

# **BRIEFING PACKET**

**"Electronic Conference on Participatory  
Approaches to Development"**

**September 21, 1994  
9:30am**

**USAID  
Global Bureau  
Centers of Excellence  
NS Room 4942**

*BEST AVAILABLE COPY*

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## **AGENDA**

**Welcome: Ron Grosz, G/HCD**

**Introduction: Toni Christiansen-Wagner, DAA/PPC**

**Technical Presentation: Craig Fisher, IRM  
Diane Russell, CDIE**

**The LAC Pilot: Sher Plunkett**

**IRM Perspectives: Gary Nelson**

**CDIE Perspectives: John Eriksson, Director**

**Discussion led by Ron Grosz**

**This is how the conference will start...**

## **Welcome to the to Conference**

**Welcome to the USAID/LAC pilot electronic conference on best practices in participatory development. My name is Sher Plunkett and I am the conference moderator. Anne Langhaug joins me as conference coordinator. Technical support is provided by IRM and LACTECH. We are here to help you learn about this new communications medium, prepare your submissions to the conference, and provide you with information. Please feel free to ask us any question at any time during the conference.**

**The purpose of this conference is to share our knowledge about and experience of participatory development with colleagues and partners. Over the next three months, we will be writing up best practice cases for publication, and participating in discussion groups. In addition, we will be collecting key documents for filing and dissemination.**

**There will be three listserv groups\* operating during the conference:**

**The TABLE: for conference submissions**

**The BULLETIN BOARD: for introductions, discussions and "poster sessions"**

**The FILE CABINET: for key documents related to the conference**

**Depending on demand, the BULLETIN BOARD and the FILE CABINET may remain operational after the conference.**

**You are now subscribed as a participant and will be receiving the following information:**

**Welcome speech by Ramon Daubon**

**Keynote address by Diane LaVoy**

**Technical information packet**

**On-line protocol and etiquette guidelines**

**Suggested format for best practices case studies**

**Information packet on participatory development**

**Evaluation form**

**We hope you find the conference enjoyable, lively and informative. This is a pilot effort, and we welcome your input, feedback and suggestions at all times.**

**Please introduce yourself to the conference. Describe your background, especially your interest and experience in participatory development, as well as your current position.**

**Sher Plunkett**

**\*Listserv is a software package that links up individuals through Internet and allows them to share files**

# **This is an example of a submission that will go into the TABLE...**

**BEST PRACTICES SUMMARY**  
**Hugh Sheridan Plunkett, LAC/RSD/BBG**  
**20 June 1994**

**TITLE: Nepal: Irrigation Water User Empowerment**

## **I. THE PROBLEM.**

USAID/Nepal's Irrigation Management Project (IMP) aimed at improving the capacity of the Department of Irrigation to implement participatory approaches in irrigation management and farmer assistance, and thereby to improve agricultural production from irrigation systems. The project's original design incorporated two simple sets of principles to be emphasized: a) a shift from DOI management of systems to either joint-management, or full turnover to users; and b) a shift from construction and rehabilitation (engineering emphasis) to operations and maintenance and user participation (service emphasis). Project implementation, however, concentrated on isolated "projectized" efforts at two field sites, and development of a training facility separated both from DOI headquarters and from the field. USAID/Nepal identified a two-fold problem: How to achieve user empowerment and increased participation in DOI-managed irrigation systems to achieve the IMP's goal, and how to institutionalize changes in operating procedures and organizational culture within the DOI bureaucracy to ensure sustainability.

## **II. INSTITUTIONALIZING PARTICIPATION IN IRRIGATION**

USAID/Nepal was able to take advantage of a scheduled midterm evaluation of the IMP to examine implementation and outline desired changes. It was clear that the project was identified as "the USAID project" at "the USAID sites", very similar to the situation elsewhere in the sector and in the country as a whole. There was no sense of ownership regarding IMP activities, either by the DOI or the farmers at the sites. In addition, project expatriate contractor performance was dismal. The evaluation report called for an immediate project redesign. The expatriate contract was terminated, and a local technical assistance firm was retained in place with a "bridging" contract.

Project redesign began three months later with an expatriate team's assessment of possible changes, and coincided with the arrival of a new USDH supervisory project officer. The redesign team solicited extensive input from a wide range of local and expatriate irrigation experts, donor representatives, and Government of Nepal officials and, to a limited extent, irrigation users. The team's report, however, focused on doing more of the same kinds of activities as in the original project, and did not address institutionalization questions effectively. USAID/Nepal staff utilized the insights gained through the redesign effort, but rejected the team's recommendations. Instead, USAID/Nepal USDH and FSN staff rapidly drafted a project redesign PP Supplement

which transformed IMP from an isolated, orphaned "field site" project to one which concentrated on institutionalizing the concept of user empowerment and transforming the role of the DOI vis-a-vis its irrigation system clientele.

With the redesign, the two field sites were rapidly phased out. A "ratcheting-down" of the USAID's local cost support set a schedule for handing over responsibility for operations to the DOI. The poorly-functioning training center in Pokhara was transferred to Kathmandu, and the originally-planned construction of a training facility was cancelled. The "bridging" local TA staff worked very closely with DOI engineers to achieve the transition. A set of performance benchmarks were agreed upon jointly by USAID and the DOI, and reviewed every six months as part of a work planning process. An 8(a) firm was contracted to provide a precisely planned and scheduled series of expatriate TA tasks, together with a single on-site expert.

USAID-provided irrigation experts provided information on the policy framework required for participatory irrigation management (which was enthusiastically endorsed by the DOI and the Government of Nepal and converted into legislation and regulations). DOI and IMP developed an operations and maintenance "training" course which resulted in DOI engineers and water users jointly developing site-specific operations manuals with immediate utility. IMP advisors worked with DOI staff to develop formal structure and operational capability in water user organizations, including conflict management and local resource mobilization to cover maintenance costs. The other donors in the sector: the World Bank, Asian Development Bank, UNDP, and ILO, together with the local office of the International Irrigation Management Institute, were brought into the process via frequent joint discussions initiated by USAID, resulting in a DOI-led sector program based on shared understandings. This damped inter-donor rivalries, especially between the World Bank and Asian Development Bank, materially improved DOI operations, and ratified the concept of user participation as a major sector goal.

### **III. ORGANIZATIONAL CHANGE AND WATER USER PARTICIPATION**

By mid-1993's irrigation season, enhanced participation, and the DOI's increased capability for eliciting participation by water users, resulted in significant organizational change and economic payoffs. One field site more than doubled its irrigated hectareage, with immediate income benefits to farmer users. Other irrigation systems were able to address persistent problems using the joint operations approach. Cropping mixes began to change toward higher-value, irrigation-dependent crops as confidence in the supply and timeliness of irrigation water increased. User associations assumed more responsibilities, and began to become prime loci for local political aspirants' attentions. DOI engineers saw that recognition and promotion resulted from enhancing participation at their sites. The DOI assumed "ownership" of the participatory approach, and increased diffusion of its institutional changes throughout the country. The Asian Development Bank has adopted the IMP conceptual model as the framework for a follow-on, \$20 million dollar loan to the irrigation sector, with USAID collaborating via continued technical assistance.

**These are examples of BULLETIN BOARD introductions, discussions and poster sessions...**

### **Introduction**

**Greeting, conferees. My name is Hector Gonzales and I am a project officer working in the environment office of USAID/La Paz. I have been working in the mission for over ten years and have seen some interesting changes take place in terms of participation.**

### **Poster Session**

**I would like to present some ongoing research on participatory approaches in urban development, particularly how urban municipalities can organize to provide community health services. I'd appreciate any feedback, other cases, examples and methods. This research is being carried out in Lima by the local University in partnership with U.S. Universities and NGOs.**

### **Discussion**

**Lessons Without Borders:**

**What are we learning that can be useful for inner city development efforts, and also efforts to provide isolated rural areas with greater access to services in our own country?**

### **Discussion Group Formation**

**How can we get indigenous groups better access to Internet? First, there is the problem of power supply, and then availability of telecommunications. In addition, we have to look at the ability of groups to maintain the equipment. Cultural Survival has done some work in this area. Let's see if we can hook them up to create a sub-group to discuss this issue.**

**These are examples of documents that will be available in the FILE CABINET...**

**Statement of Principles on Participatory Development by the Honorable J. Brian Atwood. November, 1993.**

**Participation Forum summaries**

**Achieving Participation: A Collection of the Africa Bureau's Best Practices. USAID/AFR**

**Electronic Conference Guidelines: Based on Inforum's Experience in Managing Two Global Conferences by Bob Hart, May 12, 1994.**

**Concept Paper on the Development of a Participatory Approach to USAID's Strategic and Program Planning and Implementation. The Development GAP, 31 October 1993.**

**Policy and Practice of Community Participation in the U.S. Agency for International Development; Community Participation in Selective U.S. PVOs; Community Participation as seen by other donor organizations; Seminar on Community Participation. AED/HIID for USAID/R&D/ED**

**Edited submissions to the conference cleared for publication (from the TABLE)**

# **TECHNICAL INFORMATION**

## **Definitions**

### **Internet**

- the Internet is a global network of computer networks linking over 25 million in over 80 countries. The Internet allows its users to exchange electronic mail, participate in discussions and access information and people all over the world.

### **Listserv/Listproc**

- Listserv (sometimes referred to as Listproc) is a software package that creates electronic discussion groups. Users can join groups to participate in discussions on almost any topic, or to receive on-line publications.

### **Electronic Conferences**

Electronic Conferences are a particular use of the Listserv technology which involve moderators, facilitators, agendas, and many of the things involved in any real life conference.



# *Internet @ USAID*

*US Agency for International Development  
Bureau for Management  
Office of Information Resources Management*

## **I. INTRODUCTION**

What is the Internet?

The Internet is a network of computer networks linking over 1 million computers, and over 20 million people, in over 80 countries worldwide. In the last few years the Internet has grown exponentially and all signs indicate that this trend will continue well into the future. It is used by soil scientists in Thailand to get the latest scientific information from American universities, by energy analysts from across the globe having electronic discussions about solar power, and Glasnet (the Russian Internet service) used the Internet to get around the press blackout following the takeover of the Russian Parliament building last October. Users of the Internet include US and other Government Agencies, International Organizations, businesses, Academic Institutions, and private individuals.

In response to Vice President Gore's initiatives promoting the expansion and use of the Global Information Infrastructure, USAID is working to provide information to the Internet community through a number of on-line database and information systems. The Internet is also becoming a tool in USAID's effort as a National Performance Review reinventing government Laboratory. For example, USAID's Office of Information Management will be establishing an electronic discussion group to help coordinate the development of its corporate information systems indicated by the Information Systems Plan of February 1993. The Electronic Conference on Participation is also an example of using Internet technology to help in the process of re-thinking and improving the way USAID does business in that it provides a forum for Agency staff to discuss openly their successes and failures while learning from the experience of their peers. USAID is also fast becoming a user of the enormous information resources available on the Internet. USAID/IRM is working to providing advanced Internet access to all users on the AID Network including access to important systems such Gopher, Mosaic, and Listservs.

There are a few key basic services used to disseminate, share, and find information on the Internet.

## **II. Electronic Mail**

E-mail is undoubtedly the best known and most widely used Internet service. It makes it possible for users to exchange messages. Users have addresses just like in postal mail. Internet addresses take the form user@place.domain where "user" designates the user and "place.domain" gives the address of his/her host computer.

At this time, any person on AIDNET can send mail to, and receive mail from, anyone with an Internet address. Everyone in AID has an Internet address. It is usually first initial, lastname@usaid.gov. For example: jrusso@usaid.gov.

However, to receive mail, you must first obtain the Internet version of your Banyan e-mail address. Simply send an e-mail to the following address:

ismtp@basa14001@servers[postmaster@usaid.gov]  
Type "ID Request" in the Subject: field.

To send mail to the Internet you need to know the address of the local Internet gateway and the address of the person to whom you are sending the mail. To send mail to Tom Smith at USDA from my workstation, for example, I need to put in the following address:

ismtp@basa14001@servers[tsmith@esusa.gov]

A LISTSERV is an Internet service that turns a simple one-to-one email into a one-to-many email-mediated discussion forum around a specific topic. You must "subscribe" to a list and then if accepted, you will receive list messages via e-mail. Once you are a member of a listserv (electronic discussion group), you will receive any message sent to the discussion group. List members easily send email messages (info, questions, ideas, etc.) to the whole discussion group. Many Listservs, including those at USAID, maintain archives of messages and file directories which can be accessed by list members. Moderated lists are managed by an administrator who controls what is posted, un-moderated lists are open for posting by all list members. Listservs tend to be fairly specific. For example, devel-l is a listserv managed by VITA (Volunteers in Technical Assistance) that is international development oriented, rferl-l is a listserv related to technology transfer in Russia.

### III Basic Services

Some of the other important services used to find and access information on the Internet are:

TELNET is used for logging into other computers on the Internet. For instance you might use Telnet to access a computer based public library card catalog. When connected, it is as if your keyboard was connected directly to that remote computer.

FILE TRANSFER PROTOCOL or FTP moves files back and forth between a local computer and a remote computer. It is analogous to moving files from the "A" drive on your PC to the "C" drive, only in this case the drives can be thousands of miles apart.

ANONYMOUS FTP - is a service which lets you access public databases without obtaining an account. Instead of logging on as "jsmith" you log on as "anonymous" and generally use your email address as your password "jsmith@usaid.gov".

NEWS or USENET - Newsgroups are Internet Bulletin Boards which consist of a variety of discussion groups on several subjects. Participants write articles that are posted to the group(s) they specify.

Participants can also respond to articles, thereby having a discussion. The USENET network was established in 1979 by Duke University and the University of North Carolina. USENET is presently available in many countries around the world. Newsgroups are organized into hierarchies, such as: comp (computers), news (news software), rec (recreation), sci (science), soc (social), talk (debate), misc (none-of-the-above).

ARCHIE - One of the biggest problems with the net is finding what is out there. Archie is one system which allows you to search indexes to locate files available on public servers. Currently, Archie indexes about 1200 servers and 2.5 million programs, data, and text files by filename. Currently, there are many Archie servers scattered across the net. Each server builds an index of anonymous FTP archives close to itself, and then the servers share the information.

M/IRM is presently engaged in the process of providing access to all of these service from the desk of each individual on the USAID Network.

### **III. Gopher**

Gopher is a somewhat more advanced service which allows you to access to resources across the Internet, without prior knowledge of their location, by bouncing from gopher to gopher through a series of interlocking menus. The Internet Data Services Group of M/IRM/CIS has established the USAID Gopher for posting of Agency data and information to be accessed by external organizations and individuals. The Agency has begun to populate this database with development, procurement, public affairs, and general information. This information is available electronically to our partners in the development community, PVOs, NGOs, vendors, universities, other federal agencies, and the general public.

The following main menu structure, or root gopher, provides an outline of the type of USAID information that is now available on Internet. The structure and organization of the menu were determined by several Agency working groups.

#### **USAID Gopher Root Menu**

- 1. Welcome!**
- 2. Agency Wide Overview**
- 3. Why Foreign Aid?...A Focus on Results**
- 4. Supporting Broad-Based Economic Growth**
- 5. Stabilizing Population Growth/Promoting Health**
- 6. Protecting the Environment**
- 7. Promoting Democracy**
- 8. Humanitarian Assistance and Post-Crisis Transition**

- 9. **Regional/Country Focus**
- 10. **USAID Procurement and Business Opportunities**
- 11. **Documents and Publications**
- 12. **Getting Around Gopher Space**
- 13. **Search for Keywords on this Gopher <?>**

This information is available for viewing and downloading to a local computer system. Current highlights include a searchable version of the Agency telephone directory (#2), speeches by the Administrator, Executive Staff Biographies, (#2), sectoral program information (#4, 5, 6, 7), the 1995 Congressional Presentation organized by region and country (#9), and current Requests for Proposals (RFPs) (#10).

The Internet address of the Agency Gopher is: [gopher.info.usaid.gov](http://gopher.info.usaid.gov)

This section shows how an individual can use the Agency Wide Overview menu to access Congressional Testimony on the Agency Gopher server.

#### Gopher Main Menu

- 1. Welcome!
- >2. **Agency Wide Overview/**
- 3. Why Foreign Aid?...A Focus on Results/
- 4. Supporting Broad-Based Economic Growth/
- 5. Stabilizing Population Growth/Promoting Health/
- 6. Protecting the Environment/
- 7. Promoting Democracy/
- 8. Humanitarian Assistance and Post-Crisis Transition/
- 9. Regional/Country Focus/
- 10. USAID Procurement and Business Opportunities/
- 11. Documents and Publications (Library)/
- 12. Getting Around Gopher Space/
- 13. Search for Keywords on This Gopher <?>

#### Agency Wide Overview

- 1. Overview
- 2. USAID Strategies for International Development/
- 3. Agency Organization and Acronyms
- 4. Agency Reorganization
- 5. How to Contact the US Agency for International Development/
- 6. Senior Staff Bios
- >7. **Speeches, Testimony, and Op-eds/**

8. FY 1995 Congressional Presentation/
9. In The National Interest
10. Lessons Without Borders/
11. Participatory Development/
12. US Non-Government Organization Directory (Redbook)/

Speeches, Testminoy, Op-Eds

1. Speeches/
- >2. Congressional Testimony/
3. Op-eds/

Congressional Testimony

1. Hon. J. Brian Atwood, Senate Foreign Relations, Subcomm. on Africa,..
- >2. Hon. Terrence J. Brown, House Subcomm. on Foreign Ag. and Hunger, 6..
3. Report to the House Approp's Subcommittee on Foreign Ops
4. Hon. Carlol Lancaster, House Committee on Small Business, 5/12/94
5. Privatization Examples, House Committee on Small Business, 5/12/94
6. Hon. Margret Carpenter, House Foreign Affairs Committee, 5/11/94
7. ....

*STATEMENT OF TERRENCE J. BROWN  
ASSISTANT TO THE ADMINISTRATOR  
FOR POLICY AND PROGRAM COORDINATION  
U. S. AGENCY FOR INTERNATIONAL DEVELOPMENT  
TO THE HOUSE SUBCOMMITTEE  
ON FOREIGN AGRICULTURE AND HUNGER*

*JUNE 9, 1994  
WASHINGTON, D.C.*

*Mr. Chairman and honorable members of the Subcommittee,*

*I am pleased to address you today concerning the issues of development and promotion of alternative crops for farmers and agribusinesses around the world; the role these crops have in enhancing economic development for producers, especially*

*smallholder producers, and processors in the developing world; and the implications these crops have to improved food security.*

*In addressing your concerns, ....*

*....Everywhere, incomes, living conditions, and enhanced food security are all served by these efforts and accomplishments. Thank you, Mr. Chairman, for inviting me to testify before the subcommittee, and I look forward to working on these issues with you in the future.*

This section depicts how the general public as well as Agency personnel can use the gopher to gain access to external information sources such as the World Bank gopher and the UN Development gopher.

#### Gopher Main Menu

1. Welcome!/  
2. Agency Wide Overview/  
3. Why Foreign Aid?...A Focus on Results/  
4. Supporting Broad-Based Economic Growth/  
5. Stabilizing Population Growth/Promoting Health/  
6. Protecting the Environment/  
7. Promoting Democracy/  
8. Humanitarian Assistance and Post-Crisis Transition/  
9. Regional/Country Focus/  
10. USAID Procurement and Business Opportunities/  
11. Documents and Publications (Library)/  
--> 12. **Getting Around Gopher Space**/  
13. Search for Keywords on This Gopher <?>

#### Other Federal and Multinational Gopher Servers

1. U.N. Development Gopher/  
2. World Bank/  
3. World Health Organization (WHO)/  
4. Networking in the Developing World/  
5. Library of Congress - MARVEL/  
6. National Science Foundation/

7. Senate Gopher/
8. USDA Extension Service Gopher/
9. White House Press Release Services/
10. White House and Congress Gopher Information Service /
11. UNICEF Gopher

## **V. USAID and the Internet**

USAID/M/IRM is involved in a number of major initiatives designed to establish a USAID presence on the Internet as well as to provide access to this powerful communications and information tool to the Agency.

Foremost among the efforts to establish USAID's position as a major provider of development information on the Internet is the USAID Gopher. The Gopher was first established in February '94 and has grown to encompass almost 800 menus and some 400 files. Currently over 200 people per day access the USAID Gopher to find program, procurement and other valuable Agency and general development information. M/IRM has also established an Anonymous FTP site, and, of course the Listproc Electronic Conference Facility.

The USAID community is using these services in a number of efforts. The Global Bureau's Global Energy Efficiency Network is using a series a of Listserv Lists to establish a dialog between USAID and organizations in the Philippines for the purposes of better understanding the types of Energy Efficiency technology needed in the Philippines. The Office of Legislative and Public Affairs will unveil a list to distribute their Press Releases in early September. Numerous organizations throughout the Agency have contributed to the USAID Gopher. The Office of Procurement currently distributes USAID/W Solicitations via the Internet, while PPC/CDIE and the Global Bureau have been major contributors of important program and general development information.

M/IRM is working to give all of USAID access to the valuable information available on the Internet. Soon every person on the USAID Banyan Network will have state-of-the-art access to all of the resources available on the information super highway.

**ELECTRONIC CONFERENCING GUIDELINES;  
BASED ON INFORUM'S EXPERIENCE IN MANAGING  
TWO GLOBAL ELECTRONIC CONFERENCES**

May 12, 1994

Robert D. Hart; INFORUM Executive Director;  
Email: bob\_hart.infox@parti.inforum.org  
Fax: 610-683-1408; Tel: 610-683-8548

INFORUM has been directly involved in setting up and managing two global electronic conferences. The first was a conference on Livestock and the Environment that was funded by IDRC and managed by Winrock International. INFORUM's role was to provide the necessary electronic services for this first conference. The second conference was funded by AID through the Sustainable Agriculture and Natural Resource Management Collaborative Research Program (SANREM CRSP). INFORUM's role for the latter conference was much more extensive and involved not only setting up and managing the electronic services but also moderating the discussion and managing the information exchange.

The purpose of this brief paper is to capture the lessons learned as a result of these experiences. The electronic conferencing guidelines that are emerging were, in particular, influenced by the experience with the SANREM CRSP conference. The information exchange process was managed by setting up: (1) an unmoderated electronic bulletin board (listserver) for people to register and describe their specific interest in indicators, (2) a moderated electronic "table" for participants to exchange ideas and discuss issues (also a listserver), and (3) a "file cabinet" where longer documents could be stored and accessed via electronic mail using an Almanac information server software program.

Approximately 235 people from 35 countries subscribed to the Indicators Bulletin Board and Indicators Table. More than 170 people sent in registration information with names, addresses, and specific interests in indicators; 42 people from 16 countries participated in the discussion on the Indicators Table; 20 documents were sent in to the Indicators File Cabinet. The 3-month moderated discussion at the Indicators Table was organized around a sequence of questions that might typically be addressed by an interdisciplinary group working together to develop and use indicators of sustainability.

## **ELECTRONIC CONFERENCING**

Electronic conferencing means different things to different people. Some people think of conferencing as a free exchange of information using electronic bulletin boards, others define conferencing as a real time audio and video link between people in different places. The guidelines outlined below are based on the definition of an electronic conference as a purposeful, moderated, information exchange process using electronic services accessible by computers connected to electronic networks.

### **SETTING UP AN ELECTRONIC CONFERENCE**

The most important decision in setting up an electronic conference is the definition of the purpose of the conference. The purpose determines who are the potential conferees. The purpose and potential conferees determine the appropriate information exchange process. This process determines the selection of appropriate electronic tools and the computer or computers where they will be set up.

The lessons learned from implementing the Livestock and Indicators electronic conferences and suggested approaches based on these experiences are described below for various steps in setting up a conference.

#### **Step 1: Define the Conference Purpose**

This decision must be made by the conference patron. Just as in the case of non-electronic meetings, workshops, or conferences, the institution or institutions that decide to have an electronic conference may not have a clear purpose for the conference, or they may have many purposes but may not have a clear idea as to the relative importance of each. But in order to successfully set up and manage an electronic conference, it is very important to be sure of its purpose. If this is not clearly defined, and if the results of the electronic conference are not particularly valuable (which may be likely in the absence of a clear purpose), it will not be easy to determine if this was as a result of everyone's inexperience with electronic conferencing, or if the conference was poorly managed, or if the conference simply did not have a clear purpose.

Both the Livestock Conference and Indicators Conference that INFORUM helped organize had relatively clear purposes. The Livestock conference had the objective of helping donor institutions understand

the potential role of livestock as components of more sustainable land use systems. The purpose of the Indicators Conference was to develop case studies that could be used as an information resource for people attending a face-to-face workshop.

## Step 2. Identify Potential Conferees

Once a purpose has been defined, the next step is to identify who the organizers want to invite to participate in the electronic conference. As with any symposia, conferences, or workshops, people might be invited for various reasons, including, their knowledge of the subject matter, their position in their institutions. As in the case of any meeting, financial considerations are often important. In face-to-face conferences who pays for the travel costs is often an issue. In an electronic conference, who pays for the telecommunications costs may be less of an issue. Instead, since many potential conferees may not at present have telecommunications access in place, a key question will likely be who pays to set up this access, or are only people who already have access to electronic communications the only ones invited to participate?

In the Livestock Conference, the first electronic conference organized by INFORUM, potential conferees were identified as animal scientists, environmentalists, and donor agency staff interested in the role of livestock (negative or positive) as components of land use systems. Conferees were asked to use their computers to log in to a central computer where conferencing software had been set up. Many people invited to participate did not have a modem, or access to telecommunications networks, or have any experience with on-line communications. To help people participate in the electronic conference, the donor agency (IDRC) agreed to reimburse people for their communications expenses up to \$300 US Dollars.

In the Indicators Conference, potential conferees were identified as people actively involved in developing and using indicators of sustainability. Conferees did not need to have on-line access to a central computer since all information exchange was done via electronic mail-mediated processes. No financial incentives were offered. No resources were available to actively invite people to participate other than through posting invitations on electronic bulletin boards and by sending faxes to a few key institutions. This approach effectively defined the potential conferees as people who already had access to electronic mail.

### Step 3. Design a Process

Once a purpose and the potential conferees have been defined, the next step is to design an information exchange process. The information exchange process involves managing both people and information. An important initial consideration is the relative importance of various types of information to be exchanged. For example, is the information to be exchanged primarily the opinions of conferees (i.e., emphasis on communication between people), or is the information from secondary sources (i.e., emphasis on information as a resource).

#### a) people management

The information exchange process must include a strategy to manage the conferees. People must be invited to participate, given assistance in accessing the venue where information exchange will occur, allowed to introduce themselves to other conferees, and guided as they begin and become active in the information exchange process.

#### b) information management

The information to be exchanged will be of two general types: subject matter related and non-subject matter related. Given the assumption made above that electronic conferences have a purpose, it is probably better to start by defining how the information will be collected and processed to produce the agreed upon subject matter related output. With this information management process defined, a process to guide people's participation in the subject matter related exchange can be developed.

To start the livestock conference people were asked to introduce themselves by uploading a note on a "bulletin board". The information exchange process that was developed emphasized the management of previously collected information resources. Jim Yazman, the conference moderator from Winrock International, collected copies of many reports before the conference started and encouraged participants to share previously written reports. More than 1000 pages of reports were made available to conferees in, what was defined as, a "file cabinet". The discussion and exchange of information among conferees was divided into three areas: livestock projects, livestock and people, and livestock and the environment. This discussion occurred at three "tables". Various people were asked to take the lead in moderating these discussions.

In developing the information exchange process for the Indicators Conference, the concept of a bulletin board, discussion table, and file cabinet was again used to manage various types of information. But instead of emphasizing collected archived information in the file cabinet, emphasis was placed on a 3-month moderated exchange of the experiences of conferees. The discussion was organized by posting a sequence of questions likely to be addressed by a multi-disciplinary team developing indicators of sustainability. People introduced themselves on the bulletin board that was also used for information not directly related to the topic being addressed at the table (i.e. how to upload information into the file cabinet, information about related events that might be of interest, etc.). The file cabinet was used to collect case studies that were either too long or too specialized in their subject matter to simply share on the table.

#### Step 4. Identify Conference Staff for Key Functions

Successful electronic conferencing depends upon successful implementation of the following management functions:

- computer hardware and software management
- information management
- people management
- subject matter management
- conference management: integrating computers, information, people, and subject matter issues

Someone needs to accept responsibility for each of these 5 functions. People can take responsibility for more than one function, but it is very important that someone accept responsibility for each function. Each function is briefly described below and some of the key lessons learned from INFORUM's experience with either the Livestock Conference or the Indicators Conference are noted.

##### 1. Computer Hardware and Software Management

To set up an electronic conference someone obviously must agree to set up appropriate computer software and hardware and keep them running during the period of the conference. This computer and software must be connected to global telecommunication networks by a modem, packet switch and/or a router. If the conference is set up with people making on-line connections (such as for the Livestock Conference), software that allows people to download and upload information after they log in to the central conferencing computer must be set up. Or, if most

conferees receive and send in information by electronic mail (such as in the case of the Indicators Conference), software that reads subscribers addresses and adds them to a list of electronic mail addresses, and then relays incoming mail to everyone on the list (usually referred to as a Listserver) must be set up. If documents are to be archived and accessed by conferees, then software programs with this function must be set up and maintained.

## 2. Information Management

To set up and manage an electronic conference, someone must agree to manage the information that is shared and collected. As noted above, in both the Livestock and Indicators Conferences, the concept of an unmoderated bulletin board, a discussion table for moderated exchange, and a file cabinet to store longer documents, was used. Although not an issue for either conference, sometimes copyright issues can be important. One of the reasons for the bulletin board/table/file cabinet distinction was that conferees were told that information shared on the table was to be viewed as not for public distribution; only information uploaded to the file cabinet would be disseminated (published) to others not subscribed to the listservers.

In the case of the Livestock Conference, more than 1000 pages of reports were shared in the file cabinet and the management of this information is not a simple task. In the Indicators Conference less than 200 pages of information was uploaded to the file cabinet, but much more information was shared on the discussion table. Processing this information in order to make periodic summaries was time consuming. Also, many people joined the conference after it had started and requested copies of archived comments that had been exchanged earlier.

## 3. People Management

To set up and manage an electronic conference, someone must agree to help people gain access to the conferencing venue and facilitate the information exchange process. In the Livestock Conference the need to help people access the computer with the conferencing software was a major task. Many people indicated by fax that they wanted to participate in the conference but were never able to get an account on their local PTT (Postal, Telephone, and Telegraph service), or get help setting up a modem. As noted above, this was less of a problem in the Indicators Conference, but many people still needed assistance in subscribing to the listservers.

Helping people share information is not a simple task. Someone must accept responsibility for encouraging people who have not participated in an electronic conference to send in information. In the Indicators Conference considerable time was invested in sending personal electronic mail message to individuals who, had experience related to the subject matter being discussed, but needed encouragement to begin participating. In the Indicators Conference the role of people management and subject matter management (see below) was done by the same person. An advantage of combining these two roles is that the facilitator can actively ask technical questions and draw people into the discussion.

One of the most interesting lessons learned from the Indicators Conference was that with relatively little encouragement many people are willing to invest time in sharing information if they receive feedback from the moderator. But, by the far the best motivator is feedback from other conferees. The fact that others invested time and effort to analyze and respond to their comments became a strong motivating factor. This motivation is probably less strong in face-to-face meetings where the investment made by someone to comment orally is not nearly as high as the investment made when someone takes the time to write up and send in a comment.

#### 4. Subject Matter Management

To set up and manage an electronic conference, someone must agree to manage subject matter issues. Clearly someone must have a vested interest in seeing a synthesis occur or conclusions drawn to conduct a successful conference. In the Livestock Conference, this motivation was not very strong because the final product of the conference was not well defined. In the Indicators Conference, the information exchange process was designed in such a way that the moderator had to periodically summarize and pose new questions to be addressed by the conferees. This kept the discussion focused on key subject matter issues and the objectives of the conference.

#### 5. Conference Management

To set up and manage an electronic conference, someone must agree to manage the overall process. This means continuously ensuring that the individuals who agree to manage the computer hardware and software, people, information, and the subject matter are working together to accomplish to implement the information exchange process and

accomplish the purpose of the conference.

In the Livestock Conference, the role of managing the overall conferencing process was not well defined. One individual took responsibility for managing the information, the subject matter discussion and was actively involved in inviting people to join the conference; another person helped conferees access the central computer, managed the hardware and software, and sometimes participated in the information management. But there was no formal definition of who was responsible for the five functions discussed above.

In the Indicators Conference, one person filled all of the five roles except for some of the computer hardware and software management responsibilities. An advantage of this approach is that communication between various individuals accepting the functional responsibilities is not a problem. A major disadvantage is that one person cannot be expert on all of the functions and the total level of effort needed to implement an electronic conference requires more than one full time person's effort.

#### Step 5. Set up the Computer Hardware and Software

With a clear purpose, potential conferees identified, a well-defined information exchange designed, and with the individuals who will be responsible for the 5 functions noted above clearly identified, the next step is to decide on what computer software to use and where the hardware should be located. It is interesting to note that this decision is often the first one that comes to mind when people think about having an electronic conference rather than the last one.

In implementing the Livestock Conference it became obvious that an over-emphasis on using on-line access has the disadvantages that: (a) people with only store-and-forward mail cannot participate, (b) people have to learn how to use another software program (the conferencing software) in addition to the communications software on their own computer, and (c) it is difficult to figure out how to bill conferees for the cost of using a commercial network to access and use the central service. Of course, an advantage of on-line access is that conferees can use more powerful information management tools, such as databases that can be searched. Also many people feel that on-line access generates more of a sense of community among the conferees, than electronic mail based conferencing.

One of the important conclusions from the Indicators Conference was that, in general, electronic mail-mediated approaches can be successfully used to convene conferences involving people in many countries using many different types of electronic mail services. One lesson learned almost immediately was that many people are using electronic mail systems that are difficult for a listserver to read. When first starting to use a listserver, it is important to have a computer programmer that can gradually modify the software so that it can access unusual incoming electronic mail. Mail from standard Internet connections, FidoNet, or commercial services such as CompuServe, Delphi, MCI, etc. are less of a problem than electronic mail from large institutions with internal electronic mail systems.

After making a decision as to what type of telecommunication access will be set up and the type of software that will be used, the next question is, where (on which computer or computers) should the service be set up? This decision will be based on: (1) image, (2) expense, and (3) type of access needed by the information manager, people manager, and topic matter manager.

Image is very important in national or regional level conferences. For example, there is no reason to set up an electronic conference on a computer in Europe or North America when the conferees are mostly from Latin America. Often the institution that is organizing the electronic conference wants to have the electronic conferencing service on its home computer. Just as often, an organizing the institutions may see positive reasons for having another institution set up the hardware and software. This is not unlike the image issues associated with organizing a face-to-face meeting. If a meeting is organized by a consortia of institutions, it is often logical to have an institution that is not part of the consortia host the meeting to avoid the image that one institution is taking control of the information exchange process.

If the computer and software management is provided as in-kind contribution by a participating institution, then expense becomes an issue. Sometimes it may be necessary to trade off image and expense objectives. But sometimes accepting "free" electronic services from an institution with a negative image or with an agenda can turn out to be very expensive in the long run.

A practical consideration is that where the computer is located can affect who has on-line access to information that is being exchanged. While the people and subject matter managers may not need to have on-

line access to the computer where the listserver or archived information is located, the information management person needs on-line access in order to be able to upload and download information.

#### Step 6. Convene the Conference and Hope for Luck

Even if the purpose is clear, the process to be followed is well understood, and staff are qualified and know their roles, like any workshop, symposia, or conference, when the conferees arrive (electronically) and the moderator calls the meeting to order you never really know if the event will be successful or not. Ultimately, the success of the conference will likely be influenced by the good or bad luck. Regardless of the media used, sometimes when people get together they become more than the sum of who they are and the conference becomes a success; at other times, regardless of how much effort is expended this simply does not happen.

#### SUMMARY

In many ways electronic conferences are not that different from face-to-face meetings. The role of the travel agency and management of the physical conferencing facility is replaced by the computer hardware and software manager. The role of the person responsible for the conference proceedings is taken by the information management person. The role of the facilitator is similar in both electronic and face-to-face meetings except that an electronic facilitator can't read body language or tone of the people they are working with. The role of the subject matter manager is relatively similar in both types of conferences. While the role of the conference organizer in both cases is complex, in the case of the organizer of an electronic conference everything is affected by the fact that this is often a first time experience for both the conferees and for staff who are organizing the conference.

These guidelines are based on INFORUM's experience with only two electronic conferences. If past experience is any guide, after completing the third conference, these recommendations will probably be significantly changed.

## **FACTS ABOUT TELECOMMUNICATIONS/INTERNET IN DEVELOPMENT...**

- o For the poorest countries, each new telephone line contributes \$12,000 to GDP.
- o In Zimbabwe, businesses with phone service have on average three times more employees.
- o UNCTAD estimates a possible \$100 billion savings world wide annually from transaction costs from greater use of telecommunications.
- o Over the last 20 years, countries succeeding in modernization invested in telecommunications infrastructure at rates 3-6 times greater than those still developing.
- o After the year 2000, U.S customs will work exclusively electronically so capacity and access will be needed to trade with the U.S.
- o In Algeria, the introduction of a trade point has led to increase from 20 to 2500 of the number of companies involved in trade (most of which are small).
- o For some countries in southern Africa, unmet demand for telephone service will equal 1/2 GDP by the year 2000.
- o Education and training are likely to be the most cost-effective routes to developing the skills and attitudes needed to thrive and function well on the information highway in the global economy.
- o What is interesting in many countries is to see how in the last five years telecommunications has moved from tenth to twentieth century, often skipping the intervening years. In Mexico and other parts of Central America cellular phones now outnumber conventional telephones. About a month ago, the Mission Director in Nicaragua received a FAX message sent via a hand-held portable FAX/phone machine from a guerilla commander less than a week after he and his group of rebels had demobilized.
- o Economic growth is usually considered in terms of national planning. Increasingly though, applications of communication at the micro-level are revealing that peasants and farmers are eminently capable of planning for individual and community economic growth.
- o In Tanzania, interviews with a wide variety of businesses confirmed that the time and cost of marketing, distribution, inventory management, receivables collection, etc. were greatly reduced or could greatly be reduced by better telecommunications. Opportunities with limited time horizons--such as exports of perishable horticultural

produce--could be captured.

- o In a world-wide survey of the impact of telecommunications on the farming sector, the telephone proved to be a highly cost effective direct substitute for transport as it enabled farmers to have a more efficient marketing system, lowered the cost of essential social services, and saved production costs.
- o Telecommunications are extremely important to the functioning of product and factor markets. A telecommunications infrastructure reduces transaction costs in numerous markets and leads in turn to higher aggregate output.
- o When a telecommunications infrastructure exists, markets are more efficient than when one does not.
- o Lower communications costs make financial markets more efficient, which in turn lowers capital costs.
- o Telecommunications have side effects (externalities) that make other economic institutions more efficient. Public bureaucracies can operate more efficiently with the existence of a telecommunications infrastructure.
- o Telecommunications facilitate market entry, improve customer service, reduce costs and increase productivity.
- o The Medical School Library, University of Zambia, provides an excellent example of the use of computers and networks for development purposes. They currently are making reference materials available to researchers and students at the university as well as to individuals at 100 sites off campus. They distribute regularly information about AIDS, share information with other African Medical Schools about research that is not published, and claim that the email links with the hospitals in southern Zambia are providing ways for people to mitigate constraints imposed by bureaucracy and clearance processes. From James Beebe, Trip Report to Southern Africa. November 1993.
- o The application of telecommunications to primary health care services (known in some contexts as telemedicine) offers a key to maintaining the system; building morale and maintaining confidence, providing emergency assistance, allowing consultation, facilitating administration and logistics, maintaining supervision and quality assurance, and supplying education and training. From Robert J. Saunders et. al.. Telecommunications & Economic Development. Second Edition. 1994. Appendix A on Social Science applications by Heather Hudson. Page 342.
- o The Rural Satellite Program, sponsored by the U.S. Agency for international Development, was designed to help countries use satellites to help solve development problems. Pilot projects were carried out in Indonesia, Peru, and the West Indies. Following from Saunders, p. 350 ff:

- In Indonesia the project linked 13 new universities in the archipelago. The satellite audio conferencing system enabled a professor at one institution to teach students at several locations. The network was also used to train faculty, handle administration, and enable administrators to meet electronically between infrequent face-to-face meetings.
- In Peru, teleconferencing activities were developed in cooperation with Peruvian Agriculture, health, and education ministries and incorporated a wide variety of administrative, training, diffusion, and promotional strategies. A total of 658 audio teleconferences were sponsored during 1984 and 1985 involving almost 12,000 participant hours.
- In the West Indies, the project linked university campuses on Barbados, Jamaica, Trinidad, Dominica and St. Lucia. Each room was equipped with audio conferencing equipment, slowscan television, microcomputers and telewriters. A typical weekly schedule included in-service classes for teachers, meetings of the project's coordinators, class sessions for Challenge Examinations (which allow students to take their first year of university in their home countries), continuing medical education classes, and medical consultations.
- o In the South Pacific, the World Health Organization has used the experimental PEACESAT satellite network to summon medical teams during outbreaks of cholera and dengue fever and to coordinate emergency assistance after typhoons and earthquakes. Saunders, p. 343.
- o In Bangladesh, the government implemented a cyclone early warning telephone system consisting of single telephone installations in several coastal areas previously without access to telecommunications to help deal with cyclone warnings and other emergencies. Saunders, p. 343.
- o In Guyana, rural health workers called "medex" use a two-way radio network to communicate with headquarters in Georgetown to check on the delivery of drugs and supplies and to receive advice on major health problems. They also request emergency evacuations and follow up on patients referred to the hospital. The Georgetown training staff offer refresher sessions and "grand rounds" over the radio. At night, chatting over the radio helps medex reduce their sense of isolation and boosts morale. Saunders, p. 344.
- o In Guyana, medex with two-way communication facilities received drugs more quickly and kept a more complete supply than medex without them. Administrative problems that took weeks or months to resolve by mail or in person were resolved within hours by radiotelephone. Saunders, p. 344.
- o Healthnet, organized by a nonprofit organization, by means of inexpensive radio equipment transmitting to low-orbit satellites makes it possible for users to query

colleagues, hold conferences via electronic mail, order and receive medical literature and request data base searches. As of 1991, demonstration sites had been set up in Kenya, Tanzania, Uganda, Zambia and Zimbabwe. Saunders, p. 347.

- o In China, the Television University distributes programs via INTELSAT and terrestrial facilities to more than 1 million students at their work sites. Indian educators use INSAT to transmit adult education programs and supplemental materials for classroom use to villages equipped with low-cost antennas. Saunders, p. 349.
- o The University of the South Pacific operates a satellite-based audio conferencing network linking its main campus in Suva, Fiji, with its Ag college in Western Samoa and extension centers in nine Pacific island nations. The system is used to administer extension service activities and courses, offer tutorials for students taking correspondence courses, and extend outreach services to the people of the region. The benefits of this experimental network have been significant. The savings in travel time and costs have been at least ten times the cost of using the network. Dropout rates have also been reduced. Saunders, p. 349.

# **USAID AND INTERNET (an informal inventory)**

## **Office of Population**

Contact: Richard Cincotta (AAAS Fellow)

The Office of Population participates in two Internet e-mail "user groups" in the area of population & environment interactions. One group links together academics who have research interests in this field; the other group links together population professionals in environmental NGOs. R&D/POP uses these groups chiefly to broadcast pertinent conferences, articles, reviews, speeches, and to distribute certain materials deemed useful for the users.

## **Office of Research**

contact: Dr. John Daly

In this office we have about 300 grants to individual investigators in place. We would like to facilitate communication between the office and the grantees and foster networking among them. In our case we have in fact funded the National Academy of Sciences to provide such networking, and they have set up a computer system for the communication among researchers. However, due to lack of funding we have not been able to make this system available to the grantees. We should be using INTERNET increasingly to communicate with the 1000 researchers who submit proposals to our office, and the 250 who submit full proposals each year. Not only would this help encourage their networking, but in places like the former Soviet Union, it is the only practical way to communicate--letters take six months, if they get there at all, phones don't work, and FAX is a dream.

One important lesson from this office is that bringing electronic communication technologies to developing countries need not be difficult or expensive. Small grants can have a large impact in this area. As an example a \$150,000 AID PSTC grant built an Internet backbone in Costa Rica and is expanding it from there to other central American countries (note: the PSTC program has been eliminated as of 1994).

## **Office of Agriculture**

AGR has helped fund INFORUM, a global electronic partnership that "collaborates with regional and international organizations that share its mission and emphasis on supporting local organizations in their development of more sustainable land use systems".

James Beebe, Chief of the Policy and Planning Division in the Global Bureau's Agriculture Office used a combination of USAID's E-mail and the Internet E-mail to contact colleagues and transfer documents in preparation for his recent trip to Southern Africa. Beebe

investigated electronic connectivity and assessed some of the USAID's views concerning telecommunication on this tdy

Dennis McCarthy, Deputy Chief for Agriculture in USAID/Nairobi is enthusiastic about being able to communicate with one of his major contractors, the University of Missouri, over the Internet allowing him to cross time zones and overcome poor telephone lines.

### **Environment and Natural Resources (ENR)**

--ENR is connected with their colleagues in USDA and the rest of the world--directly from the Agency's email system. Their technical work is expedited by such connectivity.

### **Office Of Energy and Infrastructure - Efficient Energy Information Communication System**

contact: William Wing, AAAS Fellow (please see attachment for complete description and workplan ACTPLAN.BW5)

Energy, the driving agent of industrial civilization, is also the source of many of the world's most critical problems, among them economic and social inequities, environmental pressures, health hazards, and military security risks. Achieving maximally efficient energy production and consumption is an important and cost-effective way to address these problems. This approach is especially important for the developing world, where both energy supplies and investment capital are inadequate, while present efficiencies are low.

Today, the technologies and techniques of efficient energy practice are well developed. The key requirement is to disseminate them widely and effectively, in understandable and implementable form. To achieve this goal, this project will create an Efficient Energy Information Communication System (EEICS) of global reach, based on powerful, low-cost, and easily replicable electronic communication and information technologies. Its users are expected to be highly diverse and geographically widespread, including utility officials, regulators, other government officials, non-governmental organizations, public-interest groups, educators, investors, industrialists, specialty publishers, donor agencies, contractors, and the interested public in both the developed and developing worlds. EEICS must successfully address the information needs of this highly diverse group.

Both the way A.I.D. does business and its development objectives are undergoing a major redefinition at present. The Office of Energy and Infrastructure intends this project to set a standard for the Agency, and simultaneously create a new development assistance model for other offices and bureaus to incorporate into their programs.

### **University Center**

contact: Ruth Frischer

A listserv has been set up which allows ongoing communication and electronic conferencing among the University Development Linkages Project (UDLP) participants ( and other interested people) all over the world. To subscribe send an email with a blank subject line to: listserv@vaxa.weeg.uiowa.edu

The message should say: subscribe UDLP-L <your name>  
Replace <your name> appropriately.

### **Office of Health,**

Contact: Melinda Moree (AAAS Fellow) or Caryn Miller

The Health Office is attempting to make health and population databases available electronically to users in developing countries in a format that they can really work with.

### **Office of International Training**

OIT has been encouraging its contractors (who handle programming for participants in the US) to transmit their data on participants electronically. We currently receive approximately 30-40% of our data this way. The electronically transmitted information is downloaded directly into our centralized database for training. This has saved us the cost of two data entry people per year. Additional savings will be forthcoming as we get more contractors to transmit electronically. Just fyi the database contains about 60 data fields per participant and there are currently about 12,000 individuals training in the US.

Other proposed uses of electronic communications:

1. Development of bulletin boards systems by OIT would allow contact with students at US universities and would permit a cost effective means of rapid information dissemination.
2. Bulletin boards/newsgroups for OIT contractors and/or training providers. This would permit rapid, cost effective disbursement of routine mailouts, allowance rates, etc, as well as listings of available courses and special programs. Bulletin boards to Missions (which we could do with our current e-mail system) could provide a means of information dissemination, far cheaper than all the DHL pouches that go out. Also Handbook 10 (and indeed all Agency Handbooks) could be put on the INTERNET, for use by outsiders (and easier use by us!!)
3. Distance learning. Distance learning through the INTERNET continues to become more popular and we may want to consider future use of the INTERNET to meet various in-country needs, e.g., predeparture materials related to training, etc. As technology improves and computers become interactive, INTERNET could be used for a variety of training need by providing tailor-made interactive course, etc.

## REGIONAL BUREAUS

### AFRICA

From the field (REDSO/W)--

Identifying Information Priorities: There are really two priorities: one, to reduce the cost for staff to use information and two, to focus our acquisition of information for repetitive local access.

We need to reduce the cost of identifying, retrieving, and absorbing information by at least 95%. This is a neutral intervention that will allow us to make the most of the existing "capacity for absorption of information services".

The truth is that we now use very little information because it is JUST TOO TIME CONSUMING AND COSTLY TO ACQUIRE. Only a small portion of our non-traditional projects or programs conduct any economic analysis at all, partly due to costly access to the existing data.

I think AID should fund the production of more annotated bibliographies and CDIE should put all new relevant executive summaries on-line as a small full-text database.

I am working with the Club du Sahel, World Resources Institute, the local National Committee for Remote Sensing and Geographic Data, and UNICEF through informal personal contacts. The objective is to have numeric data available by local sub-national areas for several countries across western Africa.

This is a critical area for demonstrating low cost ways to conduct analysis related to program design/evaluation and policy dialogue.

I see no reason why we shouldn't have an on-line geographic database within 24 months that could be used for local development organizations, regional integration analysis, USAID program impact analysis, and U.S. universities for more basic sectoral research. Africa is swimming with data but hardly any analysis for more informed public debate. Based on conversations and earlier reports I put together, World Resources Institute (Jake Brunner and Dan Tunstall) have just written a proposal for "The Provision of 1:1,000,000 Base Maps to Users in Africa".

Locally in Abidjan we are in the process of creating an Email network among economists in different organizations. Many others here have the same frustration that I have: they can communicate with others in their own organization but not with colleagues here in town. As a result there is less sharing of ideas, data, etc. among donors. Since many have regional offices here in Abidjan this is a constraint on donor coordination in the whole of West and Central Africa. A common external communication net, such as Internet would solve this problem on a regional scale. We may solve it locally with an Email system or bulletin board.

Cost savings are substantial. REDSO now uses a contracting officer's private Compuserve account through a French established dataline to send multiple copies of faxes or letters regarding contracts. For sending out 60 copies at a saving of over \$10 per copy this is reducing our costs and speeding up communication given the delays experienced in sending individual faxes through the local telephone line. I am also using Compuserve to send Email through to universities and organizations in Europe to coordinate technical meetings. It is so cheap to use my own personal Email system from home that I do it in the evenings when I have more time to think than in the office. Right now I am paying this out of my own pocket, since it costs about 5% of what it would cost to send it through commercial phone, fax, etc. at the USAID office. The cost to AID is cheaper since these costs come out of my pocket. I would obviously use it much more if AID was paying for it and I had access at the office.

Email is a critical donor coordination tool:

There are millions of dollars being spent on creation of databases by different donors across West Africa. Through using Email there is now a network of individuals in U.S. Universities, U.S. NGOs, the Club du Sahel, and elsewhere that are beginning to work together on database sharing. Frequent, short communication through Email is the foundation of this sharing. For USAID this type of data and idea sharing among donors could potentially result in data collection/analysis savings of \$5 to \$10 million per year in Africa alone.

Locally in Abidjan we are in the process of creating an Email network among economists in different organizations.

There is an Ivoirian here in Abidjan that has set up an electronic bulletin board. Through private email networks we are now exploring having a forum for local journalists or economists to share information posted to this bulletin board. The trained manpower is here, the potential users are here, but wider connectivity and very specific short term technical assistance is needed to make these networks flourish. The costs are almost too low to make it worthwhile for the mission to process the AID papers.

Glenn Rogers, USAID Regional Program Economist in Abidjan has used his CompuServe account to coordinate technical meetings with universities and organizations in Europe. Rogers said their E-mail network of U.S. universities, U.S. NGOs and the Club du Sahel could result in savings of \$5 to \$10 million per year in Africa alone.

**Bureau of Humanitarian Response**

Contact: Maxx Dilley (OFDA)

Jim Arnold Food For Peace (FFP)

The following is a brief summary of a few things that the Office of U.S. Foreign Disaster Assistance (OFDA) and Jim Arnold's office, Food for Peace (FFP) are doing in GIS, networks and assorted other information related areas.

1) The International Emergency Readiness and Response Information System (IERRIS) - OFDA funded the UN Department of Humanitarian Affairs (UN/DHA) for a two year information management project to help them coordinate the responses to major international disasters. The main ingredients of the project are likely to be internet, for information sharing between major donors and the UN, and packet radio for "deep field" communication.

2) In the "deep field" vein, Jim Arnold's Rapid Emergency Logistics Information Exchange Forum (RELIEF) uses FidoNET (a PC modem-based technology) to link stations in the "periphery" with each other and with the "core" for disaster logistics tracking. He has already linked some stations in the NIS and is working with the World Food Program (WFP) to do the same in other areas. OFDA gave them a grant to do famine vulnerability mapping, which may involve data transfer between Rome and Washington and to and from WFP country offices.

RELIEF is the successor to The Southern Africa Food Information and Resource Exchange (SAFIRE), a pilot project jointly conceived by USAID and the UN's World Food Program (WFP), which linked 25 sites in six African countries with the U.S., Italy and Switzerland. SAFIRE's primary objective was to assist the drought-stricken countries of southern Africa through coordination of donor and host country humanitarian assistance efforts.

3) OFDA's information management group has been quite active at exploiting the potential of internet and GIS. Two examples are receiving PVO proposals electronically and plotting the locations of OFDA-funded disaster-related projects on electronic base maps. OFDA and FFP have also been instructed to combine their Management Information Systems (MIS) to provide comprehensive reports to our Bureau's management of our office's activities.

Of course, OFDA in general is moving along into the information age in the ways that I suspect most offices are, using internet to transfer documents and send emails to our UN and other counterparts. We are developing an in-house mapping capability to meet growing demands for maps for presentations and reports. If you need any additional information don't hesitate to ask.

From: Jim Arnold@FHA.FFP@AIDW

I just would like to emphasize the importance of AID involvement in networking projects.

Particularly I have in mind ways to extend Internet "points of presence" (POPS) into the developing world. Sustainable network development can often be linked to grants to connecting up major universities with the Internet under such a plan that the connection into a university in a country is done with a door open to extending that feed to corporations in the country. The university connection provides the "legitimacy" and the corporate link ends up paying for (and sustaining) the network in the country.

## **An Initial Inventory (DRAFT)**

### **USAID activities in electronic information and telecommunications include:**

#### **Institutional Support and Capital Improvements**

- Provided grant funds to support mixed-credit proposal by AT&T for Indonesia Telecommunications Switch Project.
- Provided Egypt with technical assistance, training and equipment for two new digital telephone systems in Cairo, improving telecommunications service for half a million residents. Financed two new local telephone exchanges, each with 30,000 (expandable to 60,000) line capacity.
- In Egypt, financed a six year activity to provide capital improvements, technical assistance and training as well as promote specific policy and institutional reforms.
- In the southern Africa the Regional Drought Emergency Relief Project will improve drought and food emergency management and enhance physical resources including telecommunications infrastructure.
- Setting up a Concessional Financing Facility (CFF) to finance U.S. goods and services for infrastructure projects in the Philippines in several sectors including telecommunications.

#### **Regulatory Reform and Privatization**

- Under the Privatization and Development project, USAID is supporting technical assistance for privatization of the telecommunications sector in Nicaragua, Honduras, Zambia, Indonesia, and in southern Africa.
- The Southern Africa Regional Office is presently implementing a project that focuses on the technical aspects of rationalizing the telecommunications sectors of member countries of the Southern Africa Development Coordination Council (SADCC). Technical assistance will be available in the areas of telecommunications restructuring, commercialization, and privatization.
- A USAID project in The Gambia designed to support financial and economic policy reforms maintains a focus on the telecommunications sector.
- Providing technical assistance and training in support of reform of telecommunications policy in Eastern Europe.
- Undertaking project increase the participation of the private sector in financing and managing infrastructure projects in Sri Lanka. The core focus is to develop a network of public and private organizations which will be the basis for a series of activities

which will culminate in awards of contracts to private firms to build-own-operate (BOO) or build-own-transfer (BOT) infrastructure in several sectors including telecommunications.

- USAID/Madagascar is currently supporting the efforts of the Government of Madagascar to privatize its phone company.

#### Training, Education, and Information Dissemination

- Provided tuition-free training to over 800 developing country telecommunications officials through the United States Telecommunications Training Institute since 1983.
- Provided distance learning educational programming via telecommunications in Nicaragua, Kenya, Papua New Guinea, Nepal, Guatemala, and Liberia.
- Funded the "Knowledge Gateway" program for India to provide local access through EASYNET to information on agriculture, natural resources, health, population and nutrition programs.
- Under an initiative of the United States-Asia Environmental Partnership and the USAID Center for Trade and Investment Services, the Environmental Technology Network for Asia (ETNA) electronically links U.S. environmental technology companies with trade leads in nine Asian countries.
- Initiated a global electronic information dissemination project know as the Global Energy & Environment Network (GLEEN) to promote the spread of environmentally sound technologies.

#### Rural Telecommunications and Development

- Supported Volunteers in Technical Assistance project for use of low level satellites in rural communications.
- Funded National Rural Electric Cooperative Association to establish a pilot rural telephone cooperative in the Philippines, integrated with an operating rural electric cooperative utilizing donated U.S. rural telephone cooperative equipment.
- Supported the "Rural Satellite Program for Developing Communications" program, which launched pilot projects to demonstrate the benefits of rural satellite communications to rural development in Indonesia, the West Indies, and Peru.
- Provided telephone, telegraph and telex services to interconnect Chad, Cameroon, and Nigeria, which permitted wide-ranging communication among the three countries and afforded Chad with access, via facilities in Nigeria and Cameroon, to international circuits.

- Built and equipped a broadcasting studio production unit in Monrovia and seven regional transmitter facilities for the Liberian Broadcasting System.
- Funded pre-feasibility study for potential of a solar-powered cellular public telephone network in rural areas of the Philippines.
- USAID Tanzania is supporting efforts to bring phone service to rural areas through private investment.

**Post-Disaster and Civil Conflict Rehabilitation**

- The Bureau of Humanitarian Response has created the Rapid Emergency Logistics Information Exchange Forum (RELIEF) to promote coordination and sharing of information. RELIEF is the successor to the Southern Africa Food Information and Resource Exchange (SAFIRE), a pilot project jointly conceived by USAID and the UN's World Food Program (WFP), which linked 25 sites in six African countries with the U.S., Italy and Switzerland. SAFIRE's primary objective was to assist the drought-stricken countries of southern Africa through coordination of donor and host country humanitarian assistance efforts.
- The Sahel Water Data and Management project supports the collection, analysis, and dissemination of weather, climatic, and hydrological data for crop forecasting purposes. USAID is providing modems, satellite equipment, transceivers, PTT interfaces, upgrading of switching systems, and single band radios for local use as well as other telecommunications equipment as needed.
- The Africa Bureau has created a Famine Early Warning System a component of which, FEWSNET, disseminates information and data related to famine throughout the Sahel and southern African region.
- Supported emergency and post-civil conflict rehabilitation of telecommunications systems in El Salvador, Jamaica, the Philippines, and Afghanistan.

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**Federal Government  
Bulletin Board Systems  
Updated: April 14, 1994**



**Interagency**

**Resource Sharing**

**Panel**

Agency	BBS	Data	Speed	Voice	Access	Note
Agricultural Library	Agricultural Library Forum	301-504-6510; 301-504-5496	9,600; 2,400	301-504-5113	Public	Library bulletins
Agriculture Department	Biological Impact Assessment	703-231-3858; 800-624-2723	2,400; 2,400	703-231-3747	Public	Biological Assessments
Agriculture Department	Commercial Information Delivery Service	Must subscribe first	9,600; 2,400	202-720-5505	Public	Develpments/statistics
Agriculture Department	Economic Research Service	800-821-6229	9,600	202-219-304	Public	Agricultural statistics
Agriculture Department	Human Nutrition Information Service	301-436-5078	2,400	301-436-8491	Public	Data on food composition
Air Force	Air Force Small Business BBS	800-638-8369 type SIGNUP	2,400	800-638-9636	Contractors (fee)	Procurement
Air Force	Small Computer Support Center	406-731-2503	9,600	406-731-4612	Public	Computer support
Air Force Engineering Installation	ULANA BBS	405-736-0928	2,400	405-734-9928	Air Force, DLA	ULANA network contract
Air Force Engineering Installation	ULANA II	405-741-0824	9,600	405-734-9928	Contractors	ULANA II procurement
Air Force Space Command	Competition Advocate	Call voice first	2,400	719-554-5325	Public	Procurement
Air Force Standard Systems Center	Standard Systems Center	205-416-5651	9,600	205-416-5771	Public	Defense contracts
Argonne National Laboratory	Newton	708-252-8241	9,600	708-252-6941	Public	Science education
Army	Integration & Analysis Center (IMA)	703-285-6400; 6401	9,600	703-285-6105	Public	Defense publications
Army Corps of Engineers	Automated Specification Criteria	916-557-7997; 800-445-8644	9,600; 2,400	916-557-7670	Public	Military engineering specs
Army Engineering and Housing Support Center	Data Distribution System	703-355-2185	9,600	703-355-0073	Army	Housing Information
Army Military District of Washington	Morale, Welfare and Recreation	202-475-7543	2,400	202-475-2513	Public	Activities
Army Software Center	Software Engineering Support BBS	703-285-9637	2,400	703-285-9654	Public	Military micros, minis
Bureau of Mines	Mines-Data	202-501-0373	9,600	202-501-0406	Public	Minerals production
Bureau of Prisons	Office of Information Systems	202-514-6102	9,600	202-307-3104	Federal employees	Microcomputer support
Census Bureau	Census BEA Electronic Forum	301-763-7554	9,600	301-763-1580	Public	Census CD-ROM shareware
Census Bureau	Census Personnel BBS	301-763-4574	2,400	301-763-4951	Public	Job vacancies
Coast Guard	Coast Guard On-Line Magazine & News	202-267-4644	9,600	202-267-0926	Public	Coast guard news
Coast Guard	Global Positioning System BBS	703-866-3894; 703-313-5910	9,600; 2,400	703-313-5900	Public	Global positioning
Commerce Department	Radio Freq. Management Issues (NTIA)	202-482-1199	2,400	202-482-3999	Public	Telecommunication issues
Commerce Office of Business Analysis	Economic BBS	202-482-3870	2,400	202-482-1986	Public (fee)	Monthly economic indexes
Commerce Office of Planning and Budget	Planning and Budget BBS	202-482-1423	2,400	202-482-2949	Public	Budget
Customs Service	Customs Electronic BBS	703-440-6155	9,600	703-440-6236	Public	Currency conversion rates
DC Government	DC Government Information	202-727-6668	2,400			
Defense Department	Ada Information Clearinghouse	703-614-0215	2,400	703-685-1427	Public	Ada information
Defense Department	Export License I	703-697-6109	2,400	703-693-1097	Public	Export license applicants
Defense Information Systems Agency	DISA Acquisition BBS	618-256-9200	9,600	618-256-9380	Public	Procurement
Defense Information Systems Agency	Information Technology Acquisition	618-744-8787	9,600	618-256-9691	Public	Procurement
Defense Logistics Agency	DASC-ZE BBS	703-274-5863	2,400	703-617-0452	Public	Microcomputer support
Defense Mapping Agency	Navifonet	301-227-4424	9,600	301-227-3298	Public	Marine advisories
Defense Technology Security Administration	Elisa I	703-697-6109	2,400	703-693-1098	Exporters	Export license status
Department of State	Passport Info/Travel Alerts	202-647-9225	9,600			
Education Department	Educational Research and Improvement	202-219-2011	2,400	202-219-2012		
Education Department	Able Inform	301-589-3563	2,400	301-589-3563	Public	Disability support
Education Office of Research and Improvement	National Education BBS	800-222-4922; 202-219-1511	2,400; 2,400	202-219-1526	Public	Statistics, classroom software
Energy Department	Megawatts	202-586-0739	9,600	Leave message on	Public	Shareware
Energy Department	Civilian Radioactive Waste Mgmt. Infolink	Call voice first	9,600	800-225-0972	Public	Radioactive waste disposal
Energy Information Administration	BA BBS	202-586-2557	2,400	202-586-8800	Public	Energy production, survey prices
Energy Office of Fossil Energy	FE Telenevs	202-586-6496	9,600	202-586-6503	Public	Coal, oil, gas reserves
Energy Office of Minority Economic Impact	Minority Impact BBS	800-543-2325; 202-586-1561	9,600	202-586-7898	Public	Procurement, education in DOE labs
Environmental Protection Agency	EPA Region 4	404-347-1787	2,400	404-347-3633	Public	Wastewater management
Environmental Protection Agency (ATTIC)	Alternative Treatment Tech Info Center	301-670-3813; 301-670-3808	9,600	301-670-6294	Public	Environmental engineering
Environmental Protection Agency	Wetlands, Oceans & Watersheds	301-589-0205	9,600	301-589-5318	Public	Source pollution information
Environmental Protection Agency	Pesticide Information Network	703-305-5919	2,400	703-305-7499	Public	Ristricted-use products file
Environmental Protection Agency	Pollution Prevention BBS	800-658-8815; 703-506-1025	2,400; 2,400	703-621-4800	Public	Pollution control
Environmental Protection Agency	Research and Development BBS	513-569-7610; 800-258-9605	9,600	513-569-7272	Public	Water, biotechnology
Environmental Protection Agency	Technology Transfer Network	919-541-1447; 919-541-5742	9,600; 2,400	919-541-5384	Public	Air pollutants, more BBSs
Environmental Protection Agency	Cleanup Information	301-589-8368	2,400	301-589-8368	Public	Hazardous waste removal
Environmental Protection Agency and SWANA	Solid Waste Management	800-544-1938	2,400	800-624-8301	Public	Wastewater treatment
Environmental Protection Agency and NOAA	Gulfline	800-235-4882; 601-688-2677	9,600; 9,600	601-688-1065	Public	Gulf states environment
EPA Ocean & Coastal Protection Division	CoastNet	202-260-8482	2,400	202-260-9082	Call for user ID	E-mail
Export-Import Bank	Eximbank BBS	202-566-4699	9,600	202-566-4490	Public (fee)	Export-import programs
Federal Aviation Administration	Air Traffic Operations Service	202-267-5331	2,400	202-267-9229	Public	Aviation information manual
Federal Aviation Administration	Air Transport Division	202-267-5231	2,400	202-267-3764	Public	Transport aircraft
Federal Aviation Administration	FAA Airports	202-267-5205	2,400	202-267-7609	Public	Airport buildings/operations standards
Federal Aviation Administration	FAA Headquarters BBS	202-267-5697	9,600	202-267-3332	Public	Civil penalty notices, conferences
Federal Aviation Administration	Navigation and Landing	202-627-6547	2,400	202-267-6543	Public	Instrument landing systems
Federal Aviation Administration	FAA Office of Environment & Energy	202-267-9647	9,600	202-267-3559	Public	Noise models
Federal Aviation Administration	FAA Safety Exchange	800-426-3814	2,400	816-426-3580	Public	Amateur-built and ultralight aircraft
Federal Aviation Administration	Orlando Flight Service District Office	407-646-6309	9,600	407-646-6840	Public	Minimum equipment list
Federal Aviation Administration	Pilot Examiner	405-684-4530; 405-954-4530	2,400	405-954-4753	Public	Aviation
Federal Aviation Administration	Portland Master Minimum Equipment List	207-780-3297	9,600	207-780-3263	Public	Minimum equipment list
Federal Communications Commission State Link	FCC daily digest & carrier stats/reports	202-632-1361	2,400	202-632-0745	Public	Carrier statistics, daily digest

Agency	BBS	Data	Speed	Voice	Access	Note
Federal Communications Commission	Public Access Link	301-725-1072	1,200	301-725-1585	Vendors	FCC license applications
Federal Defect Reduction	Report US Government waste fraud & abuse	202-225-5527				
Federal Emergency Management Agency	Hazardous Materials	708-972-3275	2,400	800-752-6367	Public	Emergency response planning
Federal Emergency Management Agency	State/Local Emergency Mgmt.	202-648-2887	9,600	202-646-3158	Public	Emergency response
Federal Energy Regulatory Commission	Commission Issuance Posting System	202-208-1397	9,600; 2,400	202-208-2474	Public	Commission agenda, filings, findings
Federal Government	Govt Printing Office & Files distribution	202-512-1397	9,600			
Federal Highway Administration	FEEBS	202-368-3764	9,600	202-366-9022	Public	FHWA programs, tech support
Federal Information Exchange	FEDIX	800-232-4879; 301-258-0953	2,400; 2,400	301-975-0103	Public	Research, educational opportunities
Federal Reserve Bank of Dallas	Federal Reserve Economic Data	214-922-5199	9,600	214-922-5173	Public	Banking, regional economic data
Federal Reserve Bank of Minneapolis	Electronic Database	612-340-2489	2,400	612-340-2443	Public	Banking, regional economic data
Federal Reserve Bank of St. Louis	Federal Reserve Economic Data	314-621-1824	2,400	314-444-8562	Public	Banking, interest rates
Federal Supply Service	Automated Product Listing Service	703-305-6570	9,600	703-305-6023	Public	Federal Supply Schedule products
Fish and Wildlife Service	National Ecology Research Center	303-226-9365	2,400	303-226-9335	Public	Habitat simulation programs
Food and Drug Administration	PMA, IDE, 510K & guidance documents					
Food and Drug Administration	Devices and Radiological Health	301-443-7496	2,400	301-443-7003	Public	Meetings, research
Geological Survey	Quick Epicenter Determination	800-358-2663	1,200	303-236-1500	Public	Seismological and geomagnetic data
Geological Survey	Geological Survey BBS/CD-ROM Info	703-648-4168	9,600	703-648-7300	Public	CD-ROM technology
Government Printing Office	Federal Bulletin Board	202-512-1387	9,600	202-512-1530	Public (fee)	Government publications
GPS	Global positioning	703-866-3890	9,600			
General Services Administration	Cooperative Administrative Support Program	202-653-7516	9,600	202-653-7000	Public	Administrative support
GSA	Consumer Information Center	202-208-7879	9,600	202-501-1794	Public	Consumer information catalog
GSA Federal Supply Service	Miltiuse File for Interagency News	202-205-3890	9,600	703-305-7200	Government	Surplus property, requisitions
GSA IRM Service	GSA Schedule BBS	202-501-7254	9,600	202-501-1404	Public	GSA schedule contracts
GSA Office of IRM	OFIRM	202-208-7484	9,600	202-501-4409	Public	Governmentwide contracts
Head Start Online - BBS	Head Start Online BBS (Region III)					
Health and Human Services	Administration for Children and Families	202-401-5800	2,400	202-401-5682	Public	Administrative support
Health and Human Services	National Institute on Alcohol Abuse	202-289-4112	2,400	202-289-2992	Public	Alcohol use statistics
Health and Human Services	Office of the Assistant Secretary of Health	202-690-5423	2,400	202-690-6248	Public	AIDS-related reports
Health and Human Services	FDA Center for Radiological Health	301-443-7496		301-443-7004	Public	Procedures for medical devices
House of Representatives	Federal Defect Reduction (Whistleblower)	202-225-5527	2,400	202-225-3471	Public	Federal waste, fraud and abuse
Housing Urban Developent	HUD News & Events BB. Press Releases	202-708-3563	9,600			
Human Nutrition Information Service	Nutrient Data Bank	301-436-5078	2,400	301-436-8491	Public	Food composition
Indian Health Service	IHS Division of Environmental Health	301-443-9517	2,400	301-443-1046	Public	Environmental health
Interior Department	Geological Survey	703-648-4168	9,600	703-648-7300	Public	Mapping & earth science information
Interior Department	Office of Environmental Affairs	202-208-7119	2,400	202-208-6304	Public	Environmental reports
Interior Department	OffShore Statistics & Information	703-787-1225	9,600	703-787-1043	Public	Offshore oil and gas data
Internal Revenue Service	ISM Support Information System	202-219-9977	9,600	202-501-5173	Public	Microcomputer support
Internal Revenue Service	Statistics of Income Division	202-874-9574	9,600	202-874-0408	Public	Tax return statistics
IRS Martinsburg Computer Center	Information Reporting Project	304-263-2749	9,600	304-263-8700	Public	Electronic filing
Justice Department	Amer. With Disabilities Act info					
Justice Office of Justice Programs	Criminal Justice Reference Service	301-738-8895	2,400	301-251-5269	Public	Civil rights enforcement
Labor Department	Board of Wage & Service Contract Appeal					
Labor Department	Labor News	202-219-4784	9,600	202-219-7343	Public	Consumer price index, earnings reports
Labor Office of Public Affairs	Labor News	202-523-4784	2,400	202-523-7343	Public	Consumer Price Index, earnings reports
Library of Congress	Library of Congress News Service	202-707-3854	2,400	703-385-8631	Public	Exhibit news, jobs
Library of Congress	Automated Library Information	202-707-4888	2,400	202-707-4800	Public	Federal agency libraries
NAPO	AIDS Information & Reports	202-690-5423	9,600			
NASA/Goddard	The NASA NODIS Locator System					
NASA Marshall Space Flight Center	NASA Spacelink	205-895-0028	2,400	205-544-6360	Public	Scientific and educational programs
National Archives (FRIEND #1)	Fed. Register Electronic News Delivery	202-275-0920	2,400	202-523-3447	Public	Federal register on line
National Archives (FRIEND #2)	Fed. Register Electronic News Delivery					
National Institute of Dental Research Online	National Institute of Dental Research					
National Institute of Standards and Technology	Center for Fire Research BBS	301-921-6302	2,400	301-975-6872	Public	Fire simulation programs
National Institute of Standards and Technology	Computer Security BBS	301-948-5140; 301-948-5717	9,600; 2,400	301-975-3359	Public	Emergency response team advisories
National Institute of Standards and Technology	Data Management Information	301-948-2059; 301-948-2048	1,200; 1,200	301-975-3272	Public	Data standards reports
National Institute of Standards and Technology	Automated Computer Time	303-494-1774	1,200	303-497-3639	Public	Synchronizes computer clocks
National Institute of Standards and Technology	North American ISDN Users Forum	301-869-7281	2,400	301-975-2937	Public	ISDN activities
National Institutes of Health BBS	National Institute of Health Grant Line					
National Institutes of Health	PC Bull	301-480-8400	2,400	301-496-2282	Agency	Microcomputers
National Oceanic and Atmospheric Administration	Space Environment Lab	303-497-5000	2,400	303-497-3997	Public	Geomagnetic and solar forecasts
National Oceanic and Atmospheric Administration	Marine Data Computer	301-713-4573	9,600	301-713-2653	Public	Marine information
National Oceanic and Atmospheric Administration	Environmental Services Data Directory	205-606-4666	9,600	202-606-2012	Public	Environmental sciences
National Oceanic and Atmospheric Administration	NOAA Library	303-497-5848	2,400	303-497-3271	Public	Shareware, public-domain software
National Science Foundation	National Science Foundation	202-634-1764	2,400			
National Technical Information Service	NTIS BBS	703-321-8970; 703-321-8020	9,600; 2,400	703-487-4007	Public	CALS standards
National Tele. & Info Admin.	Spectrum Openness Program	202-482-1199	9,600	202-482-1139	Public	Radio Frequency Management
National Weather Service	Climate Dial-Up Service	301-899-0827	2,400	301-763-4670	Public (fee)	Worldwide climate conditions

Agency	BBS	Data	Speed	Voice	Access	Note
Naval Computer and Telecommunications Station	Navy IRM College Recruitment BBS	804-445-2104; 804-843-4093	9,600; 38.4K	804-444-8487	Public	Entry-level IRM employment
Naval Computer and Telecommunications Station	Online Automated System	804-445-1627	2,400	804-444-8487	Government	Micro contracts, DOD software
Naval Computer and Telecommunications Station	ADA Technical Support BBS	804-444-7641	2,400	804-444-1231	Public	Ada technical assistance
Naval Gun Weapon System BBS	Naval Gun Weapon System					
Naval Research Force HQ	Naval Reserve Force BBS	504-254-7776	2,400	504-254-7947	Government	Reserve force training
Navy Marine Corps Appellate Review	JAGnet	703-325-0748	2,400	202-325-2924	Public	Microcomputers
Navy	NAVAIRES Alameda					
Navy	Naval Health Sci Edu & Training Command					
Navy	NAVCOMTELSTA Washington DC					
Navy	Nav Computer & Telecom Station					
Navy BUPERS Access	Navy Personnel Information					
Office of Government Ethics BBS	Office of Government Ethics	202-523-1186	9,600			
Office of Personnel Management - WASHNET	Government Groups and Organizations	202-806-1113; Call voice/password	2,400	202-606-1848	Government	SES openings, weekly job updates
Office of Personnel Management - WASHNET	Mainstreet	202-806-4800	2,400	202-376-3747	Public	Weekly federal job openings
Office of Personnel Management	Federal Quality Institute	301-937-0722	2,400	800-766-8737	Government	Total quality management
Office of Personnel Management	Policy Operations and Staffing BBS	912-757-3100	9,600; 2,400	202-606-0980	Government	Policies
Office of Personnel Management/Corpus Christi, TX	Federal Jobs	512-850-8255	9,600	512-850-8905	Public	Jobs
Office of Personnel Management/Dallas, TX	Federal Jobs	214-767-0565	9,600	214-767-0310	Public	Jobs
Office of Personnel Management/Detroit, MI	Midwest FederalJobs	313-226-4423	2,400	313-226-2095	Public	Jobs
Office of Personnel Management/Macon, GA	Midwest FederalJobs	912-757-3100	2,400	912-744-2139	Public	Jobs
PayPerNet #1	Fed. Pay & Performance Management BBS					
PayPerNet #2	Fed. Pay & Performance Management					
Press Release-Online	Some Cong. Committee Press Release					
Science & Technology Information System	Science & Technology Information System	202-357-0359	9,600			
Small Business Administration: SBA ONLINE	SBA BBS DC Metro Full Service	202-401-9600	9,600	202-205-6400	Public	Small Business Information
Small Business Administration: SBA ONLINE	SBA BBS 800 Limited Service	800-697-INFO	9,600	202-205-6400	Public	Small Bus. Info. (No Mail/Gateway)
Small Business Administration: SBA ONLINE	SBA BBS 900 Full Service	900-463-INFO	9,600	202-205-6400	Public	Small Business Information
Small Business Administration	Small Business Admin. internal BBS	202-205-6269	9,600	202-205-6400	Government	Small Business Information
State Department	Automated License Status System	703-875-7350		703-875-7391	Public	Monitoring of export license applications
State Department	Consular Affairs	202-647-9225	1,200	202-647-1488	Public	Passport info, Travel alerts
State Department	PerManNet	703-715-9806	9,600	703-715-9832	Public	International Affairs
Treasury Financial Management Service	FMS Inventory Line	202-287-0767	2,400	202-874-7115	Government	Financial rates
Treasury Financial Management Service	Surety Bond Circular 570	202-287-1295; 202-874-7214	2,400	202-874-6850	Government	Federal bond approvals
U.S. Courts/4th Circuit Court of Appeals	Access to Court Records	804-771-8084	2,400	202-633-6393	Public	Cases, court dockets
U.S. Courts/8th Circuit Court of Appeals	Appellate Court Electronic Services	513-684-2842	2,400	202-633-6393	Public	Opinions, oral argument calendars
U.S. Courts/7th Circuit Court of Appeals	Access to Court Records	312-435-5560	9,600	312-453-5584	Public	Cases, court documents
U.S. Courts/9th Circuit Court of Appeals	Electroni Opinions	415-744-9022	9,600	415-744-9530	Public	Court opinions
Veterans Affairs Information Technology Center	Information Technology Center BBS	202-523-7339	9,600	202-535-8923	Government	Shareware
Veterans Affairs Department/Regional Offices	Foreclosed Property	Call voice		202-233-2741	Public	Lists property foreclosures

# THE WHOLE INTERNET



USER'S GUIDE & CATALOG

A NUTSHELL



HANDBOOK

*ED KROL*

O'REILLY & ASSOCIATES, INC.



"If the Internet came with a manual, *The Internet For Dummies* would be it!" —Paul McCloskey, Executive Editor, Federal Computer Week

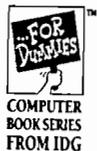
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Covers DOS, Windows Mac,  
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# **VISUALS USED IN BRIEFING**

## SYNERGY

LAC: Building LAC Agenda

CDIE: Development Experience  
Expanding Internet Use

M:

IRM: Building Internet Capacity  
Reengineering Linkages

PPC: Policy Guidelines Research  
Reality Testing for Participation

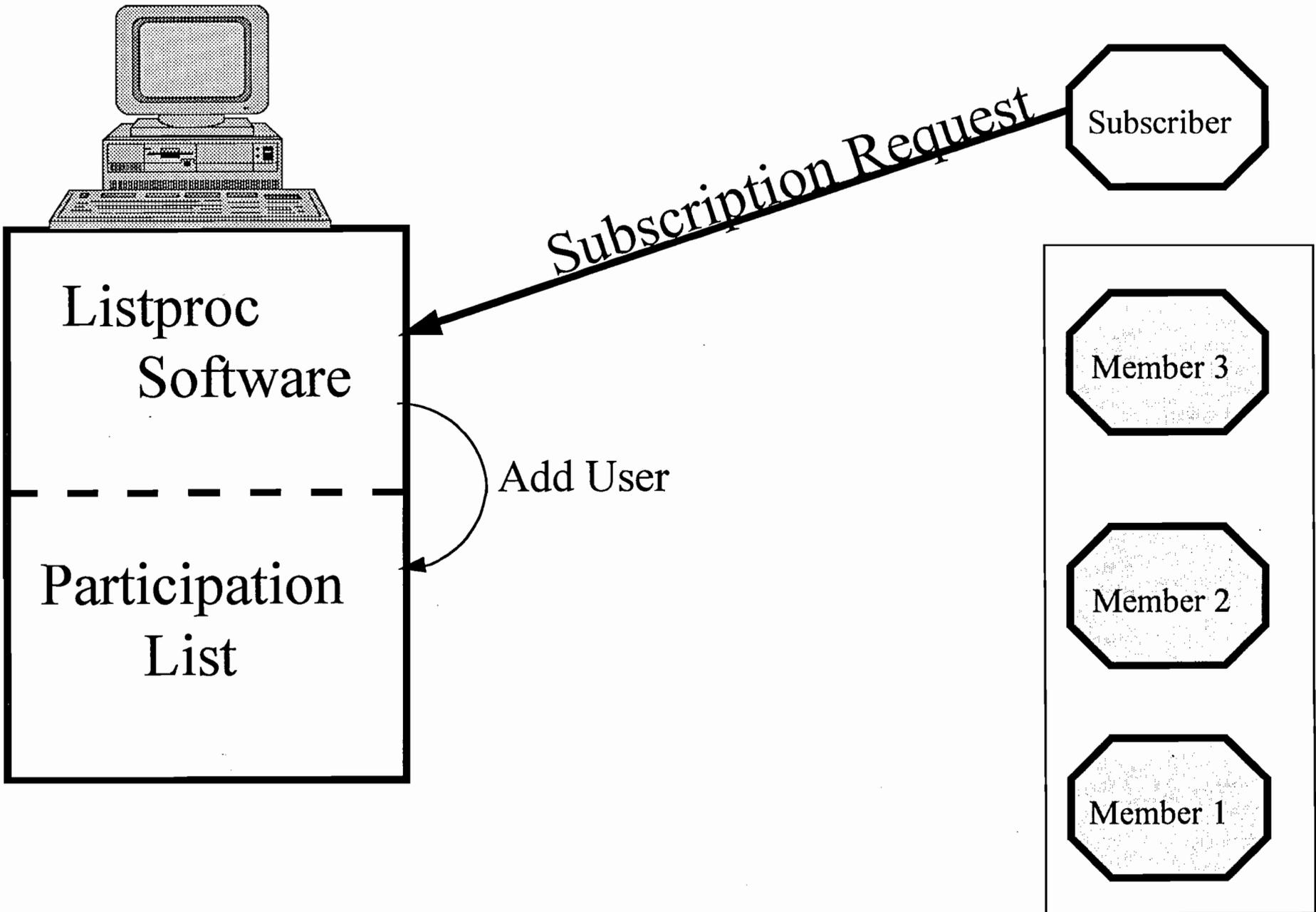
Global: Telecommunications  
Technical Leadership

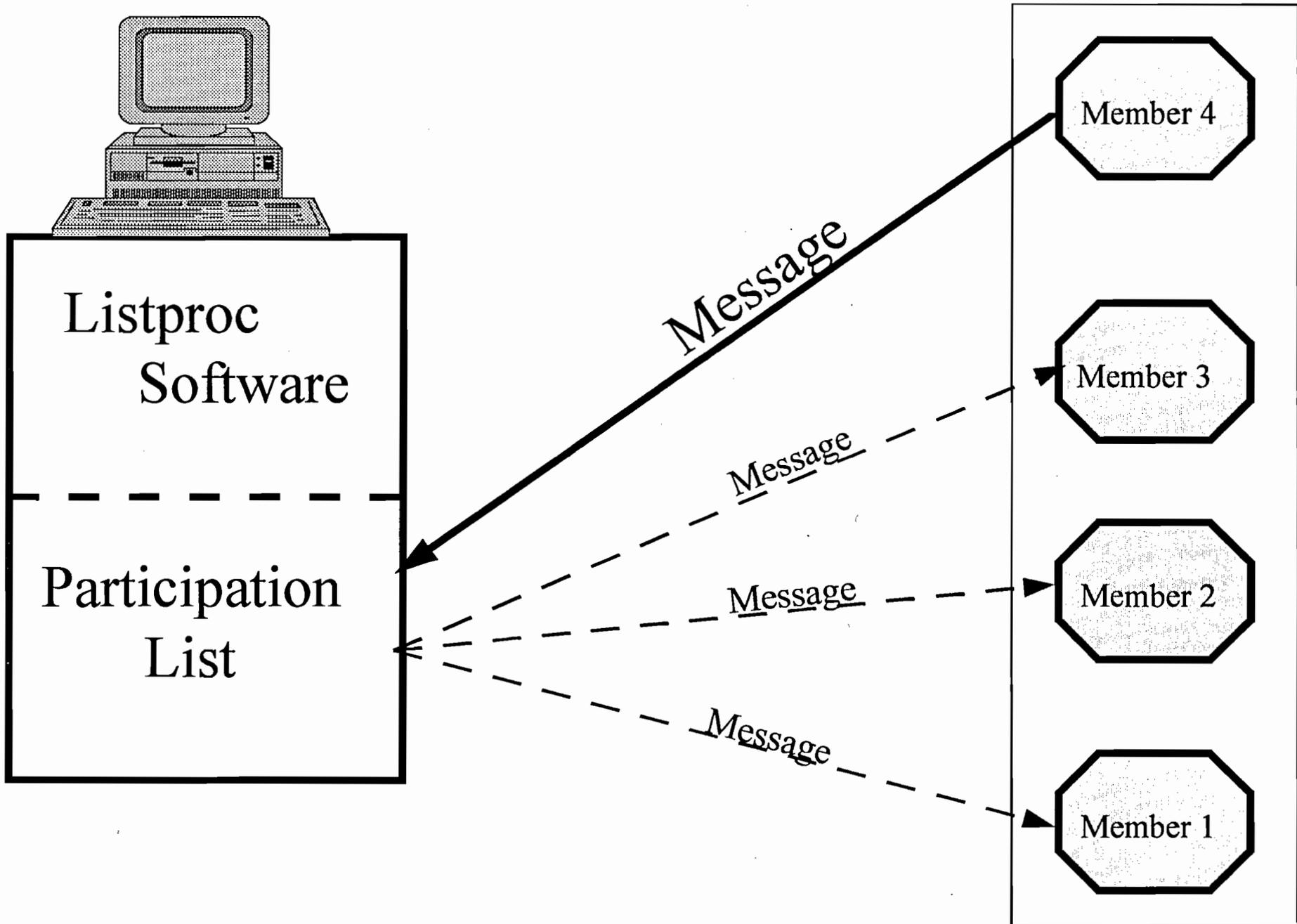
USAID Missions: Building Networks

USAID Development Partners: Fostering  
Dialogue

Agency as a whole:

- Cost effective method
- Task force approach





**Beyond E-mail:  
Using Internet to  
Capture  
Development  
Experience**

**What is a**

**Moderated  
Electronic  
Conference?**

# **USAID EXPERIENCE**

- **SANREM CRSP  
sustainability  
indicators**
- **GLEEN project  
(briefing packet)**
- **CDIE/DI use for  
requests**

# **THREE LEVELS of activity**

- **Bulletin Board--  
discussion group**
- **Table--  
presentations**
- **File Cabinet--  
archives**

## **Participation LEVELS Vary**

**"Attendee" monitors conference but does not submit**

**"Discussant" speaks to others informally**

**"Presenter" gives a paper**

**"End User" reads the output after it has been analyzed and synthesized**

# **OUTPUT**

- **Case Studies/Best Practices**
- **Background Materials--archives**
- **Network--sustainable**
- **Synthesis and Analysis --available to everyone**

# **KEY ELEMENTS**

**Moderation-linking people  
not machines**

**Flexibility--Duration  
and Participation**

**Purpose and Goal defined  
by users**

**Quality of Output**

## **Implications for Global Bureau**

- **Create T/A groups and teams**
- **Share experience and models**
- **Solve problems**
- **Reach out**

# **ISSUES**

- **Internet Culture**
- **Time Management**
- **Roles & Responsibilities**
- **Staffing & Funding**

## **DEVELOPMENT EXPERIENCE**

**Electronic Conferencing is a new way to collect development experience**

**Participative  
Interactive**

**Helps practitioners to help each other**

**Builds USAID's capacity to learn from experience**

**Strengthens information resources by capturing "live information"**

**Facilitates CDIE's ability to handle information requests (35,000 a year)**

## **WHAT WE CAN DO**

**Monitoring and receiving output of conferences/bulletin boards for:**

**finding out who is doing what  
new methods/approaches**

**Playing the moderator role--PEOPLE are necessary**

**Making the technology more user friendly**

**Synthesizing and analyzing output**

► COST

200 people  
35 countries

\$50,000

VS

\$500,000 (?)

▶ SUSTAINABILITY

▶ INSTITUTION  
BUILDING

▶ IMPACT--  
CHANGING  
PRACTICES

▶ **FLEXIBILITY**

■ Time

■ Participation

■ Openness

▶ **QUALITY**

- papers can be improved by moderator or other participants

▶ **FACE TO FACE**