc.: The Cambridge, MA company responsible for development, operation and monitoring of the ARPANET, and presently NearNet, the New England regional Internet provider.
BITNET	Because It's Time NETwork: A cooperative network of primarily academic institutions, serving more than 2,300 sites in 32 countries. The major services supported are e-mail, mailing lists and file transfer.
Client Server Model	The model of interaction in a distributed system in which a program at one site sends a request to a program at another site and awaits a response. The requesting program is called a client; the program satisfying the request is called the server.
dedicated line	With a dedicated line connection, the Internet provider brings a cable and a router to your site. Used with mainframes, minicomputers, and LANs, to connect multiple users at a site to the Internet.

dial-in	This type of connection has an end user dialing into a host computer, using a microcomputer and modem, to reach the Internet.
domain	The domain portion of an e-mail address indicates the name and type of organization the person is affiliated with. For example, in the address mjb@nelinet.org, the domain portion is what follows the @ sign and indicates that the person is at the organization called NELINET.
download	To copy a file from a host computer to your microcomputer.
DS0	DIGITAL SIGNAL LEVEL 0. One 56 Kbps or 64 KBPs standard digital telecommunications channel.
DS1	DIGITAL SIGNAL LEVEL 1. An AT&T standard for the transmission of high speed data over T1C facilities (1.544 Mbps).
DS3	DIGITAL SIGNAL LEVEL 3. An AT&T standard for the transmission of high speed data over T3 facilities (44 Mbps).
Dumb Terminal	A terminal which operates asynchronously using ASCII coding for communicating. These devices generally do not perform storage functions or any local operations available on a microcomputers or intelligent terminals.
e-mail	Electronic Mail: allows people to send messages to each other over a telephone or data line using a computer and modem, or a dedicated line terminal.
Ethernet	A popular local area network technology invented by Xerox. Workstations communicate using a technology called CSMA/CD (carrier sense multiple access/collisions detection) in which if data are being sent by one node and it detects a collisions with other data, it waits and then retransmits. It is a comprehensive baseband data communications standard that interconnects computers and local area networks. The baseband transmission speed is rated at 10 Mbps. The standard version of Ethernet is defined by IEEE in 802.3, 10BASE2. A broadband version is defined in 10BASE36; Thin Ethernet using RG-58 coax cable is defined in 10BASE2, and a version using twisted pair cable is specified in 10BASET.
FTP	File Transfer Protocol: The Internet protocol (and program) used to transfer files between host computers.
FYI	For Your Information: Informal documents on how the Internet works. For example, answers to frequently asked questions and bibliographies.
Gateway	Hardware and software connecting two dissimilar networks that adds security, flow control and protocol conversion. Gateways typically handle protocol-conversion operations across a wide spectrum of communications functions or layers. Gateways require software programming and central management. Gateways usually operate at the transport layer or above in

	the OSI model and provide protocol translation as well as rouging. As a result of the more complex processing done in gateways, they are usually slower in speed than bridges or routers.
hostname	The name given to a computer.
internet	Interconnected networks that function as a single, large virtual network. These networks are composed of disparate computer systems throughout the world.
Internet (with a capital "I")	The largest internet in the world consisting of large national backbone nets (such as MILNET, NSFNET) acting as one virtual network. The services available on Internet included e-mail, ftp and telnet.
internet address	An assigned number or name which identifies a host in an internet. It has two or three parts: network number/name, optional subnet number/name and host number/name.
IP	Internet Protocol: The Internet standard protocol provides a common technology layer over dissimilar networks to move packets of data among host computers.
ISDN	Integrated Services Digital Network - A digitized telecommunications network being defined by CCITT in which data, voice, facsimile and video would be carried over the same communications channel using OSI standards.
Janet	Joint Academic Network - The United Kingdom's private wide area network which links higher education sites and research centers.
Kermit	A popular file transfer and terminal emulation communications program and protocol.
list	Mailing list on the network, also referred to as a conference.
listserv	On BITNET, an automated program for maintaining discussion lists, which takes care of additions to and removals from a list. It also provides archives of postings, back issues of electronic journals and useful documentation for users. A "listserver" is the computer on which the listserv is operated.
message	For the purposes of this workshop, a message is an electronic mail document intended for a single recipient. See also Posting.
mid-level regional networks	Networks invested with the responsibility to provide Internet access to research and development institutions within their regions. There are about thirty of these networks in the United States and many are run on a state-wide basis. New England is served by two of these networks, NearNet and JVNCNet.

NIC	Network Information Center: An organization which provides network users with information about services provided by the network. Such centers provide user assistance, document service, training, etc.
NOC	Network Operations Center: An organization that is responsible for maintaining a network. Tasks include monitoring, control, troubleshooting and support.
NREN	National Research Educational Network: Proposed successor to the Internet, financed by the "High Performance Computing Act of 1992", PL102-194. The NREN bill provides for the National Science Foundation to assist regional networks to upgrade their capabilities and for assisting colleges, universities, libraries and K-12 to connect to the Network.
NSF	National Science Foundation: Sponsors of the NSFNET.
NSFNET	National Science Foundation Network: The NSFNET is part of the Internet. The NSFNET is a highspeed "network of networks" which is hierarchical in nature. At the highest level is a network that spans the continental United States. Attached to that are mid-level networks and attached to the mid-levels are campus and local networks. It also has connections out in Canada, Mexico, Europe, and the Pacific Rim.
OSI	Open Systems Interconnect: a suite of protocols being developed by NISO to connect disparate computer systems worldwide. Although the Internet protocols are the de facto standard today, it is predicted that the OSI protocols will supersede the Internet protocols in the future, as they allow for more sophisticated network operations.
packet	A cluster of data transmitted on the network.
packet switch	Data transmission technique in which data is segmented and routed in packets.
posting	For the purposes of this workshop, an electronic mail document sent to a list for distribution to all subscribers of the list. See also Message.
protocol	A formal set of rules governing the format, timing, and error control of transmissions on a network.
RFC	Request For Comments: The document series, begun in 1969, which describes the Internet suite of protocols and related experiments. Not all RFCs describe Internet standards, but all Internet standards are written up as RFCs. See also FYI.
server	A computer that provides services to network users, such as shared access to a file system, a printer, a modem or an electronic mail system.

SLIP	Serial Line Internet Protocol: Enables a microcomputer to become an Internet host. Instead of dialing into a remote host, your microcomputer would be the host. SLIP software, such FTP Software, is necessary to enable this connection.
TCP	Transmission Control Protocol: The Internet standard high-level protocol for transferring files from one computer to another.
Telenet	A public packet-switching network purchased by US Sprint. Now known as "SprintNet", this is a commercial network service and should not be confused with Telnet. See below.
TELNET	The Internet protocol which allows you to log onto a remote host computer.
terminal emulation	Software program that allows a microcomputer to look like and act as a mainframe or minicomputer terminal.
ULTRIX	UNIX-based operating system for Digital Equipment Corporation computers.
UNIX	An operating system developed by Bell Laboratories that supports multiuser and multitasking operations.
upload	To copy a file from your microcomputer to a host computer.
VMS	Virtual Memory System: a Digital Equipment Corporation operating system.
WHOIS	A program that allows you to search a database of e-mail addresses to find out who a given address belongs to.
X.25	A CCITT standard that defines a protocol for gaining access to public packet-switching networks. The latest (1988) version of this protocol is used in the OCLC packet-switch network.
z39.50	A NISO standard entitled "Information Retrieval Service Definition and Protocol Specification for Library Applications." It has important applications for library and information service vendors and it gives guidelines for format of queries, provides for the transfer of database records, and defines other record types. This standard is designed as an within the Open Systems Interconnection (OSI) protocol suite but is also being mapped into the TCP/IP protocol suite.

E-mail

E-mail means never having to lick a stamp again.

What is E-mail ?

E-mail is the abbreviated form of the term electronic mail. Electronic mail allows an individual to send a message to another person on the network using a computer and a modem, or a dedicated line dumb terminal. The message is "delivered to a mailbox", i.e. it is stored on a disk, where the recipient can retrieve it at any time. It is possible to indicate more than one addressee when sending e-mail.

Why use E-mail?

1. Delivery of electronic mail is much faster than standard mail delivery.

2. Delivery of electronic mail is less expensive.

3. If your message/posting fails to reach its intended address, it is returned to you immediately.

4. Reuse of material in electronic form is far easier because the text is already in machine readable form.

An example of the benefits of e-mail:

You are collaborating with someone to write an article, and you need to have her/him make comments on what you have written.

Common procedures:

a. You create the article on your word processor
b. You print the article and make a photocopy
c. You fax the article
d. They make a photocopy of the document
e. They make corrections
f. They fax it back to you
g. You make the corrections on your computer

E-mail procedures:

a. You create the article on your word processor and save it as an ASCII file
b. You send the file via e-mail
c. They receive the file, make corrections on the computer, and send the corrected file to you
d. You receive the file with the corrections and print the final copy

E-mail Addresses

Every user on an electronic network is provided with an e-mail address. This address identifies a user on the network. The address you are given by your network administrator is the address that must be used for you to receive messages. An e-mail address usually has at least two parts, username and organization, and is expressed as name@domain.

BITNET Addresses

The user name is always to the left of the @ sign. The computer or organization is always to the right of the @ sign. The address should always have .bitnet at the end.

An example of a BITNET address is: mjb@nelinet.bitnet

Internet Addresses

Internet e-mail addresses follow the domain name system. An e-mail address is constructed as follows: user@domain, with the domain specified at several levels. A typical domain is comprised of a machine name, an institution, and a top level domain.

An example of an Internet address is: jdoe@computer.university.edu

Top-Level Domains

.edu	Educational Institution
.com	Commercial
.gov	Government
.mil	Military
.org	Non-Profit Organization
.net	Network Operation and Information Centers

Country Codes

.ca	Canada
.jp	Japan
.au	Australia
.il	Israel
.uk	United Kingdom
.se	Sweden
.us	United States

Common Mail Commands

Whatever your mail system, you should be able to send a message/posting, reply to a message/posting, get a directory of your mail, etc. Check with your system administrator for the actual commands, and possible abbreviations for these functions.

send - moves the e-mail from the sender's computer to the recipient's computer
reply - respond to an e-mail message/posting
read - read the text of an e-mail message/posting
dir - display a list of e-mail messages/postings
delete - erases e-mail messages/postings

An Example of an E-Mail Directory

MAIL> dir NEWMAIL

```
#  From                    Date          Subject

 3 IN%"PACS-L%UHUPVM1.B 13-MAR-1992  Statewide and Intra-state Library
 4 IN%"PACS-L%UHUPVM1.B 13-MAR-1992  Computer Projection Systems
 5 IN%"PACS-L%UHUPVM1.B 13-MAR-1992  Swiss OPACs
 6 IN%"harper@CONVEX.CS 13-MAR-1992  RE: MEDLINE on CD, also USA white
 7 IN%"moepmisa@TECNET1 13-MAR-1992  HELLO/QUESTIONS...
 8 IN%"PACS-L%UHUPVM1.B 13-MAR-1992  Position Announcement
 9 IN%"PACS-L%UHUPVM1.B 13-MAR-1992  Position Announcement
10 IN%"PACS-L%UHUPVM1.B 13-MAR-1992  CAN/OLE Address Change
11 IN%"moepmisa@TECNET1 13-MAR-1992  MORE QUESTIONS...
12 IN%"cchao@CELLO.HPL. 13-MAR-1992  WANTED: CD-ROM
13 IN%"geoff@BODLEIAN.E 13-MAR-1992  Seeking experiences of using Sun
14 IN%"dancey@MILTON.U. 13-MAR-1992  RE: Hitachi cdr1503s - iso 96
15 IN%"OPK%NIHCU.bitnet 13-MAR-1992  RE:  CDROMs work with OS/2
16 IN%"silverton@MALA.B 13-MAR-1992  Manufacturing Disks
17 IN%"CHARLESW@QUCDN.Q 13-MAR-1992  RE: INSIDE MACINTOSH on CDrom
18 IN%"CHARLESW@QUCDN.Q 13-MAR-1992  RE: Write-Once
19 IN%"pac@CERC.WVU.WVN 13-MAR-1992  RE: Toshiba CD/Future Domain
```

Press RETURN for more...

Reading the E-Mail Header

Received: These lines are most commonly ignored, because they accumulate as the message travels. They list each computer or system the message has to travel through to get to your computer. Over the Internet, there is always one "Received:" and there may be as many as four or five.

Message-ID: This line is intended mainly for tracing mail routing, and you do not need to write down or remember this number. The number identifies the date and time of the message, and identifies where the message originated. Every "Message-ID:" is unique.

Date: This line contains the date and time (military time) the message was sent.

From: This line is the e-mail address of the person who sent the message. This is also the address you would use to reply to the message of a particular individual.

Sender: This line is added by the mail delivery person if From: was supplied by the user and does not match the real sender. This feature was designed to allow secretaries to send mail for their bosses or for a single person to send mail on behalf of a group.

To: This line lists the e-mail address of the recipients of the message. There may also be a "Cc:" line which lists additional addresses where the message was sent.

Subj: This line is used to list a brief description of the subject of the message. This will appear is the directory of your mail messages.

Example of an E-Mail Header

From:IN%"v.verkade@lynx.northeastern.edu"
To:IN%"MMCKENNA@RCNVMS.RCN.MASS.EDU"
CC:
Subj:NEASIS

Received: from helios.northeastern.edu by RCNVMS.RCN.MASS.EDU (PMDF #12408) id <01GI2GF78GBKCZ0DR2@RCNVMS.RCN.MASS.EDU>; Wed, 25 Mar 1992 16:29 EST
Date: Wed, 25 Mar 92 16:29:52 EST
From: v.verkade@lynx.northeastern.edu
Subject: NEASIS
In-reply-to: <memo.1714109@lynx.northeastern.edu>
To: MMCKENNA@RCNVMS.RCN.MASS.EDU
Message-id: <memo.1746361@lynx.northeastern.edu>

Example of Message Received

```
 #22        13-MAR-1992 15:31:05.04                          NEWMAIL
From:IN%"RAYNIRO@sud.ed.ray.com"
To:IN%"MMCKENNA@RCNVMS.RCN.MASS.EDU"
CC:
Subj:RE: Case Studies

Received: from relay1.UU.NET by RCNVMS.RCN.MASS.EDU (PMDF #12408) id
 <01GHLMUW8CKWCYZGZS@RCNVMS.RCN.MASS.EDU>; Fri, 13 Mar 1992 15:30 EST
Received: from uunet.uu.net (via LOCALHOST.UU.NET) by relay1.UU.NET with SMTP
 (5.61/UUNET-internet-primary) id AA19354; Fri, 13 Mar 92 15:30:27 -0500
Received: from rayssd.UUCP by uunet.uu.net with UUCP/RMAIL (queuing-rmail) id
 152823.3174; Fri, 13 Mar 1992 15:28:23 EST
Received: from SUD1.ED.RAY.COM by rayssd.ssd.ray.com (5.65/8.26) with SMTP ;
 Fri, 13 Mar 92 13:33:19 -0500
Date: Fri, 13 Mar 92 13:35 EDT
From: RAYNIRO@sud.ed.ray.com
Subject: RE: Case Studies
To: MMCKENNA@RCNVMS.RCN.MASS.EDU
Message-id: <9203131833.AA21324@ray.com>
X-VMS-To: IN%"MMCKENNA@RCNVMS.RCN.MASS.EDU"

Press RETURN for more...

MAIL>
   #22        13-MAR-1992 15:31:05.04                          NEWMAIL

Hi Mary!  Please let Mary Jo know her message was received just fine.
  Thanks.              --Ray Niro

MAIL>
```

Bounced Mail

When an e-mail address is incorrect is some way (the system name, user name, etc may be wrong) the mail system will bounce the message/posting back to the sender. There will be a message in the subject field noting that the message/posting was undeliverable.

LISTSERV

On BITNET, Listserv is an automated program for maintaining discussion lists. The program takes care of additions to and removals from a list. It also provides archives of postings, back issues of electronic journals and useful documentation for users. Any mail sent to the "list" is sent to all subscribers/members of the group. A listserver is the computer on which the listserv is operated.

Definitions

List Name	The 1-8 character name by which a distribution list is identified to the server. It will often end in "-L", eg. PACS-L, ILL-L
List userid	The network address/userid@node/mailbox to which mail and files must be sent in order to be redistributed to the list. The first part "userid" will always be the list name, while the second part "node" is the node name of the LISTSERV server. Example:UG-L@BITNIC.
LISTSERV userid	The network address of the LISTSERV server, e.g. LISTSERV@FRECP11.
List owner	The person(s) who maintain the list and who have authority to perform list-maintenance functions. You will sometimes get a message saying that "Your request has been forwarded to the list owner".
List moderator	The person who reviews material sent by users to the list before allowing the server to distribute them. If the list is controlled by a moderator you will get a message saying "Your mail has been forwarded to the list moderator". Most distribution lists do NOT have a moderator and mail received by the server is distributed "as is".

BULLETINS

Some network adminstrators will set up a Bulletin (an electronic bulletin board) to receive postings from a variety of Internet/BITNET interest groups, such as PACS-L or ILL-L. This eliminates the need for several people in an organization to subscribe to a given list/conference.

Because there are so many mail postings on a list/conference, using the Bulletin instead will prevent your mailbox from cluttering up with hundreds of messages if you go away and forget to unsubscribe.

A Bulletin utility permits a user to create a posting for reading by all users. Users are notified upon logging in that new postings have been added, and the topic of the posting. Actual reading of the postings is optional. Postings are automatically deleted when their expiration date has passed.

LISTSERV Subscription Information

ILL-L

A moderated discussion list for interlibrary loan staff.

Location:	University of Vermont, Burlington, VT
Contact:	Patricia Mardeusz, Bailey-Howe Library, University of Vermont, (802) 656-2242
Subscribe: BITNET	Send the following e-mail message to listserv@uvmvm.bitnet **SUBSCRIBE ILL-L FirstName LastName**
Unsubscribe: BITNET	Send the following e-mail message to listserv@uvmvm.bitnet **UNSUBSCRIBE ILL-L FirstName LastName**

INT-LAW / [Last Updated 28 Jan 1992]

INT-LAW (Foreign and International Law Librarians) is a list on BITNET for librarians and others interested in exchanging information related to foreign, comparative and international legal materials and issues. Selected topics in the six months since INT-LAW began include the READEX CD-ROM Index to United Nations documents, databases containing information on foreign and international law, the "European Court Reports", sources of information on careers in international law, GATT panel reports, the "National Trade Data Bank" CD-ROM, etc. INT-LAW came up on April 31, 1991. There are approximately 185 subscribers to INT-LAW at present, mainly from the U.S. Other countries represented include Canada, Mexico, and Germany.

Subscribe: BITNET	Send the following e-mail message to LISTSERV@UMINN1.BITNET **SUBSCRIBE INT-LAW Firstname Lastname**
Subscribe: INTERNET	Send the following e-mail message to LISTSERV@VM1.SPCS.UMN.EDU **SUBSCRIBE INT-LAW Firstname Lastname**
Unsubscribe:	Substitute "UNSUBSCRIBE" for "SUBSCRIBE" in the above e-mail messages.
Moderator:	Send any questions, comments, etc. to: Lyonette Louis-Jacques (L-LOUI@UMINN1) or Mila Rush (M-RUSH@UMINN1). Mila Rush is the listowner.

LISTSERV Subscription Information

LIBREF-L

This list is a discussion of the changing environment of library reference services and activities. Topics include traditional reference services, patron expectations, staff training, as well the impact of CD-ROM and online searching on reference service. This forum serves as a professional networking and information source sharing ideas, solutions and experiences. This list is run from the LISTSERV at Kent State University and moderated by the Reference Librarians at Kent State University Libraries.

Subscribe: BITNET	Send the following e-mail message to LISTSERV@kentvm.BITNET **SUB LIBREF-L Your Name**
Subscribe: INTERNET	Send the following e-mail message to LISTSERV@kentvm.kent.edu **SUB LIBREF-L Your Name**
Unsubscribe:	Substitute "UNSUBSCRIBE" for "SUBSCRIBE" in the above e-mail messages.

Please do NOT send this command to the list address LIBREF-L@KENTVM. Doing so will cause your request to be broadcast to all subscribers and will not cause your name to be added to the list.

Owners: Diane Kovacs (dkovacs@kentvm), Laura Bartolo (lbartolo@kentvm), Gladys Bell (gbell@kentvm), Mary DuMont (mdumont@kentvm), Julie McDaniel (jmcdanie@kentvm), Carolyn Radcliff (cradclif@kentvm), Kara Robinson (krobinso@kentvm), Barbara Schloman (bschloma@kentvm)

MEDLIB-L

MEDLIB-L is a forum for librarians in the health sciences. Discussion will include practical and theoretical issues in both the public and technical service areas. This list may be used to exchange ideas, questions, concerns and announcements of particular interest to health sciences librarians.

Subscribe: BITNET	Send the following e-mail message to LISTSERV@UBVM.BITNET **SUB MEDLIB-L yourfirstname yourlastname**
Subscribe: INTERNET	Send the following e-mail message to LISTSERV@UBVM.CC.BUFFALO.EDU **SUB MEDLIB-L yourfirstname yourlastname**
Unsubscribe:	Substitute "UNSUBSCRIBE" for "SUBSCRIBE" in the above e-mail messages.
Owner:	HSLSTART@UBVM (Nancy Start)

Notebook: Yes, public, monthly
Subscription: Open

LISTSERV Subscription Information

PACS-L

The University Libraries and the Information Technology Division of the University of Houston have established this list that deals with all computer systems that libraries make available to their patrons, including CD-ROM databases, computer-assisted instruction (CAI and ICAI) programs, expert systems, hypermedia programs, library microcomputer facilities, locally-mounted databases, online catalogs, and remote end-user search systems. The list is open for general subscription.

Archives of PACS-L are stored in the PACS-L FILELIST. To receive a list of files send the command INDEX LISTNAME to LISTSERV@UHUPVM1.

Subscribe: To join PACS-L, send the following e-mail message to LISTSERV@UHUPVM1.BitNet
SUBSCRIBE PACS-L Your_full_name

Subscribe: Internet users - To join PACS-L, send the following e-mail message to
LISTSERV%UHUPVM1.BITNET@VM1.NODAK.EDU
SUBSCRIBE PACS-L Your_full_name

Unsubscribe: Substitute the word "UNSUBSCRIBE" for the word "SUBSCRIBE" in the above e-mail messages.

Contact: Charles Bailey <LIB3%UHUPVM1.BITNET@VM1.NODAK.EDU>
Owner: LIBPACS@UHUPVM1.BitNet

E-Mail/LIST Etiquette

1. Never forget that the person on the other side is human.
2. Don't blame system administrators for their users' behavior.
3. Be careful what you say about others.
4. Be brief.
5. Proofread any message/posting you send to make sure the message/posting will not be misunderstood.
6. Include a descriptive subject line in your message/posting. When responding to a message/posting, the subject line should be the same with the word "RE:" at the beginning.
7. Think about your audience.
8. Be careful with humor and sarcasm.
9. Try not to send the same message/posting to several mailing lists.
10. Summarize if you are following up with the results from a previous inquiry.
11. If you are responding to a message/posting, include part of the original message/posting in your response, or refer to the contents of the original message/posting.
12. If requested, remember to send responses directly to the person involved - don't post the response for everyone on the list to read.
13. Read all follow-ups and don't repeat what has already been said.
14. Be careful about copyrights and licenses.
15. Cite appropriate references.
16. Don't overdo signatures. The main purpose of a signature is to help people locate you.
17. Avoid control characters.
18. Keep message/posting to only one subject. This allows the reader to quickly decide whether they need to read the message/posting.

Electronic Journals

There are a growing number of electronic journals available on both Internet and BITNET. Because they are relatively inexpensive to produce, subscriptions are free or low cost. To subscribe to an electronic journal, you generally only need to send an e-mail message to the publisher requesting a subscription.

For a complete list of electronic journals available on BITNET and Internet:

send e-mail to listserv@uottawa.bitnet
messages: get ejournl1 directry
get ejournl2 directry

Below are examples of free e-journals of interest to librarians:

ACQNET
Acquisitions Librarians Electronic Network.

send e-mail to cni@cornellc.bitnet

ALCTS NETWORK NEWS
Association for Library Collections and Technical Services

send e-mail to listserv@uicvm.bitnet
message: subscribe alcts firstname lastname

MeckJournal
Published by Meckler Publishing. It can be accessed two ways:

send e-mail to meckler@tigger.jvnc.net
message: subscribe meckjournal [your address]
or
telnet to niso.jvnc.net
type nicol, no password is necessary

Public Access Computer Systems Review
This is sent automatically to PACS-L subscribers. For a list of article files:

send e-mail to listserv@uhupvm1.bitnet
message: index pacs-l

Community Computing: If It Plays in Peoria... Video

This video was produced by the National Public Telecomputing Network (NPTN).

Description of NPTN

NPTN is attempting to establish as many community computer systems throughout the country as possible. NPTN wishes to link these systems together in a common network for resource sharing. Some information services are available to all affiliate community computer systems. NPTN also takes positions on issues affecting community computing and develops new and innovative technology.

This is a non-profit organization which is funded completely by voluntary membership dues from the users of community computer systems, corporate and foundation grants and donations, and other fund-raising activities.

To obtain a free package which includes this video, informational brochures, and The Blue Book: A Guide to the Development of Free-Net Community Computer Systems, write to the address below:

National Public Telecomputing Network
BOX 1987
Cleveland, OH 44106
216-368-2733

A copy of this package is at the front of the room for your perusal during breaks.

FTP (File Transfer Protocol)

The FTP protocol is used to transfer a file between two host computers. FTP is also the command which initiates the transfer.

Most FTP sites are operated as a courtesy by an institution. You are encouraged to use FTP sites between the hours of 6 PM and 8 AM weekdays, and anytime on weekends, paying attention to time zone differences. These sites may have their regular computer operations overloaded if people are using their FTP facility during weekdays. Please use FTP sites with these guidelines in mind.

FTP Uses

The most common use of FTP is to connect to an *FTP site*, which is a computer facility which has agreed to store computer files in some spare storage space on their computer. The user may log into an FTP site and transfer (FTP) a file to their host computer. Most FTP sites only allow users to transfer files *from* an FTP site. You need special permission to be able to transfer a file *to* an FTP site.

FTP sites usually require users to log in to their systems using "Anonymous" as the user id. Hence, the term *anonymous FTP site* is frequently used. For the password, you are usually prompted to enter your e-mail address, or simply enter "guest".

When you move a file from an FTP site to your host computer, you still may need to do one final step. This is to move the file from your host computer to your local microcomputer. This is accomplished by *downloading* the file to your computer. The most frequent program and protocol used for this procedure is Kermit. Moving the file between host computers is usually a very fast operation. Downloading the file from your host to your local microcomputer can be a very slow process. The file will be downloaded at the connection speed of your modem.

What's available by FTP?

The greatest advantage of FTP is the ability to transfer computer programs across the network. BITNET allows for data files to be transferred, but not program files. FTP allows you to transfer both types of files over Internet.

Every type of computer program you can imagine can be found at some FTP site on the Internet. Documents are also commonly transferred by using FTP. A document may also be transferred using e-mail, but with e-mail you have to request it and then rely on someone else to send it to you. Using FTP, you simply go out and get the document yourself.

FTP Site Directories

When you reach an FTP site, you must determine what directory the file is kept in on the host computer. Files are arranged in directories on a mainframe/minicomputer in the same way they are arranged on a microcomputer hard disk. The following page has a list of FTP sites and popular FTP files which include the FTP address, and the directory in which you the FTP files are located.

Where to find FTP SITES

There are two fast routes to a directory of FTP Sites. The first is to obtain a huge document known as the list of FTP Sites. This enormous document has a strange arrangement (alpha by domain name, with little descriptive information of contents), and is quickly out of date. This is not the best route to take, although if you need a hardcopy list of FTP sites, here's how to get it:

FTP to PILOT.NJIN.NET Directory pub/ftp-list Filename: FTP.LIST

The second option is to use an FTP finder program called ARCHIE. This is the McGill School of Computer Science Archive Server Listing Service. ARCHIE is really two software programs. The first maintains and updates a list of hundreds of FTP sites. The second allows a user to telnet to a server containing ARCHIE and search the database of FTP sites.

To use ARCHIE:

Telnet to : ARCHIE.SURA.NET Login ARCHIE See the ARCHIE help files for details on its use.
or
Telnet to : ARCHIE.UNL.EDU Login ARCHIE

Popular FTP Sites

Hostname	Directory	Description
wsmr-simtel20.army.mil		IBM PC Archives
archive.umich.edu (141.211.164.153) Please use numeric address if possible as archives move occasionally.		
	/MAC	Macintosh software
	/MSDOS	IBM PC software
	/APLLE2	APLLE2 software
nnsc.nsf.net	/resource-guide	Internet Resource Guide
	/internet-tour	"Tour of the Internet" - hypercard2
sumex-aim.stanford.edu		Macintosh Archive
ariel.unm.edu	/library	Library Information
ftp.utexas.edu	pub/netinfo/docs	Network Reading List
watsun.cc.columbia.edu	/kermit	Kermit
hydra.uwo.ca	/libsoft	Library Software Archive

TELNET

Telnet is the Internet protocol that allows you to connect to a remote host computer to use its resources. These include library catalogs, free information databases, commercial databases and a large number of miscellaneous services. "Telnet" is also the command used to initiate the connection to a remote computer over the Internet.

Why Use Telnet?

Telnet can provide low cost access to many resources. Many libraries have made their online catalogs accessible to anyone over the Internet without requiring accounts or passwords. Having access to these catalogs is advantageous for various reasons. It can help you to identify new materials on a topic in a collection that is stronger than the local collection. It allows you to evaluate the holdings of another institution, and opens up avenues for cooperative collection development. Especially beneficial is access to locally created specialized databases, such as indexes to a song or slide collection or to local newspapers. Finally, if you are considering purchasing a local OPAC system, you may telnet into other sites to test and evaluate the capabilities of various systems.

In addition to library catalogs, telnet provides the means to access commercial databases, such as OCLC's EPIC and FirstSearch, and Dialog, reducing the telecommunications costs for these services. Internet searchers can also reach Campus Wide Information Systems, Freenets, and databases on a wide variety of topics.

Where to Telnet

Several guides have been compiled that list sites to which you can telnet. Many of these directories are available in electronic form from various FTP sites. Following are documents which contain a mere sampling of what you can explore over the Internet via telnet.

Internet Resource Guide

The Internet Resource Guide is a comprehensive document which describes the major resources available over the Internet. These include library catalogs, data archives, online white pages, network information centers and supercomputer centers. It also identifies who can use the resources, explains how to reach them and lists contacts for more information.

anonymous ftp to nnsc.nsf.net
directory = resource-guide
filename = resource-guide.txt.tar.Z
(or you can select single chapters)

Library OPACs

For comprehensive lists of Internet accessible public access catalogs there are documents which you can obtain electronically via anonymous ftp. Below are two. (Note: these are very long files - well over 100 pages.)

UNT's Accessing On-Line Bibliographic Databases
Provides an international list of accessible catalogs which includes the telnet address, how to log on and off, and usernames and passwords to use. Appendixes provide instructions for using various OPAC systems, e.g Dynix, GEAC, INNOPAC and NOTIS.

anonymous ftp to ftp.unt.edu
directory = library
filename = libraries.txt

Internet-Accessible Library Catalogs and Databases
Lists over 100 online catalogs, Campus Wide Information Systems, and Bulletin Board Systems. Includes descriptions of the resources and how to access them. Also includes a list of printed resources.

anonymous ftp to arie.unm.edu
directory = library
filename = internet.library
or
e-mail to listserv@unmvm.bitnet
message = GET LIBRARY PACKAGE

Hundreds of libraries all over the world have made their online catalogs available over the Internet. There are far too many to list here, but here are two examples:

CARL - Colorado Alliance of Research Libraries
Provides access to member library catalogs, current article indexes and document delivery, informational databases, including the Internet Resource Guide and an electronic encyclopedia. Access to the system is not restricted; however, access to some of the databases is restricted.

telnet to **pac.carl.org**

MELVYL - University of California
The online catalog of nine University of California campuses and affiliated libraries. Also provides access to the current MEDLINE database, ISI's Current Contents. Some of the files have restricted use.

telnet to melvyl.ucop.edu

Campus Wide Information Systems

Campus Wide Information Systems generally include information on instruction, research, libraries and administration of a university. Some also include items on weather, restaurant listings, jobs and housing information.

Campus Wide Information Systems (CWIS)
This document list the internet address, contact person, logon procedures for various campus wide information systems.

anonymous ftp to hydra.uwo.ca
directory = libsoft
file = cwis.txt

Freenets

Freenets are free community computer systems. They are similar to campus wide information systems, but provide a variety of services/information of interest to a community. They also provide electronic forums and discussion groups and access to other systems.

A file containing the most frequently asked questions about Freenets and bulletin board systems available via ftp.

ftp to polyslo.calpoly.edu
directory = pub
filename = alt.bbs.faq

Below are the addresses of three freenets you are encouraged to explore.

Cleveland Freenet

telnet to freenet-in-a.cwru.edu or
freenet-in-b.cwru.edu or
freenet-in-c.cwru.edu

Heartland Freenet

telnet to heartland.bradley.edu
login as bbguest

Youngstown Freenet

telnet to yfn.ysu.edu
login as visitor

The offerings of the Internet extend far beyond library catalogs, university and community systems. You can also reach a multitude of specialized databases, sponsored and compiled by various organizations. Content varies from full text to bibliographies to statistics. See the Internet Resource Guide and various Network Information Centers to find out more about them. Below are a few examples:

PENpages
A database of agricultural and nutritional information produced by Pennsylvania State University with support from USDA, the Pennsylvania Department of Agriculture, and Rutgers University.

telnet to psupen.psu.edu
login: pnotpa

Dartmouth Dante
This evolving database includes 32 commentaries--all in their original language--and the full text of Dante's DIVINE COMEDY.

telnet to eleazar.dartmouth.edu
login: ddprfnet, password: freenet

Geographic Name Server
Contains standard information such as population, latitude/longitude, and zipcode for over 150,000 cities (mainly U.S.) and selected geographic locations.

telnet to martini.eecs.umich.edu

Shakespeare Plays and Shakespeare Sonnets
Two full text databases which are searchable by keyword.

telnet to lib.dartmouth.edu

ARCH PIC
A keyword searchable index to architectural illustrations, which is part of Carnegie Mellon University's online catalog.

telnet to cmulibrary.andrew.cmu.edu

RFCs, FYIs and FAQs

RFCs

RFCs or Request for Comments are informational working documents produced by network researchers around the world. Most RFCs are descriptions of network protocols or services, often giving detailed procedures and formats providing the information necessary for creating implementations. Some RFCs report on the results of policy studies or summarize the work of technical committees or workshops.

RFCs are created when someone who wants a protocol or service formalized writes a document describing the issues and mails it to Jon Postel (postel@isi.edu), who acts as a referee for the proposal. It is then commented upon by anyone wishing to do so. When it becomes accepted as a good idea, it is assigned a number and filed with the RFCs.

FYIs and FAQs

FYIs (For Your Information) are a subset of the RFC series. They are written in less formal language and include such topics as answers to frequently asked questions (FAQs) and bibliographies. Many FYIs contain valuable information for beginners; others deal with advanced topics.

RFCs and FYIs are available via ftp many sources including the Merit Network Information Center.

ftp to nis.nsf.net

rfc directory = internet/publications/rfc
index = $index.rfc

fyi directory = internet/publications/fyi
index = $index.fyi

The index file, which can be read online will provide the RFC or FYI number and the name of the document, the author and date of creation.

Examples of RFCs/FYIs (some documents have both numbers):

RFC-1118 - The Hitchhiker's Guide to the Internet
RFC-1175 - A Bibliography of Internetworking Information
RFC-1206 - Answers to Commonly Asked "New Internet User" Questions (FYI_04)
RFC-1208 - Glossary of Networking Terms
RFC-1290 - There's Gold in Them Thar Networks! (FYI_10)

USENET

USENET is an electronic conferencing system with hundreds of discussion groups available worldwide. USENET software provides access to news and transfer articles from one machine to another. USENET operates on many different types of physical networks including UUCP, X.25, and Internet.

The only requirement for any host to join USENET is to find another machine already using the system to transfer the USENET news to it. These daily USENET feeds take up a good deal of disk space on any host computer, so many Internet hosts do not have USENET access.

USENET organizes discussions into "newsgroups" or interest topics. Usenet messages are not sent to a subscriber's mailbox as they are with listservs on BITNET. Instead, the newsgroup is posted as a folder that anyone can look at - in bulletin board fashion. There are several hundred newsgroups, covering every spectrum of human interest. Certain newsgroups have been deemed to be controversial in nature and even banned in some institutions. The censorship of USENET newsgroups is currently one hot issue in electronic networking circles.

WHOIS

WHOIS is a program that allows you to get information about another user. Several universities offer a whois service database containing most of the individuals at the university.

The main WHOIS database is located at the Department of Defence Network Information Center. The 'whois' command will let you search a database of every registered domain and of registered users. Note that most registered users are network administrators.

telnet to nic.ddn.mil
type whois
type help at the whois prompt

To obtain a list of WHOIS servers available on the Internet, ftp to ftp.sura.net. The file is in the pub/nic/directory.services/WHOIS.info directory and is called WHOIS.servers.

GOPHER

The Internet Gopher is described as an information distribution system. Gopher was developed at the University of Minnesota as a way to let a new user search and obtain many types of documents on many different hosts. There are gateways between Gopher and Archie, WAIS servers, and ftp sites. Gopher software is free.

Gopher servers provide a variety of information on subjects as diverse as phone books, the weather, recipes, library catalogs, etc. You don't have to keep track of the address of each service - Gopher does that for you.

You may access this system for a test drive:
Telnet to: consultant.micro.umn.edu Login as GOPHER

To obtain Gopher software, ftp to: boombox@micro.umn.edu /pub/gopher

WAIS

WAIS stands for the Wide Area Information Servers Systems. WAIS is an electronic publishing software set which allows you to search and retrieve multimedia information from databases worldwide. Much of this software is currently available for free use.

WAIS was developed by Thinking Machines Corporation of Cambridge, MA in collaboration with Apple Computer, Inc., Dow Jones and Co. and KPMG Peat Marwick. WAIS is rapidly becoming a standard for information distribution within the Internet environment. WAIS uses a single NISO Z39.50 computer-to-computer protocol.

Two of the most promising features of WAIS technology include use of natural language to query the databases, and being able to use the same software to query many different types of databases.

For more information about WAIS:

1. Try a simple interface by telnet to quake.think.com; login as "wais".
2. FTP the free software from think.com in the /wais directory.
3. FTP a bibliography called bibliography.txt from quake.think.com in the /pub/wais/wais-discussion directory.
4. Subscribe to wais-discussion-request@think.com, a biweekly email list on electronic publishing issues and WAIS releases.
5. Contact:

Barbara Lincoln, Project Administrator (barbara@think.com) or

Brewster Kahle, Project Leader (brewster@think.com)

Thinking Machines Corporation
1010 El Camino Real
Menlo Park, CA 94025
(415) 329-9300

Organizations

CNI

Coalition for Networked Information
1527 New Hampshire Avenue, NW
Washington, DC 20036
(202) 232-2466

The mission of the Coalition for Networked Information is to promote the creation of and access to information resources in networked environments in order to enrich scholarship and to enhance intellectual productivity.

The Coalition pursues its mission by seeking to realize the information distribution and access potential of existing and proposed high performance computers and networks that support the research and educational activities of a wide variety of institutions and organizations.

The Coalition accomplishes this realization by undertaking activities, on its own and in partnership with others, that formulate, promulgate, evaluate, and promote policies and protocols that enable powerful, flexible, and universal access to networked information resources.

The Coalition directs the combined intellectual, technological, professional, and financial resources of its members according to a shared vision of how the nature of information management is changing and will continue to change through the end of the 20th century and into the beginning of the 21st.

EDUCOM

1112 16th Street, NW.Suite 600
Washington, DC 20036
(202) 872-4200
knk@bitnic.bitnet

CoSN

K-12 access to networks
Mr. John Clement
c/o EDUCOM
112 16th Street, NW, Suite 600
Washington, DC 20036

Internet Society

"The Internet Society is a professional membership organization that is being created [sic] to promote the evolution and growth of the Internet as a global research and eduction communications infrastructure."

Charter: The Society will operate as a non-profit organization for academic, educational, charitable and scientific purposes among which are:

To facilitate and support the technical evolution of the Internet as a research and education infrastructure and to stimulate involvement of the academic, scientific and engineering communities in the evolution of the Internet.

To educate the academic and scientific communities and the public concerning the technology, use and application of the Internet.

To promote scientific and educational applications of Internet technology for the benefit of educational institutions at all grade levels, industry and the public at large.

To provide a forum for exploration of new Internet applications and to foster collaboration among organizations in their operation and use of the Internet.

Internet Society
1895 Preston White Drive
Suite 100
Reston, VA 22091
isoc@nri.reston.va.us

EFF

Mission statement: The Electronic Frontier Foundation has been established to civilize the electronic frontier; to make it useful and beneficial not just to a technical elite, but to everyone; and to do this in keeping with our society's highest traditions of the free and open flow of information and communication.

The Electronic Frontier Foundation, Inc.
155 Second Street
Cambridge, MA 02142
(617) 864-0665
(617) 864-0866 FAX
EFF@eff.org

Access

BITNET

Access to BITNET is coordinated by EDUCOM in Washington, D.C.

EDUCOM
1112 16th Street, NW.Suite 600
Washington, DC 20036
(202) 872-4200
knk@bitnic.bitnet

Internet

The following networks are Mid-level regionals invested with the responsibility to provide Internet access to research and development institutions within their regions. There are nearly thirty of these networks. Many run on a state-wide basis. New England is served by two of these regional networks and their territories overlap slightly.

NEARNET, managed by BB&N in Cambridge, MA: currently in MA, NH, VT, ME, CT, RI

JVNCNET, at Princeton University, NJ: currently in CT, RI, MA, NJ

The following networks are called commercial providers. They have no regional restraints and are extremely aggressive in marketing their service to institutions which may not qualify for NSF money to startup on Internet. Their full connection prices are more expensive than mid-levels, although the gap is quickly closing. They also offer a variety of levels of service (e-mail only as opposed to e-mail, telnet & ftp) which make their offerings unique.

PSI, ALTERNET (UUNET), ANS (non-profit) & ANS CO+RE (for-profit to serve the commercial community),

Value added networks are commercial networks which offer e-mail access to Internet, usually available in metropolitan areas only.

CompuServe, Columbus, OH

MCI Mail, Washington, DC

The World, Software Tool & Die, Brookline, MA

Cooperative networks are non-profit networks which usually offer e-mail capability.

BITNET, Washington, DC

Fidonet, St. Louis, MO

INTERNET in New England

Internet Providers may offer the full range of Internet services, or only one or two of the services. The limited service providers make it possible for less expensive connections. The providers listed here are those that NELINET is aware of as of August 1992. Note that the dialup services offered will vary; some dialups will allow you to use your current telecommunications program (SmartComm, ProComm, etc.) and some dialup connections require that you purchase FTP Software to run on your microcomputer. Be sure to determine which type of dialup connection your cost estimate will deliver. FTP Software will mean a larger investment in dollars, setup, and education.

Internet Services - E-mail, TELNET (RLOGIN), FTP:

ALTERNET
UUNET Technologies
3110 Fairview Park Drive
Falls Church, VA 22042
800-488-6383
Cost: Write for estimate

Advanced Network & Services (ANS)
100 Clearbrook Road
Elmsford, NY 10523
914-789-5300
Cost: Write for estimate

CLASS
1415 Koll Circle, Suite 101
San Jose, CA 95112-4698
800-488-4559
Cost: CLASS membership (required): $135; Administrative fee/year: $150; Additional passwords $50; connect hour charge $10.50 (on 800 number);

Global Enterprise Services, Inc. (formerly JVNCNET)
Princeton, NJ 08544
609-258-2411
Covers: MA,CT,RI
Cost: Write for estimate (Dial-up service in Providence & Hartford $1800. a year)

NEARNET
BBN Systems and Technologies
10 Moulton Street
Cambridge, MA 02138
617-873-8730
Cost: Write for estimate

Performance Systems International, Inc. (PSI)
11800 Sunrise Valley Drive
Suite 1100
Reston, VA 22091
800-827-7482
Cost: Write for estimate

Software Tool & Die
The World
1330 Beacon St.
Brookline, MA 02146
617-739-0202
Cost: For e-mail, Usenet, limited FTP & TELNET
$5. per month + $2. per hour
Bulk rate $20. for 20 hours per month

E-mail Only Connections (Individual Accounts)

CompuServe
5000 Arlington Center Blvd.
PO BOX 20212
Columbus, OH 43220
614-457-0802
Cost: $2./per month plus .21 a minute for 1200/2400 bps

International FidoNet Association (IFNA)
PO BOX 41143
St. Louis, MO 63141
No phone number available
Cost: $25. a year

MCI Mail
2000 M Street N.W.
Washington, DC 20036
800-444-6245
Cost: $35 per year / plus per e-mail message starting at $.45

Performance Systems International, Inc. (PSI)
11800 Sunrise Valley Drive
Suite 1100
Reston, VA 22091
800-827-7482
Cost: $19. a month (includes slick PSILink e-mail software)

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Access: ftp ftp.sura.net, directory=nic, file=wholeguide.txt OR ftp nnsc.nsf.net, directory=resource-guide, file=resource-guide.txt.tar.Z or resource-guide.ps.tar.Z
(Users should transfer and read the document "Internet Resource Guide: How to use it")

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Access: e-mail listserv@uottawa.bitnet, messages: get ejournl1 directry and get ejournl1 directry.

ANXIETY IN THE WORKPLACE: STRATEGIES FOR CHANGE

by Carol F. Thomas, Ph.D.

Social critics, philosophers, sociologists, and psychologists seem to agree that we live in a culture in transition. This transitional period is characterized by what might be called the bewildering complexities, paradoxes, and ambiguities of contemporary life. As a culture which has frequently manifested a lusting for certitude, security and "purity," this disarray may be difficult to accept and perhaps startling to modern sensibilities. If, as some suggest, a certain unwillingness to see, an obtuseness and refusal of vision, characterized our culture and social actions at this time, perhaps the future may bring a challenge to become, in the words of Henry James, people on whom "nothing is lost," people who are deeply invested in discerning the truth about themselves, the truth about culture, and perhaps even more importantly, concerned with how persons should live, how one determines what is of value, and what enhances human life with special regard for the particular, concrete, lived experience and a renewed vision of community.

Relative to anxiety in the workplace, there is the proverbial good news and bad news. The good news has to do with the fact that we know a great deal about what causes anxiety in the workplace and we also know a great deal about how to alleviate this anxiety. The bad news has to do with the fact that this alleviation will require change, a process according to psychologists, as anxiety producing as death and taxes!

In his fine text, <u>The Corrosion of the Self: Society's Effects On People</u>, Thomas Kreilkamp suggests that within western intellectual tradition and its emphasis on the abstract notion of the pure platonic ideal, that perfect and original template transcending human experience, society has become set outside of and over and against a sense of true, deep, rich personhood and the self. This schism and split between the self and society essentially does not reflect human creativity in community and instead appears grounded in non-human experience. In fact this split between self and others and self and the community is deeply hurtful to both. Kreilkamp goes on to suggest that in the light of current sociopsychological knowledge, creative change is not only possible, but deeply needed. He invites his readers to entertain the notion that in fact within persons there exists the desire for tacit cooperation and interaction with others as well as the ability to participate in collaborative efforts. In Toni Morrison's recent book on literary theory, <u>Playing in the Dark:</u>

Whiteness and the Literary Imagination, she suggests that it is the writer's task to encourage readers to imagine what it is to be other than one's self. Morrison's work rejects the concept of universal truth and suggests that a true sense of community seeks to build shared conceptual and symbolic networks--never perfect, but good, reflective of pluralism and diversity with the potential for enhancing self and others. In Kreilkamp's vision, society oppresses the individual. For Kreilkamp, society is somewhat obsessively engaged in a compulsive search for certitude and perfection, a search he feels that is doomed to failure, disillusionment, and anger.

Instead, Kreilkamp suggests that people need not be alienated but are necessary for one another to get work done, for a sense of purpose and meaning, for validation and support, by participating in a shared discourse reflecting and defining real people's lived process of becoming more fully human occurs, even within a "terribly complex developmental matrix." In conclusion, Kreilkamp observers that an invitation to change, grow, cooperate, and develop is difficult" for Americans to understand since there are romantic elements in their culture which leads them to conceive of the self as "imperial, autonomous, and self-sufficiently aloof," in opposition with a corrupt and corrupting society.

As Max Weber and the Frankfurt School of Sociology would suggest, the Enlightenment Project was concerned with fostering increased feelings of happiness in subjects along with decreased feelings of anxiety. In contemporary culture, a number of postmodern theorists suggest that a reversal of this process of enlightenment is now operative, a process in which reification, the making of an I/person into an it/thing is taking place and where "machines" are bureaucratically preferable to human activity and thought.

Harry Stack Sullivan, that most marvelous father of American psychiatry, in his interporsonal theory of self in relationship, defines anxiety as the anticipation of humiliation. If anxiety is to be reduced in the workplace and within the indificual, there must be a movement toward a trustful revaluing of the individual's worth, with renewed appreciation for that radically unique and diverse self in community.

In Writing Without Teachers, Peter Elbow writes metaphorically of two approaches to teaching which are descriptive of all collaborative human activity. Elbow describes the bureaucratic process of documenting error through surveillance and "correcting" it through micrological techniques of shame and humiliation. This he calls the "doubting game." This game attempts t "weed out the self, its wishes, and its preoccupations." It is a process which tries to get you to think more like a computer than a human being, and this "doubting game" is characterized by a series of hurtful impersonal transactions. Elbow's "believing game," on the other hand is built on the idea that the self cannot be removed, and that this spontaneous, open, creative endeavor is grounded in

sharing experience, perception, and thinking with others. Elbow's "doubting game" focuses on a literal approach, rigidity, aggression, deflation, competition, adversity, argumentation, and a lusting for security. The "believing game" focuses on involvement, commitment, openness, metaphor and figurative language, flexibility, risk taking, mutuality and support as collaboration. Elbow's work reflects Maslow's seminal text, Motivation and Personality, published in 1954:

> One last point. The key concepts in the newer dynamic of psychology are spontaneity, release, naturalness, self choice, self acceptance, and impulse-awareness, gratification of basic needs. They used to be control, inhibition, discipline, training, shaping, on the principle that the depths of human nature were dangerous, evil, predatory, ravenous. Education, family training, bringing up children, acculturation in general were all seen as a process of bringing the darker forces within us under control.
>
> See how different are the ideal conceptions of society, law, education, and family that are generated by these two different conceptions of human nature. In the one case, they are restraining and controlling forces; in the other they are gratifying and fulfilling. (279-280)

Maslow's second perspective along with Elbow's believing game, suggest a model of psychological health and well-being which finds support from a wide variety of psychological and sociological paradigms. In fundamental terms, this position suggests an affirming attitude with which to approach persons in a collaborative and respectful mode.

The truth of the matter is that a great dean is known about the causes of anxiety in the workplace as well as what to do about it. In terms of ameliorating anxiety in the workplace, one of the ironies concerns the fact that solutions are obstructed by the very bureaucracy which creates the workplace paradigm! Many social-psychologists and theorists define bureaucracy as characterized by fixed and static performance guidelines, hierarchialized supervision from above, standardized forms of non-personalized communication, arbitrary control, and a requirement for a total kind of loyalty which supports the status quo. At their worst, bureaucracies are defined as political arenas in which struggles for power, status, and survival take place in a system characterized by oligarchy, hegemony, inequality, classism, sexism, racism, alienation, estrangement, isolation, and terrifying pressure to conform. Given this paradigm and the prohibition of face to face human encounter and activities, there is a reluctance on the part of the individual to acknowledge his or her real experience. Fear and anxiety are the normative standards and the result is frequently stress-related illness, frustration, paralysis, and depression.

In 1992 and within a culture in transition, the news from the front is discouraging but not hopeless. If the causes of anxiety in the workplace are to be challenged, serious effort, change and renewal both from within persons and organizations will be required. Perhaps as individuals and as a culture, we are awakening to the challenge to live a more fully examined life, both individually and in community.

To critique, assess, and change anxiety in the workplace will require a shift in attitude, from one of negativity and a seeking out and punishment of error, hostile confrontation, and a "doubting game," to an attitude which focuses on recognition and validation of the individual, on a rewarding of creative excellence, the encouraging of authentic and respectful communications, and a trustful and "believing game" of risk, courage, commitment, and mutual support. The most frequently expressed stressors in the workplace are as follows:

--taking obligations and tight restrictions on personal freedom--too much work and too little time with frequent and unexpected deadlines--
--constant pressure and conflict between the demands of the workplace and important personal values--
--alienation--a separation between individual personhood and work task--
--lack of appreciation and recognition for work done, and a lack of positive feedback--
--a sense of injustice and unfairness relative to hegemony, false loyalties, and partisan politics--
--uncertainty as to the quality of work done and fear as to the continuity of future employment--
--inauthentic communications and an exploitive and manipulative use of power--

Those workplaces which tend to reduce stress are frequently characterized by the following:

--an environment sensitive to individual personhood and basic human need--
--opportunities for personal interaction, contribution, creativity, and achievement--
--open, honest, and authentic communication and dialogue--
--intrinsic satisfactions based on feedback, cooperation, affiliation, collaboration, and creativity--reward for work well done rather than humiliation and punishment for error-
--a physically safe and clean, psychologically supportive environment which is understood as process oriented, collaborative, and appreciative of change and, renewal, and opportunities for growth and development--

In 1992 and a context of creative work, there is much that is known about anxiety in the workplace and how to challenge and

change this anxiety. We know that persons need more recognition in terms of their personhood. They need to derive more intrinsic satisfaction, and to anticipate possibilities for future achievement and policies designed to encourage and empower.

As our culture responds to new insights and learnings derived from psychology, sociology, the arts, the humanities, and the sciences, there is a wonderful opportunity to address anxiety in the workplace and to renegotiate our old treaties. Toward a dynamic of positive change, the "believing game," trust, affirmation, recognition, and a replacing of old and rigid hierarchialized notions with fluid and collaborative networks, ongoing education, and enlightened leadership will be most helpful. Individual psychological health and well being recognized life and creativity as a process of ongoing change and fluidity. To acknowledge the deep ambiguities and ironies of life it to embrace an informed sense of reality. Change need not be inhibited by fear--it is rather the very fabric, nature, and essence of life. To embrace change is to lessen our anxiety and to move toward a deepened understanding or life itself in all of its wild poetry, amorphic beauty, unpredictability, and wonder. To reduce anxiety is to let go of constricting illusion and to acknowledge life as change, process, and a becoming as Kierkegaard would say, more fully of "that self that we were truly meant to be."

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BOOTSTRAPPING CONTINUING EDUCATION OPPORTUNITIES, AND THE FLICC EDUCATION WORKING GROUP

by W. F. Rettenmaier, Office of the Chief of Naval Research, Arlington, VA

Bootstrapping Continuing Education Opportunities, and the FLICC Education Working Group.

I intend this morning's session to be a true workshop session, one which will rouse, excite, move and involve *you*. My objective is to both increase your awareness of continuing education opportunities, and to move you to creating those opportunities for yourself, your staff, and your professional colleagues in your geographical area.

I am Fred Rettenmaier, Librarian at the Office of the Chief of Naval Research, Arlington, Virginia. I have been a navy librarian for 22 years. My background and training is in secondary education and in library science. I have been involved with the Federal Library and Information Center Committee (FLICC) Education Working Group for four years; this is my second year as Chairman. I have a personal and professional interest in staff development, on-the-job training, and total quality management. I have a commitment to working together and to sharing information, talent, and resources. Ages ago, I was also Chairman of the Cooperative Information Network (C.I.N.) a four-county intertype library network in northern California, funded, primarily, by LSCA and administered through the California State Library. One of the priorities of C.I.N. was staff development.

Professor, Doctor Thomas spoke yesterday of Maslow and trusting open communication. In that spirit, let's get started. We will use the outline as a structure for this session.

BOOTSTRAPPING CONTINUING EDUCATION OPPORTUNITIES, AND THE FLICC EDUCATION WORKING GROUP.

A. NEED Here one should consider such factors as:
   1. Personal needs.
   2. Professional and technical needs (for advancement, or for just keeping-up with procedural or technological developments).
   3. Command needs -- what is- and what will be required of you, as an employee, to fulfill the mission of your command?
   4. Other needs. Here, primarily, regional or geographic. The metropolitan Washington, DC area abounds with educational opportunities, yet we bootstrap here. In other locations (our field sites, for example) may only have the continuing education opportunities which *you* make available.

B. BACKGROUND The major factors, here, are in the areas of:

1. EDUCATION.
   a. Education formal courses offered through educational institutions or private training corporations.
   b. Professional involvement in national and state organizations, and in their local chapters.
   c. The creation of open fora for the sharing of information, ideas, knowledge, and skills.
2. THE FLICC EDUCATION WORKING GROUP.
   a. The wide variety of continuing education opportunities offered by FLICC.
   b. Free and fee-based events.
   c. Interface and exchange with other FLICC Working Groups, such as the Personnel Working Group (Chaired by Ms. Nyce of the Pentagon Library), the newly reconstituted Reference Working Group (Chaired by Mr. Bradley of the Naval Research Laboratory), The Preservation Working Group, and many others.
3. AVAILABILITY OF CONTINUING EDUCATION.
   a. The availability programs, locally or out-of-town.
   b. Convenience – is the opportunity local and convenient? Is the opportunity in the field, at the state capitol, in Washington, DC?
   c. Cost factors, and free *vs.* fee-based programs. This includes training and travel budgets.

C. THE FLICC EDUCATION WORKING GROUP.

1. CONSTITUTION.
   a. Composed of volunteers form a wide variety of agencies.
   b. Generally a 3-year commitment
   c. With FLICC and FEDLINK representation.
2. SUPPORT AND STAFFING.
   a. Supported directly by Ms. Bohlin (FLICC Public Events Specialist), and indirectly by Ms. Levering (FLICC Executive Director), Ms. Dolan (FLICC Editor-in-Chief).
   b. Also supported by Mr. McGee (FEDLINK), Ms. Eighmey (FEDLINK Network Librarian), and all other FEDLINK Network Librarians.
3. PROGRAMS – may be divided into three size categories, and 3 sponsorship categories:
   a. Small programs, which include the "Brown-Bag Luncheon Series" and the "Out-and-About Series (scheduled visits to Federal libraries in the area). These are of 2-3 hours duration.
   b. Medium programs, which include full-day tours of the Library of Congress (of 6 departments within LC), and such programs as a program on Strategic Planning (scheduled for December), an Internet program (January), an OPM Standards program (February or March), and others throughout the year.
   c. Large programs. Now, this is the "FLICC Forum on Federal Information Policies" -- a 1-day program of national significance.
   d. FEDLINK produces such programs as "How to Use FEDLINK" and series of Vendor Fairs (in addition to FEDLINK provided training on PRISM, *etc.*).
   e. Other Working Groups also present programs. The Conservation Group has sponsored two highly successful programs, a Binding Group program is planned, and the Personnel Group program has been mentioned previously.
   f. Jointly-Sponsored programs involve the local chapter of SLA, the District of Columbia Library Association, and others in an annual "Joint Spring Workshop." The local ASIS chapter is involved with an annual "Information Technology Update."
   g. The Education Working Group also plans and sponsors its own programs.

4. LOGICAL DEVELOPMENT – We hope to design and provide programs which are:
    a. Of topical and timely interest – what is hot; what is current – programs on TQM and on Space Planning are being formed.
    b. Segments of a series – such as the Management Series, the binding Series, the Preservation Series, *etc*.
    c. Responsive to the user community – we welcome and seek suggestions for programs from FLICC members, from the Working Groups, from the library associations, and from *you*, the individual librarian.
5. IN THE FIELD.
    a. FEDLINK provides OCLC training.
    b. FLICC and FEDLINK have an interest in providing training in the field; questions of staffing and of funding must be resolved before programs are designed, however.

D. YOUR PROGRAMS. This is the big blank –
1. QUESTIONS which you should be asking center about:
    a. What shall be done?
    b. Where shall it be held?
    c. When shall it be held?
    d. Why – anyway, WHY DO IT?
    e. How to plan, manage, and sponsor a program.
    f. Who shall staff the program?
    g. What is the target audience?

2. SURVEY THE NEED – do we really want and need a program, and what is that program?
    a. Gather a committee (Bakers are needed to make the bread), and fire-up that committee with enthusiasm for the task at hand.
    b. Start small, and look for a 'sure-fire success' which is both a good demonstration project and good for one's ego.
    c. Look to a 'local' program – one of local interest, involving local people.
    d. Look to a low-cost program.

3. HELP IN THE KITCHEN.
    a. FLICC assistance and sponsorship.
        i. The FLICC Education Working Group and the FLICC staff are available for consultation and discussion of your plans for sponsorship of continuing education opportunities.
        ii. FLICC may be able to provide:
            a. Publicity and fliers.
            b. Joint sponsorship.
    b. State organizations and local chapters of national organizations may also provide assistance.
    c. Look to this and to other MLWs, and perhaps expand just one aspect of these tremendous programs.

Now, it is time to fill in the blanks.

D. IDEAS:

a. YOUR PROGRAM IDEAS:

1.

2.

b. YOUR AUDIENCE:

1.

2.

c. YOUR COMMITTEES:

1.

2..

YOUR PROGRAM:

_____.

It is never too early, and it may not be too late to Share Knowledge, to Train, to Educate, and to Develop the next leaders.

Two of the most important professional questions to ask yourself are:

Who on my staff is brighter and more knowledgeable that I am, and shows potential to exceed my own accomplishments?

What am I doing to assist that person along the path of excellence and professional accomplishment?

Bootstrapping Continuing Education Opportunities, and the FLICC Education Working Group.

W. F. Rettenmaier, Jr.
Office of the Chief of Naval Research
Arlington, VA

Bootstrapping Continuing Education Opportunities,
and the FLICC Education Working Group.

A. NEED:

B. BACKGROUND:

C. THE FLICC EDUCATION WORKING GROUP:

1. Constitution:

2. Support and Staffing:

3. Programs:

a. Small --

b. Medium --

c. Large --

d. Cooperative Programs --

1. FEDLINK -

2. Other Working Groups -

3. Associations -

3. Logical Development:

a. Programs of topical and timely interest --

b. Program series --

c. Responsive to the user --

d. Programs in the field --

1. FEDLINK -

2. Your programs -

D. Your Programs:

1. Survey the need --

2. Gather a committee --
[Bakers are needed . . .]

3. Start small --

a. A "sure-fire" success -

b. A "local" program -

4. FLICC assistance / sponsorship --
[Help in the kitchen . . .]

E. IDEAS:

1. YOUR Programs --

a.

b.

2. YOUR Audience --

a.

b.

3. YOUR Committees --

a.

b.

FEDERAL LIBRARY AND INFORMATION CENTER COMMITTEE FISCAL YEAR 1992: HIGHLIGHTS OF THE YEAR

by Mary Berghaus-Levering, FLICC

HIGHLIGHTS OF THE YEAR

FY '92 marked a period of consolidation and continuing progress for FLICC and its operating network FEDLINK. FLICC began FY '92 by moving to new headquarters to Market Square Annex (MSA) in downtown Washington, enabling the consolidation of FEDLINK Fiscal Operations (FFO) formerly located at the Library of Congress (LC) Navy Yard Annex with FLICC and FEDLINK Network Operations (FNO) formerly located in the LC Adams Building. The move brought the long-separated units together and expanded the space available for FEDLINK training classes.

During FY '92 FLICC concentrated on continuing to ensure strict compliance and vigilant follow-up with all federal regulations appropriate to the FEDLINK program. FLICC submitted the first report of a "limited review" of the FEDLINK financial management system to the LC Financial Services Directorate (LC/FSD) in late December. The LC/Inspector General (LC/IG) audited LC and the FEDLINK program again to update its 1989 investigation and report on the current status of the FEDLINK program. The LC/IG's follow-up review of the 1988 Government Accounting Office (GAO) Financial Audit of LC was released by the LC/IG on August 21. The review concluded that problems previously discovered in the FEDLINK program had been corrected, and also identified four additional FEDLINK control problems that are currently being addressed by FEDLINK.

The accounting firm of Price Waterhouse (PW) provided 872 hours of financial analysis and review services from March through August to ensure that necessary improvements in the FEDLINK program were accomplished. The PW team also worked on review and compliance of FEDLINK's networked automated system, Systems Management Information Network (SYMIN), including data integrity, testing, and analysis.

Installation of FLICCnet, the FLICC local area network (LAN) that supports SYMIN, and other networked office communications functions for FLICC and FEDLINK, were completed during the year improving FLICC's automation support. FLICC's systems design team moved FLICC and FEDLINK communications operations to MSA with a minimum of program disruption; tackled, identified, and resolved LAN problems that had disrupted operations for several months; and continued to develop and refine SYMIN's capabilities.

FEDLINK inaugurated additional complex procurement procedures in order to meet all federal requirements when the FY '93 FEDLINK Serials Subscription Services competition began early in FY '92. Aided by a consultant, FNO staff developed and introduced a new Request for Quote (RFQ) process in FEDLINK serials procurement that utilized advanced registration to provide for competition among the four FEDLINK serials subscription agents awarded FEDLINK Basic Ordering Agreements (BOAs). The specially designated FNO serials team coordinated the enormous amount of work generated by the new serials requirements with LC Contracts and Logistics Services (LC/C&L) to ensure the program met the needs of

FEDLINK members at the same time it met all appropriate federal procurement regulations.

FEDLINK network librarians continued to provide a variety of technical training courses to help federal librarians stay ahead of changing library technology. In FY '92 FEDLINK network librarians conducted 125 classes, training 1,033 federal library staff.

FLICC continued to work with its 12 working groups on numerous issues of concern to federal librarians, including the Office of Personnel Management (OPM) Personnel Classification and Qualification Standards for Librarians, the Government Printing Office's library binding contract, revision on the 1978 federal library statistics, preservation concerns, Internet and the emerging national networks, and education.

Working with the FLICC Education Working Group, FLICC continued to offer a comprehensive education program addressing such topics as preservation, information access and dissemination, library technology, and binding.

Highlights of FLICC and FEDLINK's extensive publications production in FY '92 included an expanded and reformatted FEDLINK FY '92 Services Directory; a comprehensive new Directory of FLICC Members and Working Groups; and a double issue publication of the combined summaries and papers from the 1991 and 1991 Annual FLICC Forum on Federal Information Policies.

Toward the end of FY '92, FLICC faced the challenge of ensuring all FY '92 budget obligations were met before the close of FY '92. When budget analysis during the summer showed actual signed commitments were too slow in being returned, FLICC undertook a series of actions to reverse the situation. From June through September control of the FY '92 operating budget and follow-up with members became a top priority. Staff took many effective steps to ensure that members transferred funds owed to LC/FEDLINK and FEDLINK vendors before September 30 to cover both obligations of the direct program and LC overhead costs. Before the close of FY '92 FLICC achieved more than 100 percent of FY '92 obligations.

FLICC WORKING GROUPS

FLICC working groups engaged in ongoing specialized activities critical to the library and information center community. In addition to the 11 established FLICC Working Groups, the FLICC References Services Working Group was reconstituted in FY '92 and work began to initiate the formation of a FLICC Working Group to follow-up with WHCLIST on WHCLIS II recommendations and actions.

FLICC BINDING WORKING GROUP: Several years of hard work by the librarians on the FLICC Binding Working Group tracking the federal binding contract of the GPO resulted in substantial progress in FY '92. The Term Contracts Division of GPO accepted nearly every FLICC-recommended change to the B405-S library binding contract. The contract, issued by GPO on June 18, 1992, contains detailed specifications for all phases of the binding process, holds the contractor financially accountable for excessive errors, and provides a three-year guarantee for the bound volumes from the date of binding. Members of the FLICC Binding Working Group participated in several sessions with GPO representatives in which additions and deletions to the contract were negotiated.

FLICC EDUCATION WORKING GROUP: The members of the FLICC Education Working Group met 6 times during the year to organize programs on topics of significance to federal

librarians and information specialists in such areas as OMB Circular A-76, emerging information policies, and internal database development.

FLICC PERSONNEL WORKING GROUP: During FY '92 the FLICC Personnel Working Group continued its ambitious efforts in cooperation with OPM to develop revised Classification and Qualification Standards for GS 1410, 1411, and 1412 Library Series. Meeting 6 times during the year, the group worked closely with Jean Stewart of OPM, proposed suggestions for OPM fact-finding visits, conducted a comprehensive review of graduate/undergraduate programs in library science, worked with consultant Ray Crosby to develop draft qualification standards, and collaborated in writing a paper on the "Qualification Needs for Federal Librarians."

FLICC POLICY WORKING GROUP: During FY '92 the FLICC Policy Working Group focused on proposed revisions to OMB Circular A-130, laying the groundwork for preparation of FLICC's draft comments during July and August 1992. The 14 active members of the working group also followed the progress of several pieces of legislation critical to FLICC members, especially two that became law, the *High Performance Computer Technology Act* of 1991 (a measure that included NREN) and the *American Technology Preeminence Act* of 1991.

In other actions by the FLICC Policy Working Group, comments were drafted for submission by the FLICC chair designate to OMB on its Policy Letter 92, on OMB's Circular A-76, regarding "inherently governmental functions" and to strongly recommend that "operation of libraries" be deleted from OPM's policy, and that federal libraries be recognized as inherently governmental functions. The Office of Government Ethics in August 1992 provided the final rule establishing the Standards of Ethical Conduct for Employees of the Executive Branch which FLICC had commented on in September 1991. Comments were drafted for submission by the FLICC chair designate on September 21 to the National Commission on Libraries and Information Services (NCLIS) on NREN. Comments were drafted for submission to OMB on August 24 by the FLICC chair designate on the Proposed Revision of OMB Circular No. A-130.

FLICC PRESERVATION WORKING GROUP: The FLICC Preservation Working Group co-sponsored with the FLICC Binding Working Group the Third FLICC Preservation Seminar entitled "Library Binding—Taking a Fresh Look," presented by Jan Merrill-Oldham of the University of Connecticut on June 16. Other projects completed included: initiation of a new column on preservation for the quarterly *FLICC Newsletter* by Dan Clemmer (State): publication of the paper "Preservation and the White House Conference on Library and Information Services July 9-13, 1991" by working group member Robert Schnare (Naval War College) in the journal *Conservation Administration News* in January 1992, and field visits organized in conjunction with the Great Escapes activities of the FLICC Education Working Group at the National Archives and Records Administration's Picket Street Annex and other sites; publication of abbreviated preservation resource lists covering such categories as agencies and experts for use on the FEDLINK ALIX Bulletin Board and in written format; preparation for a needs assessment survey on preservation to be conducted in FY '93 in conjunction with the survey of federal libraries.

FLICC STATISTICS WORKING GROUP: The FLICC Statistics Working Group was organized to update the federal library statistics of 1978 prepared by FLICC's predecessor, the Federal Library Committee, in cooperation with the National Center for Education Statistics

(NCES). Reflective of FLICC's mission, the new survey instrument being developed by the working group seeks to include federal information centers along with federal libraries. Accomplishments during FY '92 include: development of a mission statement, survey goals and objectives, and guidelines stressing responsibilities for survey completion; identification of the audience for survey results and the survey's uses, benefits, and final products; preparation of a draft statement of work for a consultant to assist in creating the survey instrument; and mobilization of the federal library and information center community through the formation of task forces.

FLICC PUBLICATIONS

The FLICC Publications and Education (FPE) office maintained its extensive production schedule during FY '92 for two newsletters, the monthly *FEDLINK Technical Notes* and the quarterly *FLICC Newsletter* which included a 12-page issue (Summer 1991) issued in January that featured WHCLIS II delegation reports.

Special FPE projects included publication of the combined summaries and papers of the *Proceedings of FLICC Forums on Federal Information Policies: Combined Summaries of Proceedings*. FPE also compiled and published the first comprehensive *1992 Directory of FLICC Members and FLICC Working Groups*, listing 136 federal representatives to FLICC and its working groups representing 73 different federal agencies and offices.

FEDLINK (FEDERAL LIBRARY AND INFORMATION NETWORK)

FEDLINK is the national library network of cooperating federal libraries and information centers that offers these agencies the opportunity to procure through a central source the information resources needed to meet their agencies' requirements. Through FEDLINK almost 1,200 federal agencies including 849 federal libraries (FEDLINK voting members) received cost effective access to a number of automated information retrieval services for online research, cataloging, and interlibrary loan. Federal agencies also procured publications, serials, and books through FEDLINK in FY '92 through LC/FEDLINK contracts with major vendors on behalf of FEDLINK members.

Analysis of FEDLINK members and member service activity categorized by federal agency shows that the Department of Defense (DOD) represents almost half of FEDLINK volume, accounting for approximately $54 million of the $116 million estimated combined Transfer Pay and Direct Pay service dollars in FY '92. After DOD, agencies with scientific/technical/medical focus such as the Department of Commerce, Department of Health and Human Services, Department of Energy and independent agencies such as National Aeronautics and Space Administration, and agencies using legal information services including the Department of Justice and Department of Treasury account for another $40 million. Members characterized as federal libraries and information centers make up $78 million, fully two thirds, of the total service dollars handled through the FEDLINK procurement program.

FEDLINK INTERNET PLANNING GROUP: The FEDLINK Internet Planning Group (IPG), was formed in August 1991 and charged with addressing issues related to the feasibility of FEDLINK providing Internet access to federal libraries as well as training and support to FEDLINK members.

FEDLINK NETWORK OPERATIONS

FEDLINK Network Operations (FNO) functions as the regional library network for 825 federal libraries that are OCLC members, utilizing products and services from OCLC (Online Computer Library Center). FNO conducts training workshops in the DC area and nationally, as well as providing daily technical and program support to all federal libraries.

OCLC NETWORK ACTIVITY: During FY '92 FEDLINK network librarians concluded the 1991 effort to train federal librarians on OCLC's new PRISM cataloging system and communications software — Passport. The extensive effort to complete the training was immediately followed by the initiation of the first step in introducing the new PRISM Interlibrary Loan subsystem, the obtaining of authorization numbers and the planning for another national training effort for the fall of 1992. Meanwhile, FEDLINK network librarians continued to teach basic OCLC courses in searching, cataloging, EPIC, and other needed topics, both in the DC area and in regional locations around the country. FEDLINK staff conducted 37 regional workshops in FY '92 in Florida, North Carolina, California, New Mexico, Virginia, Massachusetts, Oklahoma, Texas, and Hawaii. During FY 1992, FEDLINK staff conducted a total of 122 OCLC training classes, attended by over 1,000 students.

FEDLINK FISCAL OPERATIONS

During FY '92 FEDLINK fiscal practices and the SYMIN automated system settled into a routine for handling the large volume of basic fiscal operations - registrations, IAGs, amendments, delivery orders, invoices, and statements. Serious local area network problems during the second quarter disrupted internal operations but did not affect service to the members; IAGs, invoices and statements were processed regularly. With basic operations under control, FEDLINK was able to address issues raised during the LC/IG's review, to implement internal controls such as regular reconciliation of obligations, to address complicated longstanding issues relating to no-year funds and prior year accounts, and to follow-up on users with outstanding IAGs and accounts with insufficient funds. Staff also developed a fuller understanding of the relational database structure of the SYMIN fiscal application which better enabled them to troubleshoot problems, to define reports from the system and interpret system data, and to specify modifications and enhancements for the system.

FEDLINK FISCAL OPERATIONS ACHEIVEMENTS: In FY '92 FFO's significant achievements included the following:

- generating and mailing timely member statements of account for FY '92 and prior years
- increasing the commitment for quality service to members and vendors through increased training, program orientation, and staff awareness
- training staff in the use of LC's FARS Intellect system to give more timely access to actual obligation and payment data
- bringing forward member agencies no-year/multi-year appropriation balances available for use earlier in the fiscal year
- reducing interest penalty payments from $200,198 in FY '91 to $38,360 in FY '92
- implementing end-of-year planning sessions with members to ascertain the amount of funds needed to cover rejected invoices, deficits and anticipated deficits
- actively collecting outstanding funds owed to the program on unsigned IAGs and deficit accounts
- implementing new serials ordering procedures with FNO, LC/C&L and LC/FSD
- reconciling FY '92 IAGs, delivery orders, and notices of obligations with LC/FSD and LC/C&L records
- developing and maintaining manual processes to augment the automated system
- increasing responsibility to inform member/vendor community through information alerts, meetings, vendor fairs, newsletters and the like

FEDLINK Fiscal Operations processed FY '92 registrations from federal libraries, information centers and other federal offices which resulted in 1,122 signed FY '92 Interagency Agreements (IAGs) compared to 1,262 basic IAGs processed in FY '91. In addition, FFO processed 5,086 IAG Amendments for agencies adding, adjusting, or terminating service funding (2,992 FY '92 and 2,094 prior year adjustments). These IAGs and IAG Amendments represented 6,178 individual service requests to begin, renew, convert, or cancel service from 84 FY '92 FEDLINK vendors. The service requests were executed by delivery orders generated by FFO and issued to vendors by LC/C&L. Delivery orders represented $60,502,322 in FY '92 and prior year Transfer Pay service dollars. For FY '92 alone FEDLINK processed approximately $54 million for 2,851 Transfer Pay accounts and approximately $59 million for 467 Direct Pay users. FY '92 activity represented a total of 3,318 FEDLINK agency accounts.

On behalf of Transfer Pay users, FFO processed for payment 94,732 invoices during FY '92 for both current and prior year member orders. Vendor payments from agencies' FY '92 Transfer Pay accounts amounted

to $36 million. FFO has continued to maintain open accounts for three prior years for members using book and serials services, paying publications services invoices based on the order date of the invoiced items. FFO staff processed 29,464 prior fiscal year invoices and converted 15,542 FY '90 invoices from the former FLAIR automated system, totalling $17.2 million as follows: $41,220 for FY '89, $700,000 for FY '90, and $16.5 million for FY '91.

SUMMARY

During FY '92 FLICC and its components FEDLINK Network Operations and FEDLINK Fiscal Operations consolidated operations at Market Square, steered the organization through its first full year under the *FLICC Bylaws* adopted in 1991, and responded with dispatch to a continuing series of requests from LC and other federal agencies designed to insure compliance with federal regulations. The LC/IG's August 1992 follow-up review of the GAO Audit generally concluded that problems had been corrected and that FEDLINK is currently correcting or planning to correct additional control weaknesses in FEDLINK Fiscal Operations that have been identified.

FLICC utilized the services of Price Waterhouse during the fiscal year for general support of FEDLINK Fiscal Operations and for analysis and testing of its SYMIN system. FLICC's own internal design team continued to develop its FLICCNet LAN and the SYMIN system, identifying and resolving the cause of a series of crashes that immobilized the system for a considerable period of time.

Even as it refined its systems to meet the needs of its members, FLICC developed new programs to assist them, including the introduction of a new competition process for serials subscription services; an expansion of training courses to a total of 125 training 1,033 students; new working groups in such areas as references services and WHCLIST follow-up on resolutions of WHCLIS II; and new publications such as the FLICC Directory, the expanded FEDLINK Services Directory, and the combined issue of the FLICC Forum summaries.

At the end of the fiscal year, FLICC staff met the challenge of insuring that FLICC achieved its FY '92 budget projections and obligations by mounting a successful drive over the last several months to cover more than 100 percent of its operating expenses before closing on September 30.

REPORT OF DEFENSE TECHNICAL INFORMATION CENTER (DTIC) ACTIVITIES

by Carol E. Jacobsen, Products and Services Division
DTIC

DTIC OVERVIEW

Good morning. I bring you greetings from the Defense Technical Information Center. I would like to acknowledge the presence of two of my DTIC colleagues Marcia Hanna and Marie O'Mara. Fiscal Year 1992 was an exciting one for DTIC. It brought with it a number of significant changes including a reorganization, an increased movement toward fee for service, and the addition of a number of new products and services.

First, I would like to speak about the reorganization which went into effect in October of 1991. A decision made in February 1991 by the Office of the Secretary of Defense transferred DTIC and the DTIC administered Information Analysis Centers from the control of Defense Logistics Agency to that of the Office of the Under Secretary of Defense (Acquisition). The purpose of this move was to assist research, development, and acquisition activities in using the Defense technology base more easily and effectively. Toward this end, DTIC will be producing more value- added products and services, in addition to providing bibliographies and summaries. DTIC underwent a major internal reorganization in order to reflect this closer alignment and stronger support to OSD and to become an even more effective, efficient, and economical operation.

The most significant changes include:

o The input and output operations were consolidated into one new directorate--the Directorate of Operations. The Directorate of Operations merged the former Directorate of Database Services with most of the Directorate of Document Services.

o The Scientific and Technical Information Network management function was expanded. This function was placed within the Directorate of Operations in the STINET Management Division.

o A new directorate was created to assume responsibility for the DoD Research, Development and Acquisition Program management and analysis support. The Directorate of RD&A Information Support will also manage the Information Analysis Centers and the Manpower and Training Research Information System Office in
San Diego.

o Policy direction for the DoD Scientific and Technical Information Program was placed at DTIC in the new DoD STIP Office.

o The change that affected me most, was the placement of the registration and reference services functions in the Directorate of User Services. This move was made to ensure a single point of contact at DTIC for user assistance.

The next issue which I would like to discuss deals with the changes in prices for DTIC's products and services. Changes in the source of funding for DTIC operations from Congressional Appropriations to the Defense Business Operations Fund has necessitated the changes in prices for various products and services. I know that there are many of us who view DBOF as a 4 letter word!

These new prices went into effect a few weeks ago. Some of the changes included: A $100 registration fee for use of the Defense RDT&E Online System (DROLS), fees for remote and demand bibliographies from the Technical Report Bibliographic Database, the Work Unit Information System and the Independent Research and Development Database, and fees for current awareness products. Basic registration continues to remain free of charge as do such services as referrals and document identification and publications such as the Users Handbook, the Contributors Guide, and our green and white brochure. In addition, the new DTIC video will be available at no charge. If you have specific questions about the new prices, please feel free to see me at the end of the Workshop or contact me on DSN: 284-6729.

Finally, I would like to take a few minutes to highlight some of the new products and services which DTIC introduced in the last year, and to discuss our plans for fiscal year 1993. Although many of you may have ordered DTIC products and services online, by form, by letter, by phone, or by fax, today you can order our products and services via electronic mail. You may find e-mail a more cost effective way of placing your orders. Our address is msorders@digis.dtic.dla.mil (although this mailbox is on the DGIS computer, if your e-mail system talks to DDN or the Internet you will be able to communicate with us by e-mail). In your e-mail message, indicate your DTIC user code, your NTIS deposit account number, the contract number (if applicable), the items or searches you want, the format you wish, and the number of copies. If you have any questions about ordering by e-mail,

please contact Evon Bumbray on DSN: 284-7633. We are also considering the establishment of e-mail groups based on product usage. The first group that we are considering is the users of our Technical Report (TR) Database on CD-ROM. If you are a TR Database on CD-ROM user, you may have received a yellow survey form asking for your preferred e-mail address. If there is enough interest, we will use e-mail as a supplement and an enhancement to our traditional means of keeping you informed about changes to our products and services. We also see e-mail as a forum through which product users can exchange ideas.

Another item introduced in Fiscal Year 1992 was the DTIC Thesaurus on Diskette. The DTIC Thesaurus on Diskette provides and alternative to the paper copy thesaurus for assistance in search strategy formulation. This product has been available since last summer. To use it you need an IBM-compatible personal computer, dBASE IV Version 1.1 or dBASE IV Runtime Version 1.1, and 8MB of hard disk storage. It is important to note that an additional 1.4MB of storage are required if you need Runtime. Both 3 1/2" and 5 1/4" diskette versions are available with and without dBASE IV Runtime. The price for the product is $49. For more information about the product, you can contact Judy Pickeral in DTIC's Product Management Branch on DSN: 284-6434. DTIC has recently introduced a computer aided instruction product for DROLS. This product which was developed by our Programs and Network Services Division is being distributed on diskette. We have also recently developed a similar training tool to introduce DTIC users to the Department of Defense Gateway Information System.

Another service that we have added to facilitate communication with our users is our new 800 number. This 800 number which services local and out-of-state users is (800) 225-DTIC or for those who prefer numbers (800) 225-3842! This number will give you direct access via a menu system to the offices that handle registration, document orders, training, SBIR requests, tours/briefings/conferences, product and service information, Corporate Information Management (CIM) referrals and general questions. We hope that this service will be useful to you. If the service is successful, it will be expanded to include other DTIC offices such as the retrieval, Current Awareness Bibliography, Automatic Document Dissemination, and Recurring Reports staffs.

DTIC continues to distribute technical information in nonprint formats such as video cassette, magnetic tape, and diskette. One of the most interesting products which we began to disseminate in Fiscal Year 1992 was PDWriter. PDWriter was developed by the Department of the Navy and the Office of Personnel Management to assist supervisors in writing job descriptions, and defining knowledges, skills, and abilities. We have duplicated and distributed over 3,000 copies of this product. If you are interested in more information on submitting or acquiring nonprint

products, the DTIC point of contact is Bonnie Klein. She can be reached on DSN: 284-6804.

This year, DTIC has become very much involved with the DoD Corporate Information Management (CIM) initiative. We have been tasked by the Office of the Director of Defense Information and the Defense Information Systems Agency to provide a Help Desk service to assist those interested in CIM. DoD-wide implementation of the CIM initiative has created a significant need for information exchange among DoD functional managers charged with the execution of the process modeling and activity costing techniques required under CIM. Recognition of DTIC's capabilities and long experience in handling information has resulted in DTIC's becoming the focal point for the exchange of CIM Information. In addition to facilitating the acquisition and dissemination of CIM documentation, the DTIC CIM Help Desk has been tasked to maintain and operate a DISA-supported referral database to assist users in locating technical expertise. Two of the items in DTIC's CIM collection are the Functional Economic Analysis Model (Version 2.2a) and the handbook entitled Process Improvement Methodology for DoD Functional Managers. For more information about DTIC's CIM products and services contact Carrie Schwarten on DSN 284-7065 or through our 800 number service. She has prepared a bibliography of the items in DTIC's CIM collection, and she will be happy to send you a copy. If you are planning to attend our Annual Users Conference next week, there will be a Reference session which will address CIM, and there will be ample opportunities to view one of the CIM videos.

Two of the new products which DTIC will be introducing in fiscal year 1993 include the Independent Research and Development Database on CD-ROM and the DoD High Thrust Areas Current Awareness Product. Both of these products will be discussed in depth at our Annual Users Conference. If you have any question or comments concerning any of DTIC's products and services please feel free to contact me on DSN 284-6729. Thank you.

Appendix A

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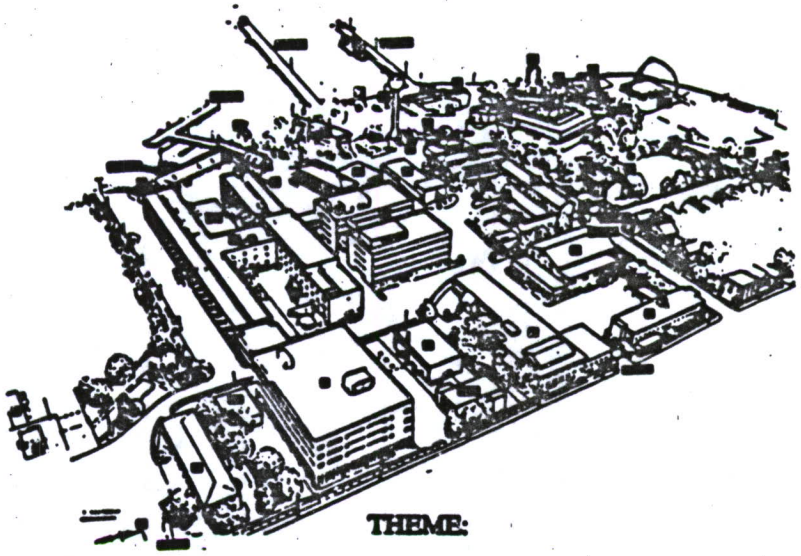
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Appendix B

Program

36th
MILITARY LIBRARIANS WORKSHOP
27 - 30 OCTOBER 1992



THEME:

NEW AGENDAS FOR THE NINETIES

HOST:

NAVAL UNDERSEA WARFARE CENTER DIVISION, NEWPORT
DETACHMENT, NEW LONDON

NEW LONDON, CONNECTICUT

NEW AGENDAS FOR THE NINETIES

36TH MILITARY LIBRARIANS WORKSHOP
27-30 OCTOBER 1992

RAMADA INN
MYSTIC, CONNECTICUT

Hosted by

NAVAL UNDERSEA WARFARE CENTER DIVISION, NEWPORT
NEW LONDON, CONNECTICUT

36th Military Librarians Workshop
27-30 October 1992

Program

Tuesday, 27 October

1800 - 2100 Registration and Service Meetings

Wednesday, 28 October

0800 - 0830 Registration

Plenary Sessions

0830 - 0840 Welcome
Normand Varieur, Chairman, MLW
Dave Hanna, Host

0840 - 0900 Welcoming Address
Captain Robert Mushen
Commander, NUWC Division, Newport

0900 - 1015 Keynote Address:
The Value of Information in Japanese Corporate Libraries
Dr. James Matarazzo
Simmons College

1015 - 1030 Break

1030 - 1130 *Managing in Lean Times*
David W. Lewis
University of Connecticut

1130 - 1200 *Fort Trumbull - New London, A High Technology Site (1917-1918)*
John Merrill
Naval Underwater Systems Center (Emeritus Electrical Engineer)

1215 - 1330 Luncheon at Poolside

1340 - 1445 *Organizing the Work of the Library in the Era of Downsizing*
Robert Leaver
Organizational Futures

1445 - 1500 Break

1500 - 1630 Service Updates
Air Force: Annette Gohlke
Army: Cynthia Banicki
Canada: Gretchen Cheung
DoD: Alice Cranor
Navy: Kathleen Wright

Thursday, 29 October

Plenary Sessions

0830 - 0930 *Government-Owned Contractor-Operated Libraries*
Marilyn Harnned
Brookhaven National Laboratory (DOE)

0930 - 1030 *NRL InfoNet -- Campus-Wide Access to CD-ROM and Other Library Resources*
Laurie Stackpole and Roderick D. Atkinson
Naval Research Laboratory (NRL)

1030 - 1045 Break

1045 - 1130 *National Translation Center*
Karl Green
Library of Congress

1130 - 1300 Lunch (on your own)

1300 - 1400 **Workshops**

OCLC For Managers
Robert Cunningham
NELINET

INTERNET/BITNET
Carolyn House
NELINET

Coping with Anxiety in the Workplace
Carol Thomas
Shoreline Psychiatric Associates

1400 - 1500 Workshops Continued

1500 - 1515 Break

1515 - 1615 Workshops Continued

1900 - 2300 **Mystic Marinelife Aquarium**
Show and Social Gathering

Friday, October 30

Plenary Session

0830 - 0930 *FLIC Education Committee Report*
Fred Rettenmaier
Office of the Chief of Naval Research

0930 - 1030 *FEDLINK Update*
Mary Berghaus Levering
Executive Director, FLICC

1030 - 1045 Break

1045 - 1130 *DTIC Update*

1130 - 1200 Business Meeting of SLA/MLW Division

1200 - 1215 Closing Remarks

Mr. Roderick D. Atkinson: Mr. Roderick D. Atkinson is currently Electronic Resources Coordinator of the Ruth H. Hooker Library and Technical Information Center, Naval Research Laboratory, Washington, DC. He is involved in the implementation of a network information system which includes CD-ROMs, optical disk imaging, software circulation and Internet services. He received his MLS from Catholic University of America.

Mr. Robert Cunningham: Mr. Cunningham is currently Senior Manager, Library and Information Services, at NELINET. He provides service and training to member libraries in OCLC cataloging, authority file, music, serials, EPIC and FIRST Search. Prior to this he served as a Quality Control Librarian at OCLC; music cataloger at Smith College; and reference librarian at the Fitchburg (MA) Public Library. Mr. Cunningham will be giving a concurrent session on Thursday, October 29th.

Mr. Karl R. Green: Mr. Green has been employed in the technical information field for almost 29 years in both the private and federal sectors, starting his career with Documentation, Inc. at the NASA Information Facility in a series of technical editing and publishing positions. He is currently head of the National Translations Center after serving as the head of the Technical Reports Section in the Science and Technology Division of the Library for 18 years. He holds a B.S. degree with honors in mathematics, computer science and experimental psychology and a master's degree in library and information sciences from the University of Maryland.

Ms. Marilynn Harnned: Ms. Harnned is currently the Deputy Manager of the Technical Information Division at Brookhaven National Laboratory, Long Island, New York. She has a B.A. from American University and a MLS from Vanderbilt University. Ms. Harnned's past employment has included tours at the Center for Naval Analysis, Naval Air Systems Command, and the Naval Oceanographic Office.

Ms. Carol House: Ms. House is currently a Member Services Librarian at NELINET. She provides training and support for CD-ROM technology, MS-DOS, Electronic Networks, and OCLC's EPIC service. Prior to this she served as reference librarian at Brookline (MA) Public Library. Ms. House will be giving a concurrent session on Thursday, October 29th.

Mr. Robert Leaver: Mr. Leaver is currently a Senior Consultant with Organizational Futures of Providence, Rhode Island. In his current job, Mr. Leaver provides integrated planning, development and design services to organizations and communities. Mr. Leaver has served as a teacher and administrator at Roger Williams College from 1971 to 1976. He has written and published articles and monographs on organizational development and dynamics.

Mr. David W. Lewis: Mr. Lewis received his M.S. in Library Service in 1975 from Columbia University, and is currently the Head of the Research and Information Services Department at the University of Connecticut, Homer Babbidge Library. Prior to this he served as Lehman Librarian at Columbia University; Assistant Director for Public Services at Franklin and Marshall College; Assistant Reference Librarian and Bibliographic Center Director at Hamilton College; and Assistant Reference Librarian at State University of New York, Agricultural and Technical College at Farmingdale. Mr. Lewis has also published numerous papers on various topics. Mr. Lewis will be speaking on Wednesday, October 28th.

Dr. James M. Matarazzo: Dr. Matarazzo holds a B.S. degree in History and Education and a M.A. degree in Political Science from Boston College, a M.S. degree from Simmons College, and a Doctoral Degree from the University Pittsburgh. He is currently a Professor at the Simmons College Graduate School of Library and Information Science. Dr. Matarazzo is the author of the following books: Closing the Corporate Library and Library Problems in Science and Technology; Corporate Library Excellence; and Information Management and Japanese Success. Dr. Matarazzo is a Fellow of the Special Libraries Association and received the SLA Professional Award in 1983, the SLA President's Award in 1988, and Certificate of Excellence in Public Relations in 1990. Dr. Matarazzo will be speaking on Wednesday, October 28th.

Mr. John Merrill: Mr. Merrill, an electronics engineer emeritus of the Naval Undersea Warfare Center, New London, Connecticut, was primarily concerned with ultra high frequency and microwave antenna developments for submarines. His later work involved investigating phenomena in the very low frequency spectrum. He was also the Center's program manger for the development of the Navy's extremely low frequency radio wave global communication system for strategic submarines known as Project Sanguine. In recent years, Mr. Merrill has been working on documenting the history of the Naval Undersea Warfare Center. He will be our luncheon speaker on Wednesday, October 28th.

Captain Robert L. Mushen: A native of Carmel, California, Capt. Mushen graduated from the United States Naval Academy and was commissioned in 1967. Following commissioning, he attended the Georgia Institute of Technology where he earned a Master of Science degree in engineering mechanics. He next underwent nuclear power training at Mare Island, California, and Idaho Falls, Idaho. Capt. Mushen served on various nuclear ballistic missile submarines until 1985 when he reported as Commanding Officer of the nuclear ballistic missile submarine USS George Washington Carver. In 1987 he assumed duties of Officer in Charge of the Naval Underwater Systems Center New London Laboratory. He then headed the Tactical Weapons Branch, Office of the Assistant Chief of Naval Operations and served as Director of Advanced Submarine Technology Program at DARPA. He is currently Commander of the Naval Undersea Warfare Center, Newport Division. He will be speaking on Wednesday, October 28th.

Mr. W. F. (Fred) Rettenmaier, Jr.: Mr. Rettenmaier is currently the Chief Librarian for the Office of the Chief of Naval Research, Arlington, VA He received his A.B. Degree from Seton Hall in 1964, and a M.S. in Library Science from the Catholic University in 1971. Presently, he is the Chairman of the FLICC Education Working Group at the Library of Congress. Previously, he served as Chairman of the Cooperative Information Network (a four county network in California).

Ms. Laurie Stackpole: Ms. Stackpole is currently Chief Librarian of the Ruth H. Hooker Research Library and Technical Information Center, Naval Research Laboratory (NRL), Washington, DC. She has over 15 years experience in administering scientific research collections and in using, adapting and developing technology to facilitate the transfer of scientific research information to researchers and administrators. Ms. Stackpole is in the forefront in applying new information technologies. Her recent publications include: Campus-wide Network Access to CD-ROM Databases, with Roderick D. Atkinson and John Yokley, Proceedings of the 13th National Online Meeting, May 1992; and Software As a Library Material in Special Libraries: A Survey and Case Study, Library Trends, 40(1), Summer 1991.

Dr. Carol F. Thomas, Ph. D.: Dr. Thomas is currently a Lecturer/Instructor at Mohegan College in Norwich, Connecticut. She also serves as an Adjunct Faculty/Lecturer in the Women's Studies Department of the University of Connecticut. Dr. Thomas has the following outstanding academic credentials, with a B.A. from Saint Leo College, a M.A. from Saint Thomas University, and a Ph.D. from the Union Institute. Dr. Thomas has been involved in dealing with problems relating to working women and stress. Her recent articles published include: "Stress in Contemporary American Life"; "Mid-Life Crisis" and "Philosophy, Growth, and Personal Development". Dr. Thomas will be giving a concurrent session on Thursday, October 29th.

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