Smithsonian Institution Libraries

NHB Room 22, MRC 154, Washington, D.C. 20560

VOICE 202-357-2240 *FAX 202-786-2866*

MEMORANDUM August 14, 1992

TO: Robert S. Hoffmann

FROM: Barbara J. Smith

SUBJECT: Internet Report

Enclosed please find the report of the Internet Committee. Although membership in and connection to the Internet is a fact, there are many issues and policy matters that must be addressed if the Smithsonian Institution is not only going to use the Internet effectively as a means of gathering information and data, but is going to contribute to scholarly and educational communication in a responsible and effective manner. The Committee submits this report and recommendations for action and awaits your pleasure.

Enclosure

cc: Secretary Adams
Under Secretary Newman
Assistant Secretaries Freudenheim, Early, Suttenfield, Lovejoy and Burnette
Deputy Assistant Secretary Simons
Director Marcalus
Chairs of COBD, CIED, and CASD
Internet Committee

H:\ADMIN\BARBARA\INTERNET\INTERNET.HOF

OPB Routing Slip Date 8/27
To: Rick
cc: Mary Ann
From: Carole
[ ] Action
[ ] Comments
[ ] See me
[ ] FYI
[X] File
[ ] Return

REPORT OF THE INTERNET IMPLEMENTATION COMMITTEE

TO

ROBERT S. HOFFMANN
ASSISTANT SECRETARY FOR SCIENCE

AUGUST 14, 1992

Table of Contents

Report of the Internet Implementation Committee
(Internet Users Advisory Committee)

I. Executive Summary

A. Background. The Internet began as a federally funded and designed system to allow the Department of Defense to communicate and share computer resources with the research and academic community. It is still federally sponsored and to a large extent federally funded through support of NSFnet, as one example, a primary carrier of computer supported communication. Through meetings of a number of professional organizations, staff continuing exploration of what can best serve the research and education interests of the Smithsonian Institution (SI), and information gained from Institution membership in the Coalition for Networked Information, it became obvious to a number of individuals that the Institution was in danger of depriving itself of the advantages that the Internet provides research, education, commercial and governmental organizations.

The recent passage of the High Performance Computing Act of 1991 will establish the National Research and Education Network (NREN) and provide several hundred million dollars for widespread use of networking in the United States with emphasis on colleges and universities, public libraries, schools and the general public. Similar efforts are underway in the European Community. The United Nations Development Programme with a number of international organizations has begun initiatives in Third World countries. A group of Smithsonian Institution staff representing OIRM, SIL, NMNH, and MSC gathered to discuss ways that membership in the Internet could be fostered. With assistance from the Office of the Assistant Secretary for Science, an effort was begun nearly a year and a half ago to gain access to the Internet for the Smithsonian Institution. This Committee is pleased to report success. Membership is a fact and access for those whose work will be facilitated by this access will begin this fall. (See Appendix M for a listing of the contributions of SI units and external gifts.)

B. Implementation Preparedness. Through the efforts of the co-leaders of the implementation effort, membership has been finalized. Appropriate hardware and software to provide access has been purchased, installed, and is being tested. The DP Managers Roundtable was provided with information about Internet implementation considerations and system managers will be given training opportunities and additional information prior to Internet implementation. By the end of September 1992, individual access to the Internet will be possible widely.

The Committee does not want to leave the impression that providing access to the Internet will be immediate for all parts of the Smithsonian Institution, but there is confidence that with support from bureaux and offices it will be only a matter of time until all who need to be will be served. Providing appropriate information access is, however, a broader matter than implementation of Internet access. Not all staff currently have access to or are using PROFS and BITNET.

C. Recommendations

1. Accept the Policy for Ethical Use of Internet (Appendix D) and recommend incorporation of its principles in the SI Computer Security Staff Handbook.

2. Accept the Internet Connection Policies (Appendix E) and recommend their incorporation in the SI Computer Security Staff Handbook.

3. Provide resources for OIRM for training and communication regarding use of the Internet and other networking services.

4. Encourage bureaux and offices where potential for Internet use is known to make training for and access to the Internet a priority for FY 1993 (Appendix H).

5. Recommend review of the Smithsonian Institution Standards of Conduct by the Office of the General Counsel for adequate provisions for the networking environment and new means of scholarly interchange.

6. Provide for improved means of coordination, management and funding of SI-wide information initiatives among bureau and office ADP and computing units to support networking activities.

7. Assure that OIRM (the Smithsonian Institution's Chief Information Office when appointed) is charged to lead a discussion and set policy for the matters addressed in Smithsonian Information on the Internet, Concerns (Appendix G).

8. Request that OIRM establish a computer security education program.

9. Charge OIRM (the Chief Information Officer when appointed) with oversight for pan-Institutional networking matters including management, operations and policy development with special attention to security, ethical use and access to Smithsonian databases and information.

10. Continue membership in the Coalition for Networked Information and consider membership in the Internet Society.

11. Request that OIRM periodically review the need for Internet awareness building programs.

II. Introduction

A. The Internet. The Internet is a "network of networks." It is comprised of several regional networks which are linked to national and international networks. The primary carrier in the United States is NSFnet. The Smithsonian Institution is a member of SURAnet which is the Institution's means of access to the Internet. All networks "talk" to each other and provide for communication and exchange of information facilitated by a standardized set of protocols called Transmission Control Protocol/Internet Protocol (TCP/IP). TCP/IP permits individual networks to be joined by gateways and appear to be a single network to users. Addressing schemes allow data to be transmitted to specified destinations. Use of an address identifying an individual user, his/her organization, the organization's member network and category designation (e.g., educational, military, commercial, government) facilitates the routing of messages, information or data in many ways mimicking the transport of letters and packages through postal systems throughout the world.

Distance tends to be irrelevant in an online environment. The user is generally unaware of the various connections being made by the Internet in passing data through the various routers, bridges and gateways to reach a specified destination. Millions of users of the Internet can access any other Internet host (the computer to which an individual in "connected" to the Internet) using remote login.

B. Use of the Internet. The Internet goes beyond e-mail. Remote connectivity and file transfer are its added value. The speed and efficiency of e-mail have long been recognized. Although it has served well as a means of communication, this means of transmission required that sender and receiver use the same network. The Internet frees individuals to cross all networks with ease. The TCP/IP permits FTP (file transfer protocol) which allows users to transfer data files readily to or from a remote computer. The file can be designated for only one recipient or it can be loaded into a file on the system which can be assessed by a number of users (e.g., an electronic bulletin board). The data can also come from a file previously prepared by word processing, spreadsheets or database software prepared for publication, financial recordkeeping, bibliographic indexing and abstracting and many other uses. Computer administrators can designate files that can be accessed anonymously (i.e., without specific approval) for the purpose of sharing information. Remote logon to distant computers including supercomputers all over the world to run applications or search databases is a value of access to the Internet.

Directories of directories and other means of identifying information available on the Internet are proliferating. According to the Internet Society some 5 million users in over 100 countries access the Internet for its real-time vast array of information resources. These resources include online library catalogs, electronic journals, full text literary works, public domain computer software, planetary science data, guides to agriculture information, current Supreme Court decisions and opinions, and online interest groups almost beyond count.

C. Committee Charge. In a memorandum dated February 19, 1992 from Ross Simons, Deputy Assistant Secretary for Science (then Research) to Vince Marcalus, Director OIRM, regarding Smithsonian Institution membership in the Internet, the charge to the Committee was set out. The Committee, referred to in the memorandum as the Users Advisory Committee, was charged to "focus on the critical programmatic issues that need to be addressed prior to full implementation of Internet" access for the Smithsonian Institution save SAO. The charge addressed examination of questions regarding the kinds of data that will be available on the Internet and data security. The memorandum also discussed publicizing the initiative to the Smithsonian Institution's staff and external constituencies. Copies of the memorandum were sent to the Secretary, the Under Secretary, the Assistant Secretaries, key staff as well as the chairs of COBD and CIED (Appendix A).

III. Action and Recommendations for Implementation

A. Awareness. Awareness is a critical aspect in introducing a new capability to the Smithsonian Institution community. Use of the Internet should be of interest to a wide-range of programs including research, education, publication and public relations. Decentralized computing services and lack of funding for demonstrations targeted to the needs of the various groups and programs require an awareness effort to alert potential users to the capabilities the Internet offers. The Awareness Task Group has set out a series of low cost steps which will be taken. These steps include a notice in the Summer 1992 issue of SI Research Reports, information in the OIRM Newsletter and the PROFS Internet bulletin board, an article in The Torch, an OIRM Research Seminar devoted to the Internet (Appendix J), a FactSheet (Appendix I) which will be widely distributed, and meetings with the DP Managers Roundtable, a key group in awareness building. Appendix C contains a listing of awareness activities prior to and coinciding with the availability of Internet access. Appendix K lists reading materials available in SIL branch libraries.

B. Training. Funding limits the scope of initial training for use of the Internet. Because of this, the concept of "train the trainers" guided the approach the Training Task Group took. Funds from OIRM's ongoing training program were redirected to provide contracted training for staff who will be able to provide some technical training and education for other Internet users. Ongoing training by OIRM or other units

will depend to a large degree on the funds that are made available for this purpose. Cost for future instruction may be recovered by charging fees. The Committee urges bureaux and offices where use of the Internet will be beneficial to make training as well as implementation of Internet access a priority in FY 1993. (See Appendices C and L)

C. Facilitation of Computing Center Support. In the decentralized computing environment that is present in the Smithsonian Institution, the Committee saw early on that it could only recommend and issue guidance to the many ADP and computing units which will ultimately be responsible for providing access and assistance to individual users. The Task Group of the Committee charged to deal with facilitation of access explored implementation and support of Internet access with the DP Managers Roundtable. The Roundtable was briefed on the recommended guidelines for facilitation of Internet access emphasizing site-specific factors. The services that users should expect from local servicing organizations initially are: user access to the SI Internet host, access documentation, training on how to access the SI Internet host, software acquisition and installation for Internet access, "HELP" for Internet access, and information distribution via local e-mail systems. Appendix H sets out in priority order those services users can expect from their local computing offices.

D. Ethics and Security. Accepted standards of academic conduct need to be reviewed to assure that these standards will be adequate in this new environment for scholarly communication, networking and online services. The Task Group which directed this effort developed two documents, Internet Connection Policies and Policy for Ethical Use of Internet. The Committee sees these documents as the most reasonable that the Institution can embrace at this time. The Policy for Ethical Use of Internet was adopted by the Committee as acceptable and adequate as it satisfies the minimum requirements set out by NSFnet and SURAnet. OIRM established a committee which is developing a computer security staff handbook. The Committee suggests that the handbook include a section on ethical use. (See Appendices D and E)

E. Information Exchange. The Task Group that addressed accessing and making Smithsonian information resources available on the Internet had perhaps the most challenging matters to address. The Group was steadied in its work by the knowledge that the old rules do apply for the most part and that electronic communication in all its forms does not mean that the ethics and accepted methodologies for print publication and spoken or written communication no longer stand. The guidelines for selecting/preparing electronic information are extremely valuable in setting out the context within which electronic sharing of information should take place. The report is a stand alone statement on the use of the Internet addressing types of access, types of information appropriate for the Internet, guidelines for selecting/preparing electronic information for the Internet, and user service and support required for data made available on the Internet. (See Appendix F)

F. Recommendations. In order that adequate support is available to users of the Internet in the early stages of access, the following recommendations based on the above discussion should be adopted and implemented.

1. Accept the Policy for Ethical Use of Internet (Appendix D) and recommend incorporation of its principles in the SI Computer Security Staff Handbook.

2. Accept the Internet Connection Policies (Appendix E) and recommend their incorporation in the SI Computer Security Staff Handbook.

3. Provide resources for OIRM for training and communication regarding use of the Internet and other networking services.

4. Encourage bureaux and offices where potential for Internet use is known to make training for and access to the Internet a priority for FY 1993 (Appendix H).

IV. Recommendations and Issues to Consider for On-Going Use of the Internet

A. Awareness. After implementation of access to the Internet for the Smithsonian Institution community, it will be important that mechanisms are in place to assure that users and servicing units be kept up-to-date regarding enhancements to Internet programs and services. It is, therefore, critical that an assessment of the need for further awareness building programs be determined periodically. If additional awareness efforts are required, staff in OIRM should be assigned responsibility for developing mechanisms to assure that current users and future users are fully aware of the potential of Internet applications. (See Appendix C)

B. Facilitation of Computing Center Support. The recommendations of the Facilitation Task Group are prioritized from basic service support, to ensure that minimum access support is furnished, to more enriched support involving individual user needs. That is, initially, computer servicing units may only be able to say "It's available, help yourself." Long term these units may want to, or need to, provide user guidance, individual assistance and other services geared to maximizing effective Internet use. Funding must be provided if service support is to progress from rudimentary service to service that is user friendly. Again, individual bureaux and offices must make a commitment to the Internet if benefits are to be fully realized. In the meantime, the roles of computing service units will overlap those of OIRM but time-tested coordination and cooperation should assure that ultimately the user will be served. (See Appendix H)

C. Ethics and Security. Whether because of lack of familiarity with the area in general or SI policies in particular, these two areas caused the Committee the greatest concern and prompted the most discussion. Nonetheless the Committee saw that it is important that OIRM take a leadership role in promoting the development of enforceable computer security measures and standards. The Committee urges that the SI Computer Security Staff Handbook being developed with OIRM leadership contain a section on ethics and that, when finalized, it be widely distributed to the user community. Violation of the computer security requirements of such as NSFnet and SURAnet could jeopardize the Smithsonian Institution's access to the critical world of networking. Not only must the Smithsonian Institution's standards of conduct be reviewed for applicability to the needs of modern communication and exchange of information but seminars on computer security and ethics should be planned and presented to a widely representative group of the user community.

D. Information Exchange. The issues raised by the Task Group which addressed in particular providing Smithsonian Institution information to the Internet are important to those who have data that should be shared with audiences beyond the Institution. The Task Group calls attention to the security needs that may warrant separate computing capabilities for databases which are designed for external access. These concerns have cost implications and demand development of Institutional policy as well as careful management procedures to avoid redundancy and inefficient use of computing resources. Promotion of databases that are made available must be carefully planned for as support for external users must be available if the Smithsonian Institution's reputation is to be maintained. The need for development of policies addressing making SI information available on the Internet is critical. Appendix F provides guidance for making Smithsonian Institution information available on the Internet while Appendix G sets out issues that must be discussed and resolved if effective use of resources is to be assured.

E. Recommendations. The long-term effective and efficient management and operation of access to and sharing of information on the Internet is critically dependant on a number of factors. The Committee has addressed what it views as the major factors in the recommendations below. In order that the Smithsonian Institution will remain informed and become a partner in the development of Internet capabilities and policy, membership in key external organizations is important and action is this area is recommended, also.

5. Recommend the review of the Smithsonian Institution Standards of Conduct by the Office of the General Counsel for adequate provisions for the networking environment and new means of scholarly interchange.

6. Provide for better means of coordination, management and funding of SI-wide information initiatives among bureau and office ADP and computing units to support networking activities.

7. Assure that OIRM (the Institution's Chief Information Officer when appointed) is charged to lead a discussion and set policy for the matters addressed in Smithsonian Information on the Internet, Concerns (Appendix G).

8. Request that OIRM to establish a computer security education program for all users.

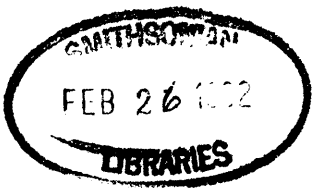
9. Charge OIRM (the Chief Information Officer when appointed) with oversight for all networking matters including management, operations and policy development with special attention to security, ethical use and access to Smithsonian databases and information.

10. Continue membership in the Coalition of Networked Information and consider membership in the Internet Society.

11. Request that OIRM review periodically the need for Internet awareness building programs.

V. Appendices

A. Committee Charge Memorandum
B. Committee Membership and Task Groups
C. Calendar of Events
D. Policy for Ethical Use of Internet
E. Internet Connection Policies
F. Smithsonian Information on the Internet
G. Smithsonian Institution Information on the Internet, Concerns
H. Internet Facilitation (service for users from local computing offices)
I. Internet FactSheet
J. Research Seminar Agenda
K. List of Materials Available in SIL Branch Libraries
L. Recommendations from Task Force on Training
M. Contributions



M E M O R A N D U M

19 February 1992

TO: Vince Marcalus

FROM: Ross Simons

SUBJ: Smithsonian Membership in Internet

Bob Hoffmann and I reviewed your plan of 13 February which would allow for Smithsonian membership in Internet, and we are pleased to inform you that we endorse this plan. To this end, the Office of the Assistant Secretary for Research agrees to both contribute to the plan's costs for the current fiscal year and to take responsibility, along with OIRM, for ensuring that recurring costs for Fiscal Year 1993 and beyond are covered. We are also in agreement that our participation in Internet will allow for access on the part of all Smithsonian units interested in joining with the exception of SAO, which is connected separately via Harvard. This connection will allow Smithsonian researchers and others to have access to Internet through the IBM 4381 and the MSC VAX. In addition, provisions will be made to hook-up those users who are currently utilizing the Novell LAN, as well connecting others desiring access through their own workstations.

This commitment to Internet recognizes the priority placed on access to this communication network by a broad spectrum of Smithsonian units, and also reflects this office's desire to see this effort go forward immediately rather than wait for several more fiscal years. The work which OIRM and others have put into this plan is greatly appreciated and should enable Smithsonian staff to benefit very quickly from this international system, thus making possible rapid access to data bases existing in thousands of different sites. We have begun the process (which was outlined in the IRM Plan among other documents) of bringing the Smithsonian's communications into the 20th century. In particular, we acknowledge the assistance provided by David Bridge of the MSC and John Moreci of your staff for their diligence in putting together a technical plan with which the entire Smithsonian community could agree. We are also most grateful for the generosity of the various user-units who have agreed to contribute to the one-time start-up costs for Internet. In this vein, both the SIL and your own office should be commended for agreeing to such a large share of these costs.

We are now prepared to move forward in implementing Internet access and would suggest that you ask John Moreci and David Bridge to act as co-leaders for this phase of the work. We have also asked Barbara Smith to chair a Users Advisory Committee to work with the project co-leaders--Barbara has graciously agreed to do so. The Advisory Committee will focus on the critical programmatic issues that need to be addressed prior to full implementation of Internet, and will also examine questions having to do with what kinds of data will be available on Internet as well as focusing on the matter of data security and a host of other vital issues. Barbara's willingness to undertake this added assignment during the implemenation is greatly appreciated. She will work with all interested institutional units to ensure a balanced Committee.

During this period of time, we will need to be certain that the Internet initiative is properly publicized to the Institution's staff and important external constituencies. It is our understanding that once monies are transferred, we will be in a position to access Internet within 60-90 days. Bob and I look forward to hearing more from you on your progress as this project moves along. Again, our thanks for assisting in the coordination of this important effort.

Attachment

cc: Bob Adams, Carmen Turner, Nancy Suttenfield, Tom Freudenheim, James Early, Tom Lovejoy, [redacted], David Bridge, John Moreci, Chairs of the COBD (Talbot) and the CIED (Carper)

INTERNET COMMITTEE MEMBERSHIP

John Moreci, OIRM, Co-leader
David Bridge, NMNH/MSC, Co-leader
Joe Russo, OIRM
Evanne Browne, OIRM
Beverly Westermeyer, OIRM
Bill McGeehan, OIRM
Richard Thorington, NMNH
Peter Kibbee, NZP
Karen Cassedy, NMAA
Karen Peters, NASM
Gary Gautier, NMNH
Bonita Perry, SIL
Tom Garnett, SIL
Dan Appleman, NMNH
Roslyn Walker, NMAfA
Ellen Farr, NMNH
Dennis Dickinson, NMAH
John Fleckner, NMAH
Christine Steiner, OGC
Jim Wallace, HMAH
Rebecca Browning, SIP
Mignon Erixon-Stanford, OIRM
Tom Loderbaugh, OESE
Barbara Smith, SIL, Chair

Task Groups

Awareness
Ellen Farr, lead
Mignon Erixon-Stanford
Peter Kibbee

Facilitation
Dennis Dickinson, lead
Gary Gautier
Karen Peters
Karen Cassedy

Training
Evanne Browne, lead
Bonita Perry
Roslyn Walker

SI Information
Beverly Westermeyer and
Rebecca Browning, leads
Jim Wallace
Tom Garnett
Christine Steiner
Joe Russo

Security/Ethics
Bill McGeehan, lead
Dennis Dickinson

APPENDIX C

INTERNET COMMITTEE

CALENDAR OF EVENTS AND ASSIGNMENTS

July		
xx	- SI Research Reports (Summer 1992)	John Barrat
20	- Testing of Internet Connection	Bridge/Moreci
August		
13	- Committee demonstration of Internet by SURAnet	E. Browne
13	- DP Managers Meeting, Q&A (FACTSHEET)	Committee
14	- Committee report finalized and forwarded	B. Smith
September		
8	- OIRM Research Seminar	M. Erixon-Stanford
21-25	- Training for Trainers and Key Users	E. Browne,BCR
28	- Internet Connect, 4381	OIRM (co-leaders)
28	- Internet Connect, other hosts	OIRM "
28	- Connect NOTICES in SI Staff Bulletin and PROFS Internet BB	D. Bridge
28	- Distribution of FactSheet with Staff Bulletin	B. Smith
28	- Article in Torch	John Barrat
28	- Internet information in SIL branches	B. Perry
28	- Computer Help Desk begins	E. Browne
28	- Training options information available	E. Browne OIRM/ADPunits
November		
4	- Lecture on Scholarly Communication and the Internet	SIL
Ongoing		
	- Demonstrations in selected SIL branches	SIL
	- Notices of interest in Profs Internet	OIRM Internet Officer

h:\admin\barbara\internet\internet.cal 7/30/92

SMITHSONIAN INSTITUTION POLICY FOR ETHICAL USE OF INTERNET

GENERAL PRINCIPLES:

Internet services are provided to support open research and education in and among U.S. research and instructional institutions, plus research arms of for-profit firms when engaged in open scholarly communication and research. Use for other purposes is not acceptable.

If a user becomes aware of a Security incident, either accidental or intentional, this should be reported immediately to the Smithsonian Institution Computer Security Manager (if the Internet session is initiated directly from a PC) or the appropriate Smithsonian Institution system administrator (if the user originates the Internet session by going through a mainframe computer, minicomputer or Local Area Network).

Users are individually responsible for understanding and respecting the security policies of the systems (computers and networks) they are using, and for the proper and ethical use of Internet.

Users are responsible for their own behavior. Weaknesses in the security of a system are not a license to penetrate or abuse a system. Unauthorized access to a computer or use of a network is explicitly a violation of Smithsonian Institution policy and Internet rules of conduct, no matter how weak the protection of those computers or networks.

Users are individually responsible for all use of resources assigned to them, and hence sharing of accounts and access to resources is strongly discouraged. However, since access to resources is assigned by individual sites and network operators, the specific rules governing sharing of accounts and protection of access is necessarily a local matter.

Users have a responsibility to employ available security mechanisms and procedures for protecting their own data. They also have a responsibility for assisting in the protection of the systems they use.

Users are expected to handle account privileges in a responsible manner and to follow site procedures for the security of their data as well as that of the system. For systems which rely upon password protection, users should select non-trivial passwords and periodically change them. Proper use of file protection mechanisms (e.g., access control lists) so as to define and maintain appropriate file access control is also part of this responsibility.

SPECIFICALLY ACCEPTABLE USES:

Communication with foreign researchers and educators in connection with research or instruction, as long as any network that the foreign user employs for such communication provides reciprocal access to U.S. researchers and educators.

Communication and exchange for professional development, to maintain currency, or to debate issues in a field or subfield of knowledge.

Use for disciplinary-society, university-association, government-advisory, or standards activities related to the user's research and instructional activities, but not for other fundraising or other public relations activities.

Continued...

Use in applying for or administering grants or contracts for research for instruction.

Any other administrative communications or activities in direct support of research and instruction.

Announcements of new products or services for use in research or instruction, but not advertising of any kind.

Any traffic originating from a network of another member agency of the Federal Networking Council if the traffic meets the acceptable use policy of that agency.

Communication incidental to otherwise acceptable use, except for illegal or specifically unacceptable use.

UNACCEPTABLE USES:

Use for for-profit activities (consulting for pay, sales or administration of campus stores, sale of tickets to sports events, and so on) or use by for-profit institutions unless covered by the General Principle or as a specifically acceptable use.

Extensive use for private or personal business.

Actions which cause interference to the network or cause interference with the work of others on the network.

Any use which violates copyright law, would be deemed defamatory, or would be considered academic misconduct.

Testing the security mechanisms of another Internet node.

Offering or releasing malicious or destructive programs.

Any unauthorized access.

Any use for which the Smithsonian Institution incurs a fees, user charges, or other costs which have not been previously negotiated.

Sharing of data which is considered Top Secret, Secret, or Confidential by the Department of Defense or Department of Energy.

Electronically eavesdropping or intercepting data transmissions that are not addressed to you.

Use of a remote computer in any manner that does not conform to the security policy at that site.

Any use that might compromise the security mechanisms of Smithsonian Institution computers.

Any use that violates Federal or state laws or regulations.

NOTE: This statement of Smithsonian Institution policy is for educational purposes. It extracts from the NSFNet Backbone Service Acceptable Use Policy and the SURAnet Acceptable Use Policy all the items which affect the individual user. The Smithsonian Institution fully accepts and adopts the complete and official version of these policies.

H:\ADMIN\BARBARA\APPEND-D.INT

APPENDIX E

INTERNET CONNECTION POLICIES

Background

The connection of the Smithsonian Institution to the Internet has provided an occasion to review our computer security practices. Because many of our systems are available through dial-up lines, Internet connection only increases the security threat to these systems in terms of the number of people who know about our systems, and the convenience with which they can access them. Some systems, however, may not have in place one or more basic security measures which are important even without the Internet connection. Thus certain minimum security safeguards have been established. In addition, some of these safeguards are needed to meet our responsibility to respond if notified of a problem by a peer organization on the Internet.

In order to connect to Internet, please certify to the Communication Management Division of OIRM that the following the security measures have been completed. (Exceptions may be granted by the Internet Security Committee (to be established)).

For Multi-User Systems:

1. Appoint an individual to be responsible for the security of the system ("System Security Officer") and the continued enforcement of the safeguards that follow. Provide a copy of the appointment with the request for connection.

2. Establish individual user accounts, and strictly and carefully limit the privileges of these accounts (except designated cases of public access systems).

3. Require passwords, minimum of 6 characters, on new accounts and when new passwords are entered.

4. Eliminate or disable accounts with trivial passwords (e.g., first name, last name, account name, words like "password" etc.), change passwords to ones that are not easily guessed, or limit guessing to three attempts.

5. Require that passwords be changed at least every 6 months.

6. Eliminate or disable dormant accounts (no activity in 6 months).

7. Eliminate or disable hardware/software vendor default accounts (supplied with operating system). Elimination or disabling of vendor site engineer accounts when not in use is strongly recommended.

8. Eliminate, or thoroughly review for security vulnerabilities, guest accounts (anonymous multi-user accounts).

9. Establish procedures to know when to close an account, and assign responsibility for this task.

10. Maintain an audit trail on paper, disk or tape. This consists at the minimum of all logins and logouts. It is recommended that these records be retained for at least 1 month.

11. Assign responsibility for regular monitoring of failed logins. Monitoring of illegal access attempts to files is encouraged.

12. If sensitive data (see definition below) is present, either ensure that the data is protected from unauthorized access by the normal use of the file management system, or ensure that the owners are aware of the measures that they must take to protect their sensitive data.

Continued...

13. Provide an initial screen showing a statement regarding the illegality of unauthorized access to the system based on Computer Fraud and Abuse Act, Public Law 99-274.

14. Establish a schedule of regular backups.

15. Distribute Smithsonian Institution Policy for Ethical Use of Internet to all account holders who will have capability to access Internet through the system applying for connection.

16. Obtain signed agreements from non-Smithsonian employees (who access a Smithsonian computer using Internet) to adhere to our security requirements. In the cases of electronic mail and public access type applications, this requirement will not apply. This requirement is intended for outside users who establish regular accounts.

For PC connection:

1. Submit a point of contact name and 24 hour phone number to the network maintenance center.

2. The security of the PC is the responsibility of the owner. There are a variety of scenarios under which the security threats range from virtually none to virtually equal to a multi-user mainframe. Elaboration on some of these threats and the appropriate safeguards will depend on gaining more experience with the technology. Due to the possible variations, any security measures will probably be in the nature of guidelines, instead of requirements.

>Definition of sensitive data:

The Computer Security Act of 1987 defines sensitive information as any information which if lost, misused, accessed or modified by unauthorized personnel, would adversely affect the national interest or conduct of Federal programs, or the privacy to which individuals are entitled under the Privacy Act of 1974.

This definition does not encompass information that has been classified by the Department of Defense or Department of Energy as Top Secret, Secret, or Confidential, since this type of information is protected under other laws. Computers containing classified information cannot be connected to Internet under any circumstances.

In general terms sensitive information would include (but is not necessarily limited to):

- Privacy Act information (personal information such as SSN, medical records, credit card numbers, etc.)
- "For Official Use Only" information if this label is applied by an agency of the U.S. government.
- Proprietary information, such as copyrighted material.
- Privileged information, such as certain information involved in legal proceedings.
- Certain types of financial information, but not including that which is public knowledge or which the SI has no need to keep secret.
- Business sensitive information as determined by senior management.

SMITHSONIAN INSTITUTION INFORMATION ON THE INTERNET

Although electronic access to the Internet opens up a wide variety of new contacts and possibilities to Smithsonian Institution bureaus and offices, it is important to realize that electronic communication is not entirely a strange, new land in which the old rules of public discourse do not apply. In fact, the best guidelines in this realm derive from the accepted standards for print publication and spoken or written communications.

The most important distinction to make for potential Internet communications is whether they are more properly considered the electronic counterparts of correspondence or publication. In general, information that is made available to only one person or to a small group of people should be regarded as the equivalent of writing a letter or sharing research results with a colleague, and the behavior of all parties involved should be dictated by accepted standards of privacy and confidentiality. Smithsonian Institution bureaus and offices would have the exact same interest in monitoring these exchanges as they do the written correspondence of employees. Established bureau and office policy or custom should be followed for Internet correspondence.

The comments and recommendations in this report are understood to refer primarily to Internet communications made available to all users without restriction or to a very large, though restricted, group. These must, for all practical purposes, be considered publications. Smithsonian Institution bureaus and offices should adapt to the electronic medium their existing standards and procedures for determining which materials are suitable for publication. In order to serve the public well and protect the reputation of the Institution, it is essential that the decision to disseminate a work to the Internet universe be made carefully and that the work be subjected to appropriate review to insure accuracy. Specific points that must be considered in selecting and preparing a work for Internet distribution are outlined below.

Types of Access to Information on the Internet

1. Remote logon: Users may enter a system to search a database, execute a program, update a file, etc. The degree of interaction (or interference) with the system that is allowed is determined entirely by the local system manager who issues the accounts remote users need to access the system.

2. Anonymous logon: Remote logon privileges may be offered to the general Internet public. A personal account is not required for anonymous logon, but the service is usually restricted to read-only access in order to protect the integrity of the database. Anonymous logon is often used for library catalogs and other databases a site wishes to make available to the wider world.

3. File transfer protocol (ftp): Rapid transfer of binary and ascii files is possible through ftp. Files can be text, programs, images, etc. The remote user does not interact directly with the files of the host system, but rather uses ftp as a form of "express mail" to get copies of desired information.

Types of Information Appropriate for the Internet

1. Databases: Databases such as the SIL Online Catalog and Fishes CIS are ideally suited to Internet dissemination. Normally remote users would be allowed read-only access to the database, and no special account or password would be required.

2. Data resources available through ftp: Smithsonian photographic images, articles or papers, and statistical data can be loaded on the mainframe or another designated platform for Internet distribution. These files are read or used on the remote user's system. The Internet acts as a delivery service, and no special account or password is required.

Continued...

3. Applications: A Smithsonian owned or produced application can be made accessible to remote users through the Internet. Users may run the program with their own data or may use data supplied by the Smithsonian. In virtually all cases, password-controlled access is recommended for applications that remote users may execute.

Guidelines for Selecting/Preparing Electronic Information

1. Audience: In some cases electronic publishing is not appropriate because a significant portion of the intended audience does not have access to a network or to the necessary hardware. Simultaneous print and electronic publication or release through CD/ROM are possible solutions to this problem.

2. Market: If it is the intention of an author to publish a work formally with a print or electronic publisher, the work (including preliminary stages of the whole or substantial parts) should not be broadcast through anonymous ftp, or even to a restricted group if it comprises the main target audience, because the informal version will very likely saturate the market, making it impossible for the publisher to recover editing and production costs. Publishers will normally refuse to accept works for which they see little or no demand.

3. Review: Works to be broadcast through the Internet should be held to professional standards of critique. In most cases, bureau sponsorship of a work entails peer review, departmental review, and revision as necessary. Where possible and appropriate the work should further be edited for consistency and clarity in presentation.

4. Copyright: Copyright considerations will be the same as in the print medium--works prepared by Smithsonian employees in the course of their employment should be copyrighted in the name of the Smithsonian Institution (© Smithsonian Institution) unless the work was prepared entirely with federal funds and is therefore in the public domain. The copyright notice should be displayed at the beginning of each interactive session for remote logon or at the beginning of the file for ftp.

   Permission to use any part of a work that does not belong to the author or to the Institution must be received in writing from the copyright holder, unless the borrowed portion falls clearly within the bounds of fair use.

5. Disclaimers or notices: A bureau or office may find it valuable to make available catalogs of specimens or artifacts or other data sets the accuracy of which cannot be guaranteed. In these cases a clear disclaimer or notice stating the exact nature of and reasons for possible inaccuracies should be included. (For example, a museum's artifact catalog may rely partly on old records that the museum has not had the time or resources to verify completely.)

6. Maintenance records: In the case of active databases, it is necessary to provide for regular updating and to insure that the release date of all updates be recorded so that users can tell whether or not a particular version is current. Perhaps the simplest way to handle this is to release to the public at regularly scheduled intervals a new version of the database, incorporating all of the internal changes that have been made during the period.

7. Accessibility: Consideration must be given at all times to how users will be able to read Smithsonian electronic documents, databases, and other files. When a Smithsonian work requires special software, which the intended users may not have, instructions should be given on how and where that software can be obtained in compliance with the software licensing agreement.

User Services and Support

Once a Smithsonian Institution bureau or office has determined that its data is appropriate for Internet access, it should consider user service and support responsibilities and the impact that making electronic information accessible to a wider audience will have on its present services. The following are guidelines for prospective Smithsonian Internet information providers:

Continued...

1. Will your information be available from a computer system that is already an Internet node or will this be a new node? If it is a an existing node, contact your local systems administrator for security and access policies. If this is a brand new computer, you should contact the Smithsonian Internet network manager for information about creating a new node.

2. Consider assigning a contact person, general telephone number, and electronic mail address for handling incoming questions.

3. Consider the type of questions you could receive; they could be about

   - data content
   - how to use the system
   - how to borrow or access the material
   - where to obtain more information

4. Will this expanded access affect your existing policies for loan, photocopying or duplication, or any fee-based services, etc.?

5. Consider the level of support you can provide. This may vary depending upon whether you are submitting data to another system (shared platform) or making your hardware and software available on your local system. Will this result in any extra workload or staffing requirements?

6. Whether you are considering providing access via a multi-user or shared platform, or from a local system, consider system security, back-up, monitoring, and troubleshooting activities. For further discussion of these issues, see the Internet Connection Policies Document.

7. How will you publicize and promote access to your information? Consider the following as you think about publicity:

   - Is your system easy to use or do you need to provide guides (written or online) to help users? Test access before you "go live."

   - You can advertise in a variety of ways, via SURAnet, BITNET listservs, existing Internet guides, journals, user groups, etc. Consider including the following types of information for submission to any Internet guides:

     Internet address
     Description of information
     Provider information - Institution/Agency name and address
     User services/support contact - name, address, telephone, electronic mail address
     Equipment or terminal emulation requirements
     Availability/hours of access
     Logon procedure
     Logoff procedure

The following are important INTERNET issues which should be discussed at an Institutional level:

I. Shared Platforms for Internet Access to Smithsonian Information

Numerous offices and bureaus within the Smithsonian Institution will want to make information accessible through the Internet. For security reasons the computing engines that supply information over the Internet may need to be kept separate from those used to meet internal day-to-day information needs. Many Smithsonian Institution units will not be able to acquire and support the computing platforms necessary to store files in a form easily usable by the wide audience on Internet. Shared computing platforms, dedicated to storing and serving Smithsonian information products are a likely solution to this problem. The following are issues associated with the acquisition and maintenance of shared platforms for Internet access to Smithsonian information.

1. Cost: How is the cost of acquisition and maintenance of a shared platform to be covered? Should the cost of the platform be funded centrally or distributed to the units that use the system? Are user fees possible or desirable?

2. Number and location of platforms: The Smithsonian may need to consider multiple shared platforms. These platforms could be located in and operated by an organization at almost any level in the institution's bureaucratic hierarchy, and the responsibility for operating and maintaining each system would be defined accordingly.

3. Standard information management software: For the convenience of the public and system managers, the institution should endeavor to limit the types of software used to maintain Smithsonian information on the Internet. This will require the selection of standard software for use on the network and provisions for conversion utilities in cases where internal source files have been created and maintained on nonstandard software.

4. Common access system: Information on Smithsonian shared platforms should be accessible from a single software query system so users are presented with a simple, common interface to Smithsonian information.

II. Possibilities for Promoting Access to Smithsonian Institution Information:

- Develop the concept of "electronic docent"

- Future use of SIRIS to create a directory of SI resources available on the Internet, users can first access SIRIS and then find out what SI products are available and how to access them. This inventory or database would contain information about the SI Internet resources (description, provider information, etc.) and would provide subject and keyword access to the descriptions about the resources.

INTERNET FACILITATION
Service for Users
(as viewed from bureau/office computer servicing organization)

<<IN PRIORITY ORDER>>

A. The following 6 items were given high scores by all members of the group. They tend to focus on site-specific factors:

1. User access to SI Internet host/communications facility from bureau/office computer environment.
2. Internet access documentation distribution.
3. Training on how to access SI Internet host/communications facility from bureau/office computer environment.
4. Software acquisition/installation for Internet access from bureau/office computer environment.
5. "HELP" desk for Internet access from bureau/office computer environment.
6. Information distribution via local email systems.

B. The following 4 items were scored highly by most of the group but not all:

7. Liaison with "SI Internet planning/support organization".
8. Hands-on user assistance.
9. Computer staff trained to provide Internet support.
10. Making it easier to get Internet access from bureau/office computer environment.

C. The following 9 items were given medium to low scores by most of the group. They tend to be things where there are other sources of support. The group would sacrifice support for these in tight times:

11. Internet documentation distribution.
12. "HELP" desk for Internet use.
13. Information clearing house.
14. Finding assistance for Internet services.
15. Seek active feedback from users.
16. Network with other SI Internet support groups.
17. Encourage development of internal use and expertise.
18. Enhance bureau/office computing facilities to support Internet user.
19. User assistance to access Internet nodes and other administrative support associated with Internet use.

The Smithsonian Institution and the INTERNET

Late this summer the Smithsonian Institution joined the INTERNET and INTERNET services are now available to Smithsonian Institution staff who have access to host computers or local area networks with links to external resources. This Fact Sheet gives an overview of the INTERNET and its services and lets potential users know where to find additional information.

Electronic mail arrives from across the world... The Photosynthesis Research discussion list forwards a message from a colleague, seconds after it is written... Co-authors transfer a manuscript back and forth electronically, and the revision process takes days instead of weeks... Data from a colleague in Mexico is transferred to your workstation to augment your own findings....

1. #What is the INTERNET and what kind of service does it provide?

The INTERNET consists of approximately 10,000 information networks of all kinds, encompassing approximately 1,000,000 computers, that are linked together to form a vast global network of networks. Only the public telephone network exceeds it in terms of extent and connectivity.

The INTERNET started as a federal effort and was soon applied to research activities in both government and academic institutions. It subsequently attracted commercial service providers, and today, most major research, commercial and government organizations are active INTERNET users. It is increasingly being marketed and used for many commercial purposes. Growth of the INTERNET is without precedent in the field of communications and is stimulating major engineering efforts to accommodate the anticipated size, complexity, and traffic. More than 5 million people worldwide in more than 100 countries who have a need to access and use information or to collaborate rapidly with colleagues use the INTERNET. Major user groups include researchers and educators in every professional discipline, government officials and agencies, and commercial enterprises. It has spawned entirely new disciplines such as collaborative theory.

2. # For those who use BITNET, how does INTERNET differ from BITNET? What will happen to BITNET?

BITNET is a global network whose members are academic and research institutions. Member institutions can send electronic mail and files among themselves. BITNET allows the movement of files and notes between computers. BITNET also has an automated system for handling electronic discussion groups.

The INTERNET consists of a network of networks which is interconnected globally. Like BITNET, the INTERNET carries electronic mail but it does so with greater speed. Users of the INTERNET can also subscribe to news groups devoted to a variety of topics. The INTERNET supports a file transfer system that allows computer systems to maintain directories of files that can be downloaded for personal use. These might include software programs and applications, images, and data files. Finally, the INTERNET supports "remote-log-in." Remote log-in allows users to run applications on computers at other sites. This feature provides access to electronic library catalogs and information databases in many disciplines. Researchers can also process datasets on high-speed computers at other institutions.

The Smithsonian will maintain membership in both the INTERNET and BITNET.

Continued...

3. # How do you access the INTERNET?

Smithsonian users will access the INTERNET through the same systems now used for BITNET and other outside networks. If you do not now communicate with any of the Smithsonian's mainframe computers or networks, your local computing support staff should be able to advise you how to gain access and how to apply for an account on the appropriate system. At this point there are no plans to pass on charges to individual users.

4. # Where does one go for training and support on INTERNET?

Much of what there is to learn about INTERNET answers the question "what can be accessed through INTERNET?" Because new information is constantly being made available through this giant network of networks, learning will be ongoing as the Institution discovers INTERNET. Reading Zen and the Art of the Internet is a good place to start. Copies are available in all SIL branches and in OIRM.

Technical assistance will begin with local systems administrators. Seeking out the people who help you with your present computing needs is where you start. They will distribute INTERNET documentation and be the contact to address your hardware/software and communications needs. OIRM's Information Resource Center will coordinate training for INTERNET users across the Smithsonian beginning in late September and will be your source of information about training opportunities. Through the OIRM Help Desk (357-HELP (voice), 786-2681 (TDD)), OIRM staff will provide consultation once you are able to connect to the INTERNET. You need also to be alert to free interactive workshops for "Navigating the Internet" that are appearing on the Internet. These online workshops are being designed for new and infrequent users.

It is expected that discipline-related Users Groups will be established across SI.

5. # Guidelines and policies governing the use of the INTERNET.

The Smithsonian's connection to the INTERNET is through membership in SURAnet (a regional network headquartered in College Park, Maryland). A good deal of SI network traffic will make use of NSFnet (a backbone service linking regional networks in this country). SI must adhere to the policies set out by both these networks. Policies for acceptable use along with guidelines developed by the Smithsonian for ethical use of networks are available in OIRM, in SIL branches and in you local systems offices.

The potential for sharing Smithsonian information through a world wide network raises issues that must be addressed when deciding which information can be shared. Existing standards for print publication and spoken or written communications should be followed. The report,"Smithsonian Information on the INTERNET," provides guidelines for making Smithsonian information available. Connecting a computer system to the INTERNET brings increased need for security measures. Assistance in assuring users that proper security is in place is available from local computing support staff.

6. # Information about services and information available on the INTERNET.

Documentation for INTERNET services, catalogs of sources of information, and copies of tips and procedures developed by Smithsonian users can be browsed in SIL branch libraries and in local ADP offices and are available from the OIRM Help Desk (357-HELP(voice),786-2681 (TDD). Documents of interest can be seen on the PROFS INTERNET bulletin board.

Keep in mind that most of the information about the Internet in ON the Internet.

OIRM RESEARCH SEMINAR
Tuesday, September 8, 1992
1:00 - 4:00 p.m.
Ripley Center, Room 3111
Quad

The INTERNET and Related Matters

Moderator	Joe Russo, OIRM
FTP, Windows and Multimedia	Bill Graves, IAT
BREAK	
The Internet Society	Tony Rutkowski
A Quick Research Tour (from the IBM)	Mignon Erixon-Stanford, OIRM
SI Internet Panel: Questions and Answers	
Physcial Connections	David Bridge, MSC
Training	Evanne Browne, OIRM
Ethical Use and Security	Bill McGeehan, OIRM

BIBLIOGRAPHY ON INTERNET *

Britten, William A. "BITNET and the Internet: Scholarly Networks for Librarians." ***College and Research Libraries News,*** 51(2) (February 1990): 103-107.

Comer, Douglas. ***Internetworking with TCP/IP: Vol. 1 Principles, Protocols and Architecture.*** Engelwood Cliffs, New Jersey: Prentice-Hall. 1991.

"Communications, Computers and Networks." ***Scientific American*** Special Issue, 1991.

Frey, Donnalyn and Adams, Rick. ***!&@:: A Dictionary of Electronic Mail Addressing and Networks.*** Sebastopol, CA: O'Reilly and Associates. Second edition, 1990. HE6239.E54F893

Henry, Marcia Klinger. ***Search Sheets for OPACS on the Internet: a Selective Guide to U.S.*** Westport, CT: Meckler Press. 1991. Z699.35.C38H46 1991x

Kaplin, Sally W. and Tennant, Roy. "Beyond OPACS...The Wealth of Information Resources on the Internet." ***Database,*** 14:4, pp. 28-33. 1991.

Kehoe, Brendan P. ***Zen and the Art of the Internet.*** Chester, PA: b s.n., 1992.

Krol, Ed. "The Hitchhiker's Guide to the Internet." ***Network Working Group, Request for Comments 1118, September 1989.*** [Available online on host nic.ddn.mil, directory rfc;, filename RFC1118.TXT]

LaQuey, Tracy L. ***User's Directory of Computer Networks.*** Bedford, MA: Digital Press. 1990. TK5105.5.U844

Malkin, G., Marine, A. and Reynolds J. "FYI on Questions and Answers: Answers to Commonly asked 'New Internet User' Questions." ***Network Working Group, Request for Comments 1177, August 1990.***

Quarterman, John S. ***The Matrix: Computer Networks and Conferencing Systems Worldwide.*** Bedford, MA: Digital Press. 1990. TK5105.5.Q37

Sproull, Lee and Keisler, Sara. ***Connections: New ways of Working in the Networked Organization.*** Cambridge, MA: MIT Press. 1991.

Stein, Richard M. "Browsing Through Terabytes: Wide-area Information Servers Open a New Frontier in Personal and Corporate Information Services." ***Byte,*** 16:5, pp. 157-164. 1991.

* Items available in ALL SI branch libraries.

Internet Committee
Recommendations from Task Force on Training
April 30, 1992

Before a training program is developed, we must identify the pockets and numbers of potential users, their needs for the Internet system, whether or not they are more likely to be going out on Internet or concerned with users coming in, and the features of Internet that they are most interested in using. We shall:

- ✓ Survey various groups (through IRMAG, through identified user groups and contacts) to determine number of users (see attached chart). Identify which function of Internet will be their main area of concentration: e-mail, file transfer, remote login, computer conferencing, or other services.

- ✓ Obtain training projections to include preferences of that group, e.g. are they more inclined to want documentation only, or training presented in class format; and get names of those that would attend.

The various unique procedures for accessing Internet must be considered and, for purposes of training and support, documented. This would be done by the administrator for each system (VAX, IBM 4381, LANs, etc.). We advocate site provision of mandatory level facilitation support (site specific access training, trouble desk, documentation distribution, in addition to other requirements such as security) before site connection is made adjunct to a training program to result in skilled and informed users. We shall:

- ✓ Identify support staff or contact for each unique configuration wishing to be connected to Internet.

- ✓ Acquire logon documentation from each identified system's contact.

- ✓ Acquire information about unique aspects of each system.

Internet training will be provided in three formats: demonstration, classroom instruction, and provided documentation for those that will not attend either. In addition, identified support staff must obtain training.

Varied <u>demonstrations</u> will be targeted to and given to special interest groups by information experts, local systems administrators, and/or OIRM staff.

- ✓ Local systems administrators will provide information and demonstration of logging on from their location.

- ✓ Specialists from each identified Internet interest area will be consulted for their input to the contents of the various training demonstrations.

- ✓ Subject matter experts will compile documentation on information of interest to their profession, such as appropriate newsgroups, remote systems, etc. accessible via Internet. This will be an ongoing effort.

Where possible, initial <u>classroom training</u> will be given by Internet experts (contractor) at nominal charge. Training should be on the system that users will be expected to use. Costs for classes will be recovered by dividing contractor fees among attendees.

Continued...

- ✓ The training task force is exploring training options with SURAnet in College Park, MD.
- ✓ IRD staff will evaluate Internet training given by other vendors.
- ✓ OIRM/IRD staff will evaluate the existing training and reference materials.
- ✓ The task force is concerned for staff at sites without training facilities that require training which cannot be provided in the OIRM classroom. Features of Internet will vary according to installation; in addition, some features of Internet may be made easier for users through other systems such as PROFS. Gathering information about the specific sites and evaluating the differences between the appearance and functionality of Internet at different sites/systems will be required before training needs can be fully addressed.

Documentation will be provided by or through:

- ✓ Systems administrators for unique site/system who will be responsible for documenting login and other different procedures.
- ✓ OIRM/IRD staff who will evaluate the existing Internet documentation for use in general training classes.
- ✓ OIRM/IRD and site systems administrators who will centrally distribute users guide for Internet (e.g., Zen and the Art of Internet or others); copies will be provided to users attending sessions or upon request.

Identified support staff will obtain skills and experience on Internet in preparation for installation. As there are not central Internet training funds, support staff must fund their own training. This includes:

- ✓ Eight SI staff who attended the SURAnet workshop for new users on April 20.
- ✓ IRD staff attending user training given by the Bibliographical Center for Research in June.
- ✓ Support staff requests for logon capabilities and trial accounts which have been requested from SURAnet to facilitate learning Internet before implementation in July.
- ✓ Train the trainer programs are recommended; available and qualified staff to provide that level of expertise have not been identified. (Could also be contracted for this first go around.)

Future classroom training needs will be met in response to the OIRM Training Needs Analysis annual survey.

- ✓ Training needs will be re-evaluated through survey of all SI bureaus and offices (next scheduled for August 1992).
- ✓ OIRM and site administrators will evaluate cost effectiveness of developing courses and providing in-house training or continuing with contractor arrangements.

CONTRIBUTIONS TO START-UP COSTS OF ACCESSING THE INTERNET

SIL	$23,000
OIRM	23,000
OAS/S	5,000
MSC	5,000
LMS*	5,000
NMNH/VZ	5,000
NMAH/CS	2,000
SERC	2,000
OPPS	2,000
TOTAL	$72,000

GIFTS

TGV, Inc. donated copies of their TCP/IP software product for use by the SI VAX community including five years of maintenance for a total gift valued at approximately $50,000.

*Laboratory of Molecular Systematics

h:\admin\barbara\internet\internet.$