



**The Agency for International Development's  
Population, Health and Nutrition Center  
and  
Human Capacity Development Center**

**Present**

**An Information Technology Learning Fair**

**in Collaboration with the National Demonstration Lab at the  
Academy for Educational Development**

**June 11, 1997**

A



U.S. AGENCY FOR  
INTERNATIONAL  
DEVELOPMENT

Dear Colleague:

In the spirit of learning and sharing, the Centers for Population, Health and Nutrition and Human Capacity Development of USAID invite you to participate in an Information Technology (IT) Learning Fair. The Learning Fair has two objectives:

1. To learn about the creative uses of IT by our CAs in order to apply these technologies in other USAID programs on population, health, nutrition, education and communication; and
2. To share creative uses of IT among CAs, learn from each others' experiences, and present applications that work effectively in the developing world.

The IT Learning Fair will take place on June 11, 1997 at the National Demonstration Laboratory (NDL) at 1255 23rd St N.W., Washington, D.C. All PHN and HCD Center cooperating agencies are invited to submit an entry(ies). The day-long fair will include IT exhibits, grouped by type or application; brief presentations by all participants; and a panel discussion on lessons learned and other issues. Please see the attached draft agenda.

Entries would include any electronically mediated message, from the low to the high-end of the scale -- wireless telephone, radio, TV, computers, Internet (please note: a live Internet connection cannot be guaranteed), satellite -- applied to population, health, nutrition, education or communication goals. We expect to see websites, radio programs, CD-roms, databases, innovative video or computer interactive programs, and the unexpected. There are no redefined categories for entries. We want to learn from each other how IT can contribute to achieving our objectives.

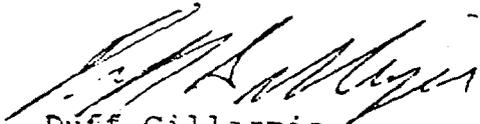
Entries should be creative and appropriate applications of IT that help to achieve PHN and HCD goals and objectives. They should be on-going or recently completed, not new applications developed only for the fair. If more than one entry is submitted per project, please prioritize them for demonstration purposes. We will try to accommodate as many as possible.

We will need two pieces of information from you before the Fair.

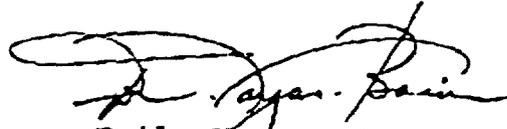
- 1) By May 12. Please submit the enclosed entry form. The National Demonstration Laboratory, with the assistance of the LearnLink project, will be in contact with you by phone to discuss your presentation needs.
- 2) By May 30. Please submit the enclosed project description. The response, no more than 2 pages long, will be the basis of a "catalogue" of entries available at the Fair. It will also be used to share with other donors and interested parties.

Please submit your entry(ies) and direct all correspondence to Elizabeth Fox, USAID G/PHN/HN at (703)875-4682 phone; (703)875-4686 fax; and efox@usaid.gov e-mail. Fax is preferred.

Even if your CA is not planning to submit an entry, please feel free to attend and learn what your colleagues are doing in Information Technology. While we are not limiting participation by project, please keep space limitations in mind. We look forward to an exciting event that will contribute to improving our programs.



Duff Gillespie,  
Deputy Assistant Administrator,  
Center for Population, Health  
and Nutrition



Emily Vargas-Baron,  
Deputy Assistant Administrator,  
Center for Human Capacity  
Development

**Agenda for the PHN/HCD Information Technology Fair  
June 11, 1997**

**9:15-9:45:**           **Opening Remarks by Duff Gillespie, Deputy Assistant Administrator, Center for Population, Health and Nutrition and Emily Vargas-Baron, Deputy Assistant Administrator, Center for Human Capacity Development**

**Workstation #1**

10:00-10:20:       INTRAH/PRIME: Tape Talk: Distance Learning Audiocassettes for Low Literate Primary Providers

10:30-10:50:       Management Sciences for Health/FPMD: FRAC: Bringing a Community into the Age of Electronic Networking: The FRAC Micro-network Experience

11:00-11:20:       Management Sciences for Health /FPMD: E-MAIL: Developing and Using E-mail Conferences and Discussion Groups

11:30-11:50:       BASICS BMIS: Information for Program Management: Linking Results with Inputs through an Integrated Management Information System.

12:00-12:20:       AVSC International: Making Connections: Inexpensive Solutions for a Global Intranet

12:30-12:50:       Manoff Group: Omni Flash: Getting Wired for Micronutrients

1:00-2:15:           Panel Discussion/ Lunch

2:30-2:50:           The Futures Group: Building Advocates and Advocacy for Behavior Change and Selling the Health Icon

3:00-3:20:           BASICS Project: Expanding the Impact of Radio through Partnership Between International and Local Broadcasters

3:30-3:50:           The Futures Group: Desensitizing Vasectomy through the Soap Opera

4:00-4:20:           Center for Human Services: Integrated Management of Childhood Illness Computer-Based Training Course

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## **Workstation #2**

- 10:00-10:20: Child Health Research Project: Child Health Research Project Website
- 10:30-10:50: BASICS Project: The Russian Ministry of Health Webpage
- 11:00-11:20: Academy for Educational Development, R&RS: Repro-HEALTH-L
- 11:30-11:50: MACRO International: Distribution of Demographic & Health Surveys
- 12:00-12:20: CIHI WEB PAGE: Internet Presentation of CIHI & its Products, to other Data Sources
- 12:30-12:50: PATH: Interactive Counseling Tools for Reproductive Health
- 1:00-2:15: Panel Discussion/ Lunch
- 2:30-2:50: Education Development Center, ABEL Project: Interactive Radio Instruction
- 3:00-3:20: The Futures Group: Promoting Contraceptive Use through Interactive Radio
- 3:30-3:50: The Futures Group: Pushing the Button on Contraceptive Promotions
- 4:00-4:20: CHS Quality Assurance Project Web Pages

## **Workstation #3**

- 10:00-10:20: Environmental Health Project: Home Page of the Environmental Health Project
- 10:30-10:50: Johns Hopkins University/ PIP: PIP on the Net
- 11:00-11:20: AED LearnLink Project: An Electronic Compilation of Selective AED Learning Resources in Population, Health, Nutrition, Basic Education and Distance Learning
- 11:30-11:50: Johns Hopkins University/ PIP: A Visual Database of Reproductive Health Educational Materials
- 12:00-12:20: Johns Hopkins University/ PCS: PROMENADE: Using Databases in the Management of Large Projects

12:30-12:50: Johns Hopkins University/ PCS: R&E Data Sets Archive: Where the hell is the data.....?

1:00-2:15: Panel Discussion/ Lunch

2:30-2:50: John Snow Inc./ Mother Care: Radio Novella on Safe Motherhood in Bolivia and a Television Spot Promoting the Novella

3:00-3:20: US Pharmacopeial Convention: Electronic Resources for Drug Information

3:30-3:50: Population Council: INOPAL III Homepage

4:00-4:20: Population Reference Bureau: PopNet, The Source for Global Population Information

#### **Workstation #4**

10:00-10:20: JHPIEGO Corporation: Designing an Internet Service for Reproductive Health Information: Reproline Case Study

10:30-10:50: MSH/FPMD: Using Electronic Communications to Improve Family Planning Management: A Demonstration of the ERC

11:00-11:20: EHP GIS MAPPING: GIS Mapping to Support Malaria Control Activities in Zambia

11:30-11:50: AIDSCAP Information Resource System

12:00-12:20: Center for Human Services: The Quality Assurance Kit

12:30-12:50: Center for Human Services: The Interactive Tuberculosis Training Program

1:00-12:15: Panel Discussion/ Lunch

2:30-2:50: JSI /FPPMES: Family Planning Program Monitoring and Evaluation System

3:00-3:20: Center for International Health Information: Health Statistics Database

3:30-3:50: Center For International Health Information: Global Health Data Viewer

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### **Workstation #5**

- 10:00-10:20: JSI/MotherCare: MotherCare Homepage
- 10:30-10:50: Johns Hopkins University/ PIP: POPLINE CD-ROM
- 11:00-11:20: Johns Hopkins University/ PIP: Condoms: A Multimedia Compilation
- 11:30-11:50: AED: PROFILES, Computer Software for Nutrition Policy Analysis
- 12:00-12:20: AIDSCAP: Behavior Change Communication Materials Database
- 12:30-12:50: AED ABEL Project: Democratizing Information Access for Education Statistics with ED\*ASSIST
- 1:00-2:15: Panel Discussion/ Lunch
- 2:30-2:50: The Evaluation Project: EASEVAL: Making Analysis of DHS Data Easy
- 3:00-3:20: JSI/SEATS: Client Contact Estimator
- 3:30-3:50: Institute for Reproductive Health: Teaching Reproductive Health Awareness with Distance Learning

### **Workstation #6**

- 10:00-10:20: JHPIEGO Corporation: Modcal Courseware for Reproductive Health Professionals
- 10:30-10:50: JHPIEGO Corporation: Automated Project Monitoring System (APMS) for Organizational Monitoring
- 11:00-11:20: JHPIEGO Corporation: TeleMentor: Low-cost, Desktop Videoconferencing
- 11:30-11:50: JHPIEGO Corporation: ProTrain: Projecting Family Planning/Reproductive Health Training Needs
- 12:00-12:20: Johns Hopkins University/ PIP: Population Reports Computer Quiz
- 12:30-12:50: Johns Hopkins University/ PCS: SCOPE: Strategic Communication Planning and Evaluation
- 1:00-2:15: Panel Discussion/ Lunch

2:30-2:50: Academy for Educational Development, ABEL Project: Planning for  
Community Participation in Education

3:00-3:20: Environmental Health Project: Community Involvement in the  
Management of Environmental Pollution as Applied in Three Secondary  
Cities in Tunisia

## Table of Contents

<b>Organization</b>	<b>Page</b>
Academy for Educational Development (AED) .....	1
AIDSCAP: Family Health International AIDS Control and Prevention .....	10
AVSC International .....	14
BASICS Project .....	17
Center for Human Services (CHS) .....	25
Child Health Research Projects .....	30
Center for International Health Information (CIHI) .....	32
Education Development Center (EDC) .....	36
Environmental Health Project (EHP) .....	39
Futures Group: EVALUATION Project .....	43
Futures Group: SOMARC Project .....	46
Institute for Reproductive Health .....	52
INTRAH: PRIME Project .....	54
JHPIEGO Corporation .....	56
Johns Hopkins University: Population Information Program .....	65
Johns Hopkins University: Population Communication Services .....	74
John Snow Incorporated (JSI) .....	79
MACRO International .....	87
Management Sciences for Health: Family Planning Management .....	89
Development Project	

## Table of Contents, continued

<b>Organization</b>	<b>Page</b>
The Manoff Group .....	97
PATH .....	100
Population Council .....	102
Population Reference Bureau .....	104
U.S. Pharmacopeial Convention .....	106

J

**Academy for Educational Development**  
**AED**

**Population, Health and Nutrition Center and Human Capacity Development Center  
Information Technologies Learning Fair  
Project Description**

**Title of Entry:** AED Anthology CD-ROM

**Intended Audience/User:** Developing country population, health, nutrition and basic education service providers; International donor organizations; developing country libraries.

**Purpose of Application:** To share some of AED's vast, documented experience and lessons learned in the these fields, and to make these full-text and multimedia materials as readily available as possible.

**Results (if available):** The product is still in the prototype and testing stage and will be released in Summer 1997.

**Cost and Sustainability Issues, Questions, Observations:** Product is being developed in-house by AED (with replication done externally), so costs are minimized. AED will continue to expand on the first version and will issue periodic updates to expand the coverage of materials. Most of the materials will also be made available through AED's World Wide Web site.

**Lessons Learned** (e.g. problems on design/implementation, challenges in developing world): Requires CD-ROM drive that may not always be available. Multi-media materials (audio and video clips) will require adequate multi-media hardware which, although increasingly available in many developing country institutions, may not always be available.

**Future Outlook of Application:** AED hopes that strengthening access to relevant lessons learned through its own experience will help to improve research and program design and implementation in developing country institutions. Every attempt will be made to disseminate the product to as broad an audience as possible.

## INFORMATION TECHNOLOGIES LEARNING FAIR

### **Title of Entry:**

**Democratizing Information Access for education statistics with ED\*ASSIST**

### **Intended Audience/User:**

Human Resource Development Officers within USAID, educational consultants and policy advisors, members of Ministry staffs, international donor staff active in education projects throughout the world.

### **Purpose of Application:**

ED\*ASSIST is a Windows software application that integrates the planning, implementation, and dissemination cycle for the production of quality education data which is relevant, reliable, and timely. By providing customizable techniques and tools, the data collection and reporting cycle can be fast-tracked from years to months. It contains a multi-year data management system for presenting comparable data. The system is designed to produce core indicators (such as access, efficiency, quality, FQL, and outputs) in a variety of formats and geographic breakdowns to meet the data needs of policy makers, managers, and school administrators. The system uses "off-the-shelf" commercially available software and proven U.S. government supported data entry routines.

Also see attached files for a more comprehensive description and background.

### **Results:**

Version 1.0 has been installed in the Ministry of Education in Benin on a pilot basis. Using ED-ASSIST, the Ministry has been able to recover approximately 3 years of prior data and produce comparative reports on the information. ED-ASSIST is being considered for use in Cambodia, Morocco, Ethiopia, Mali, and Mozambique. The modular nature of the program allows portions of existing systems to be used in conjunction with the "standards and practices" built into the software. Additionally, key functionality of ED-ASSIST is being considered for use in other systems that were reviewed recently in several UNESCO sponsored conferences in connection with the Association for the Development of Education in Africa (ADEA).

### **Cost and Sustainability Issues, Questions, Observations:**

The use of "off-the-shelf" software, and supported data entry processes from the U.S. government have lowered the initial cost of this software and increased its sustainability. The generic character of the software means that there is minimal rewrite or reprogramming to achieve approximately 80% of all standard required educational, statistical information. Relatively unskilled data clerks and analysts can produce useable output in a fraction of the time previously required under custom programming approaches. The software is also designed to support decentralization and gender specific reporting. Decentralization increases sustainability by increasing the numbers of persons trained and active in the use of ED-ASSIST techniques and software. Because the implementation period is reduced from a typical 3 year cycle to under 1 year, ED-ASSIST's acceptability to policy makers is increased. The generic character of the software should encourage its common use in a variety of countries, thereby encouraging exchanges of experience and the development of statistical users groups within Africa and other continents or subcontinents.

**Lessons Learned:**

From a tradition of having to be very self-sufficient, many ministries opt immediately for difficult to sustain custom educational systems. Many such systems collapse after a project is over or key staff leave. Many ministries believe that their educational data requirements are very unique--some are, but many remain unsure exactly how many schools and how many teachers are in either the public or private educational system. Most educational users are under represented in the development of educational data systems--the result is that a users' most asked question is often not answered by systems designed and developed solely by specialists. Many statistical systems for education are rendered incomplete or slow by often the simplest elements in the process--for example, obtaining sufficient survey forms, or incomplete training, or too few data entry clerks, or unavailable equipment. Many education statistics systems, developed within the last 10 years, will only, with great difficulty, support effectively decentralization.

**Future Outlook of Application:**

With acceptance by even five major countries, the outlook for broader adoption is excellent. The integrated nature of the ED-ASSIST package (extending down to the survey development and capture level and up to the geographic reporting level) means that lower cost and faster implementation are possible. These are attractive elements for a comparatively small and specialized world of public ministries and units for education. Additionally, key elements of the software can be accessed, updated, and some training provided via the Internet. This will reduce the amount of costly on-site consulting assistance required, and increase the likelihood of better, recurrent training.

**Contact Persons:**

Name: Kurt Moses/ Vivian Toro  
Phone Number: (202) 884-8275/(202) 884-8168  
E-mail Address: kmoses@aed.org/vtoro@aed.org  
Fax number: (202) 884-8466

***Title of Entry: Planning for Community Participation in Education***

***Intended Audience/User:*** Governments, donors, NGOs, consultants - anyone involved in creating a policy, project or program that addresses community involvement in education

***Purpose of Application:*** To provide information on actual experiences with community participation in education based on the strategies, goals, and context of each intervention. Summary case studies are also included for each experience.

- The Strategy section provides information to allow exploration of many examples of community participation organized according to functional categories, such as Teacher Selection or School Management.
- The Context section demonstrates, again through examination of specific examples, why the unique characteristics of each context, such as level of Decentralization or Cultural Attitudes, have to be taken into consideration.
- The Goals section discusses the types of goals that can be addressed through community involvement and the relationship between goal and the strategies employed.

***Cost and Sustainability Issues:*** Requires computers with Windows capability. Disks are inexpensive, and material can be accessed through copying and downloading from the net.

***Lessons Learned:*** There is a need for analysis of the successes and difficulties of using community participation strategies, while all that exists in most cases is a description of what the strategies involve. Although what has worked in one context may not in another, some guidance is needed about the trade-offs involved in adopting any particular approach.

***Future Outlook of Application:*** Plans are to follow up with two future products: (1) "Working with the Community," a similar software program designed to assist in implementing the policy, project, or program in the community, and (2) a model for evaluating community participation in education interventions.

## IT LEARNING FAIR PROJECT DESCRIPTION

### TITLE OF ENTRY:

Listserv REPRO-HLTH-L

### INTENDED AUDIENCE/USER:

Anyone interested in reproductive health issues is welcome to participate.

### PURPOSE OF APPLICATION:

The listserv is designed to facilitate discussion of reproductive health issues. Topics discussed through the listserv include family planning, STDs/HIV/AIDS, breastfeeding, safe pregnancy, adolescents, female genital mutilation, nutrition, and service delivery strategies. The REPRO-HLTH-L forum allows participants to engage in frank discussions of the issues, technical challenges, and lessons learned in reproductive health. Participants are encouraged to discuss and disseminate information relevant to reproductive health topics and to share items such as bibliographic citations, book reviews, meeting announcements, and new research findings.

### RESULTS:

Currently, around 350 subscribers in 12 countries participate in the listserv, which was begun in June 1995. The listserv averages about two messages per week.

### COST AND SUSTAINABILITY ISSUES, QUESTIONS, OBSERVATIONS:

Because only an e-mail account is needed to participate, this is a relatively low-technology application for discussing and learning about current reproductive health issues. The usefulness of the listserv is the responsibility of the subscribers; it is as useful as they make it.

### LESSONS LEARNED:

The listserv is sponsored and managed by USAID and at first the listserv was known only to USAID personnel. It was advertized to USAID's CAS, and to others on a World Bank listserv, and now has a wider audience, which increases its potential for usefulness. There must be enough participants for the listserv to generate exchanges.

REPRO-HLTH-L is a moderated listserv. There are pros and cons for moderating and not moderating listservs, but in this case the slight delay in the relay of messages is preferred as it allows the monitor to screen out messages that are not relevant to the list.

### FUTURE OUTLOOK OF APPLICATION:

As more people have access to the Internet and use e-mail, especially in developing countries, the better the future of the listserv. Its usefulness and number of participants should only increase.

To subscribe to REPRO-HLTH-L, send an e-mail to:  
listproc@info.usaid.gov

Leave the subject line blank and in the body of the message type:  
subscribe REPRO-HLTH-L *Your first name Your last name*  
Example: subscribe REPRO-HLTH-L Jane Doe

You will automatically begin to receive messages. The first message you receive will contain instructions for how to unsubscribe.

**Population, Health and Nutrition Center and Human Capacity Development Center  
Information Technologies Learning Fair  
Project Description**

**Title of Entry:** PROFILES: Computer Software for Policy Analysis and Advocacy

**Intended Audience/User:**

**Audience:** Decision makers

**Users:** Nutrition Advocates and Policy Analysts

**Purpose of Application:** PROFILES uses models developed from the scientific nutrition literature to quantify the consequences of malnutrition, to demonstrate the economic and human benefits of nutrition improvement, and to display these results graphically. This software tool is usually used in a larger process of policy analysis and advocacy. The overall process usually involves the active participation of country level nutritionists and advocates in defining the issues, gathering the necessary nutrition data, agreeing on the model coefficients and assumptions, running the PROFILES simulations and finally formulating and communicating the arguments in the most effective and convincing manner.

**Results:** PROFILES was first used in Bangladesh in 1993 to promote a nutrition project supported by the World Bank and UNICEF. PROFILES was credited with being at least partly responsible for influencing the government's decision to approve the Bangladesh Integrated Nutrition Project. Profiles has since been used in a dozen other countries to support nutrition projects and policy reforms.

**Cost:** The development of the PROFILES software involved approximately 24 person months of technical input from AED and its subcontractor plus additional staff time from UNICEF and the World Bank in the Bangladesh application. Additions and refinements have since involved another estimated 8 person months. In comparison with this relatively costly development, applications of the software and PROFILES process in particular countries are relatively inexpensive, ranging from a few thousand dollars for a simple application with limited documentation and no travel to tens of thousands for a comprehensive application with full documentation and several weeks of in-country technical assistance.

**Sustainability:** Advocacy for policy reform is a long term process requiring continuous inputs over an extended period. It is therefore crucial for success that the PROFILES process becomes a local activity, not reliant on external assistance. This sustainability tends to be proportional to the technical ability of counterparts and to the investment in capacity building.

**Lessons Learned:** Use of the PROFILES software and process has led to identification of the following requirements for successful nutrition advocacy: 1) sound technical analysis of the nutrition policy reform needs; 2) feasible and cost-effective solutions (programs or policies); 3) a credible, honest policy "champion" or counterpart organization; and 4) an effective policy communication strategy.

**Future Outlook:** The nutrition models in PROFILES have been programmed in spreadsheet form. Spreadsheets versions are popular because they allow analysts to see and adapt the PROFILES models and to add new models if required. New models are regularly added to the menu of relationships programmed, as new evidence appears in the literature or as new advocacy priorities develop. To keep up with demand for nutrition advocacy using the PROFILES process, AED is hiring another nutritional epidemiologist to work full time on PROFILES and is developing an in-service training curriculum that combines the principles of nutrition policy analysis using spreadsheet versions of PROFILES with training in nutrition advocacy.

New spreadsheet versions of PROFILES are being developed to perform diverse and specialized functions, such as a) quantifying the economic impacts of breastfeeding at different levels; or b) weighing the under five mortality risks associated with artificial feeding against the risk of HIV transmission in breastmilk (for the lactating HIV+ mother).

**AIDSCAP**  
**Family Health International AIDS**  
**Control and Prevention Project**

**Population, Health and Nutrition Center and Human Capacity Development  
Center  
Information Technologies Learning Fair  
Project Description**

**Title of Entry:** AIDSCAP BCC Materials Database

**Intended Audience/User:** AIDSCAP staff, BCC offices in particular.

**Purpose of Application:** AIDSCAP BCC/IEC materials are documented in this database on the basis of producer, target audience, objectives, literary level and language. Additionally, materials are assessed and monitored, providing BCC offices with the ability to share materials and experiences across the project and to determine future technical assistance needs.

**Results (if available):**

**Cost and Sustainability Issues, Questions, Observations:** Database designed in ProCite because it is basically bibliographic data and because the AIDSTECH BCC database was also a ProCite database. It was easy to learn and customize, but does provide some obstacles--discussed below.

**Lessons Learned (e.g. problems on design/implementation, challenges in developing world):** Database resides in ProCite, providing an obstacle to a relational database system. The data will migrate so it can relate to other AIDSCAP information resources.

**Future Outlook of Application:** Migration to Access or other ODBC product. Continued use as a component in the AIDSCAP information delivery systems.

**Population, Health and Nutrition Center and Human Capacity Development  
Center  
Information Technologies Learning Fair  
Project Description**

**Title of Entry:** AIDSCAP Central Files Index (CFI)

**Intended Audience/Users:** AIDSCAP project documentation managers and other information managers, AIDSCAP staff and program managers.

**Purpose of Application:** Documents and inventories AIDSCAP agreements, documents subproject reporting and deliverables, data sets, communications or other project products. Provides staff with a catalogue of same with access provided on the basis of keywords and/or geography.

**Results (if available):**

**Cost and Sustainability Issues, Questions, Observations:**

See AIDSCAP Subproject Index

**Lessons Learned (e.g. problems on design/implementation, challenges in developing world):**

See AIDSCAP Subproject Index

**Future Outlook of Application:**

Continued and expanded use of the CFI, with particular emphasis on migrating our electronic documents collection with links to CFI.

**Population, Health and Nutrition Center and Human Capacity Development  
Center  
Information Technologies Learning Fair**

**Title of Entry:** AIDSCAP Subproject Index

**Intended Audience/User:** Currently: AIDSCAP staff and interested visitors with queries. Future: FHI IAs, partners and, eventually, web browsers in an abbreviated form.

**Purpose of Application:** Currently: 1) classifies each subproject, 2) provides base information to program managers in tracking various process information, 3) provides responses to focussed inquiries on the basis of geography and/or objectives (keywords)

**Results (if available):**

**Cost and Sustainability Issues, Questions, Observations:** Data are maintained in a PC-based application (MSoft Access), providing opportunity for wide, periodic dissemination across project. More importantly, data can transport on or in various media (CD-ROM, diskette, Internet or Intranet)

**Lessons Learned (e.g. problems on design/implementation, challenges in developing world):** Design should parallel objectives and adapt appropriately; implementation more challenging in the developing world where technology lags. An important constraint has been in training end users, data contributors in a globally distributed environment.

**Future Outlook of Application:** Continued use as a cornerstone of FHI's HIV/AIDS department information delivery systems. Will also provide a legacy of experience and data in HIV/AIDS prevention activities in the developing world. Future enhancements include more widespread dissemination and links to other, related data banks maintained by FHI HIV/AIDS dept., most notably the AIDSCAP subproject abstracts and other tracking and monitoring tasks.

# **AVSC International**

## **Information Technologies Learning Fair Project Description**

**Title of Entry:** Making Connections: Inexpensive Solutions for a Global Intranet

**Intended Audience/User:** IS staff responsible for designing/implementing Internet connectivity from remote sites, and Intranet solutions for sharing Agency-wide information.

**Purpose of Application:** Intranets are providing a means for the sharing of internal information among disparate sites, or to remote users travelling. Our need is to keep field offices "in the loop" about Agency-wide information. We have developed an Intranet Bulletin Board as means of sharing that information. The easiest way to reach a organizational Intranet from a remote site is through the Internet. The cost of quality connectivity to the Internet can be high, and often cannot be justified in the budget of a relatively small field office. While remote users can usually dial into a local Internet Service Provider, a location with several users, who need to share E-mail within the office as well as Internet connectivity to the outside world, cannot provide multiple dial-up Internet accounts, individual modems, or redundant phone lines at a reasonable cost. Dedicated solutions are also expensive, and require onsite expertise to install and maintain. In response to this need - the ability to access our organization's Intranet from small, remote field offices - AVSC International has developed a Standard Configuration for Internet Connectivity, a solution that allows for inexpensive, quality Internet connectivity.

**Results:** Without using expensive hardware (routers, CSU/DSU modems, dedicated or leased telephone lines, communications servers), we have developed a strategy for sharing a single, dial-up PPP or SLIP Internet account among several users. The key element for this solution is what is known as Proxy Software. Proxy Software allows several individuals to use Internet applications (E-mail readers, Web Browsers, FTP clients, IRC Chat clients, etc.) at the same time and through the same, single Internet connection. Our particular implementation for our Proxy Software solution depends on the size of the office. At minimum, it requires a LAN comprised of a 10base-T Ethernet cards in each Windows 95 workstation connected to a small Ethernet hub, and one modem. For larger offices, we also add a Windows NT File/Print Server.

**Cost and Sustainability Issues, Questions, Observations:** The cost of our Standard Configuration is relatively fixed: the cost of each Windows 95 workstation, the software costs, the LAN costs, and the dial-up PPP Internet account with a modem. In larger offices, there is also the cost of a Windows NT server. Most of these offices would have incurred these expenses even without the Internet connection. The implementation includes the services of a local computer consultant who works with an IS staff person

from our headquarters to do the actual installation. The consultant receives the specs for the setup in advance, helps with the purchase of equipment, learns our way of doing business, and is available to the local staff for any help or for disaster recovery. In addition, we elect an appropriate local staff member as office guru. We include the guru in the installation process and train that person in the minor jobs (adding users, troubleshooting , etc.) necessary for maintaining the network. Because Windows NT maintains the same interface as Windows 95, this process is quicker and easier than a UNIX or NetWare solution. Each location provides different problems, but our overall experience has been very positive: users are happy, executive staff are happy, and work gets done.

**Lessons Learned:** Quality Internet connectivity is attainable, with low maintenance and relatively low cost. Small networks can be maintained without a dedicated staff. A good, local computer consultant, properly trained in the computer methodology of your company, is the key to a successful implementation.

**Future Outlook of Application:** Technology changes daily. This solution works today, but may not be adequate for tomorrow's needs. Because of its low cost and low maintenance, our Standard Configuration justifies its installation almost immediately. The hardware will be good for at least 2 to 4 years. The software will be upgraded, and the configuration redefined as necessary. The need for sharing of information, and the best methods for that sharing, will dictate the longevity of the software.

# **The BASICS Project**

Information Technologies Learning Fair  
Project Description

Title of entry:                   **Information for Program Management.**  
                                  **Linking Results with Inputs through an Integrated Management Information System.**

Intended Audience/User:    USAID and Contracting Agencies  
                                  Project Management  
                                  Program and Budget Managers

Though the integrated management information system has been developed to meet the specific needs of one USAID project, it is based on general planning and management elements that apply to projects which cover different technical areas, i.e., family planning, reproductive health, HIV/AIDS, or environmental health. For example, the system currently monitors 82 programs managed by the project, and is built around program objectives (results) and activities (actions). Performance is measured through a core set of indicators. Since the project deals with an increasing number of funding sources, the system tracks the funding mix through obligations for each of the 82 programs. Inputs for 1,700 program activities are summarized by technical and program intervention, and grouped by USAID result as specified in the result frameworks of the Global Bureau and country missions.

Purpose of Application

The integrated BASICS Management Information System (BMIS) is designed to provide project management (Contracting Agencies and USAID) with information about the status of overall project implementation and resource utilization. BMIS also gives program and budget managers detailed information, in a tailored format, about results and sources of funding on both activity and objective levels. Information can be used directly for programmatic and financial decisions.

Results

- Result-oriented program plans based on objectives and activities
- Systematic planning of monitoring and evaluation of programs
- Multi-year budgeting and expenditure tracking
- Use of 50+ standard indicators (quantitative and qualitative)
- Matching technical emphasis with resource requirements (i.e., integrated management of childhood illnesses, immunization, control of diarrhea, treatment of pneumonia)
- Link of project results and resources with result frameworks of USAID country missions and the global bureau
- Detailed resource monitoring by 75+ sources of funding (global bureau core, field support core, designated core, delivery order contracts)
- Quarterly management information and financial status reports

Cost and Sustainability Issues, Questions, Observations

The planned initial development cycle for BMIS was one year, including six months of computer programmers' time. To make this short time-frame realistic and to develop a prototype rapidly, Microsoft Access® was chosen as the computer database management software with Visual Basic® as the programming language. Required program modules with a basic functionality as planned were ready

within one year of program start. Due to a changing environment and increased user demand, development has continued for an additional two and a half years, including twelve months of computer programmers' time and six months of project staff time.

BMIS is designed to assist program planning and management on a macro-level, with the activity as the smallest workplan element. Micro-management of tasks is completed in a separate accounting system. This approach, which duplicates some data entry, keeps the focus on results instead of outputs and processes, and forgoes a higher level of integration between detailed task level planning and result-oriented program monitoring. Future revisions should reconsider this approach.

BMIS provides users with a detailed cost analysis of technical program interventions, and compares different public health aspects of child health and nutrition with resources actually used. While this is useful, BMIS does not allow a fully comprehensive cost-effectiveness analysis, because only USAID's share of costs is included but none of the costs of partner organizations. Measures of effectiveness are limited to outcomes like increases in health worker performance or changes in caretaker behavior, but impact as a reduction of the disease burden cannot be measured in the project's short time-frame.

#### Lessons Learned (design, implementation)

BMIS was designed originally as a simple input and output tracking system following project contract requirements. However, administrative aspects have changed (i.e., sources of funding increased 30-fold), and management must focus more on results rather than program outputs. These changes require a much more complex system than initially planned. Fortunately the system's modular design and adherence to common program elements (objectives and activities) allow for an incremental process of adding new components while still providing access to essential system functions. However, as the system has grown in capabilities, access has slowed considerably, requiring the use of a SQL database server to increase data access and processing.

The growing complexity of the system has also required several levels of access for data manipulation, which are reinforced by a series of check-stops within the information structure itself. Some data cannot be manipulated (i.e., expenditure data directly imported from the accounting system, specific activity codes), while other data can only be changed with confirmation from affected users. However, the system still retains the ability for users to create budgets and simulated money flows, based on current data.

The system itself is very user friendly, though minimal training is required on the information structure and flow.

#### Future Outlook of Application

BMIS is currently designed as a program management tool for use at project headquarters, though pipeline and other program analyses are important for field offices as well. The increased availability of Internet database server technology will provide direct connection to the system's information for all offices—initially as read-only access to standard reports, but later to include user input from the field.

**Population, Health and Nutrition Center and Human Capacity Development Center  
Information Technologies Learning Fair  
Project Description**

**Title of Entry:** MOH Website: Russia

**Intended Audience/User:**

Russian MOH; Oblast (regional) health administrations; doctors; medical researchers and students; International health organizations working with Russians.

**Purpose:**

To exchange medical information between Russia and the world and provide the Russian medical community with immediate access to current Russian-language medical information.

**Results:**

The website was established December 10, 1996 and is managed by Medicine for You (MFY), the Press Service of the Ministry of Health. The site contains a wide range of medical information in Russia in an on-line database, including official MOH documents, technical documents from medical organizations worldwide such as WIIO and the American Academy of Pediatrics, and has 1,000 hits per day as of April, 1997. The MOH is establishing direct database links with its federal departments of Sanitary and Epidemiologic Surveillance and Information and Statistics to provide current health statistics daily. The website is linked to the webpages of several international health organizations and projects, including WHO and CDC.

**Costs and Sustainability Issues, Questions, Observations:** At this point the website -- the information resource -- is established and will be maintained and enhanced by the Ministry of Health. However, the real measure of success is community access -- 1,000 hits per day is admirable, but does not represent 100% access. To institutionalize this access will require enlisting commitments to Internet connectivity from each Oblast health administration, medical school and institution -- a large but not impossible task. Because of the decentralized nature of the Russian health system, the MOH cannot mandate this, but could play a large role in encouraging regional participation. An MOH-donor partnership in this area could yield excellent results, however it seems that no donor project currently has this mandate.

Access can be created for individuals (administrators, doctors) or for the public (medical schools, libraries). To develop a private access site requires a computer, a modem, and a decent telephone connection; to develop a public access site requires several computers, a high speed wire, and a fast modem connection. Costs depend on the level of technology acquired, but can run as low as \$5,000 per site. The MOH is certain that the Oblast health administrations, once routinely using the MFY website, will commit to sustaining their connection. The information and connections provided by the Internet, and the MOH website, will bring Oblast (rural) users out of the rural isolation they suffer as no other technology can.

**Lessons Learned:**

Key factors in the success of establishing the website were MOH interest and commitment,

support from the federal-level medical community, local computer expertise, a counterpart institution with the capacity to maintain and update a website, the existence of Internet nodes (access) across the country, and access to computers by the medical community at large.

**Outlook of the Application:**

The Internet promises a solution to historic barriers to staying informed in Russia: great distances -- up to thirteen time zones -- between parties within Russia alone, not to mention distances to the rest of the world. Russia is experiencing rapid private sector growth which is financing much of the technological revolution in the country. In these circumstances, Internet technology is a relevant solution to Russia's communications problems.

The real success of the application for the health sector in Russia depends on increasing and institutionalizing the connectivity of the medical community. With few funds available at the Federal level and a decentralized system in the Oblasts (regions), development is slow and would benefit greatly from external assistance in coordinating the effort to ensure the institutionalization of the system.

Using the Internet in other developing countries for the dissemination of medical information and connection to colleagues world-wide holds great promise, but will be a slower process where the private sector is not growing as quickly or computerization is less wide-spread.

## INFORMATION TECHNOLOGIES LEARNING FAIR

- Title of Entry:** Creative Use of Radio in Bolivia
- Intended Audience/User:** Caretakers, Health Professionals and Health Policy Makers in Bolivia
- Purpose of Application:** To pilot two innovations using radio broadcasting in support of child health:
- 1) Using actual mortality data in developing a radio drama series
  - 2) Collaboration with VOA on a child health program

### Radio Drama Series - "Los Angelitos"

**Sustainability issues:** In order to create a program that is sustainable, we have involved the community from the very onset of the project. The radio drama series is based on the results obtained from an infant mortality survey that was conducted in an urban area just outside of La Paz called El Alto. Members of the health community were involved in the surveillance efforts (collection of data, interviews with the mothers in their native tongue, group discussions, etc.). The community component is a main ingredient in the overall design of the project, and will remain involved throughout the dissemination of the series and afterwards.

*"Los Angelitos de la Vida"* is the title of a radio drama serial being produced in Bolivia, supported by Basic Support for Institutionalizing Child Survival (BASICS). What sets this radio program apart, is its development from a mortality survey and a collection of illness narratives, conducted on the local level. Although dramatic narratives featuring role models successfully practicing family planning and other health-related behaviors have been used in mass media campaigns and community theater to influence health practices, typically these stories are not systematically grounded in local-level research. The El Alto Mortality Survey, a health surveillance instrument, developed by BASICS and Johns Hopkins University (JHU) - Department of International Health, offers a unique opportunity to further bridge the gap between basic formative research and intervention design.

### BACKGROUND

The mortality survey is a multi-method community-based study of the biomedical, social, and behavioral processes contributing to children's death, conducted in El Alto, Bolivia. Findings of the survey in El Alto, Bolivia, were able to pinpoint exactly on the need for intervention: they indicated that poor quality care within the household, together with inappropriate (and sometimes dangerous) treatment provided through the formal and informal health systems, led in the majority of cases to child deaths which could have been prevented.

Open-ended, qualitative data such as illness narratives, in which mothers tell in their own words how their children died, have considerable potential for guiding the development of effective, community-based, tailored interventions targeting both children's caretakers in the household setting, and indirectly health care providers in the wider system. Based on the analysis of the survey and its illness narratives, BASICS formulated recommendations for intervention strategies which included the production of a radio serial drama for behavior modification aimed primarily at caretakers.

## **DESIGN**

### *Los Angelitos*

When a child dies in Bolivia, it is widely believed that the child continues to live on as a "little angel". "Los Angelitos de la Vida,"--the little angels of life-- was chosen as the overall title of the radio series, in order to remember the children, so that they did not die in vain. The title of the actual story/drama is "El Zambo Angolita" which refers to the main character who becomes a famous soccer star, but has vowed to help save the lives of children in Bolivia due to the unnecessary death of his baby sister when he was young boy.

Radio was chosen as the means of communication, based on the oral tradition of the indigenous populations, wide reach of target audiences, and its popularity in the country as a whole. The agreed upon global objective of the project is to reduce the mortality rate of Bolivian children under the age of five. Specific objectives for the primary target group (families) includes raising awareness of the national scope of the problem at hand, to recognize the danger signs of life-threatening illnesses (ARI, diarrhea, and pneumonia), and to encourage the use of health centers with confidence. The main objective for the health workers is to enhance their inter-personal communication skills and to disseminate correct health information. Mobilization and participation in child survival efforts is expected from the community level.

In the future, BASICS plans to use the Mortality Surveillance tool in other countries and regions, while the radio drama experience in Bolivia will provide a model for using radio in other settings, including rural areas. Partnerships have been formed with UNICEF, ERBOL (national radio network), the district health officials, and USAID to ensure appropriate technical messages.

## **FORMAT**

The serial drama is composed of 50 episodes (one per week). While each drama episode will include some basic health information, our general approach is to use the "Enter-Educate" format, in which the emphasis is on entertainment with messages woven in subtly and naturally and to incorporate an interactive education component in which simple questions and answers dealing with the outlined messages are introduced as a fixed segment of each episode. After every tenth episode, a discussion session is planned after the airing of the drama episode, which will serve as a vehicle for further dissemination and in-depth understanding of correct health information and skills.

## **VOA / BASICS Radio Program:**

The radio series was made possible by a collaboration between BASICS (Basic Support for Institutionalizing Child Survival) and the VOA. A reporter from VOA traveled with a BASICS communications expert and met with BASICS/Bolivia staff to identify critical child survival issues in Bolivia. The reporter then taped nearly twenty-five interviews with health experts, politicians—including the president of Bolivia, Indian women, children, doctors, and nurses. Clips from these interviews were used in the twelve programs.

In this radio series, Indian women and children speak openly about beliefs and practices that affect their health. Many formerly taboo subjects are aired to a national audience. Their comments are paired with responses from health experts and political leaders that bridge the people's concerns with workable solutions to improve health services in Bolivia.

Response to the programming has been overwhelming— newspapers reported on the series and printed excerpts from the programs. Many national and local radio stations rebroadcast the messages, and tapes of the programs are being distributed to requesting health organizations for further dissemination. In October 1996, the twelve-part series won the first place award in the American Republics Division of VOA. In February 1997, the series went on to win the VOA Annual Award for Excellence in Programming in the original script category. Over 200 programs in forty-six different languages competed for this prestigious award.

This type of innovative radio programming allows a closer look at those people who are often only represented as a government statistic. Dramatically, these statistics become real people with real concerns. Listeners can sympathize or relate to their stories. In addition to creating increased awareness of child survival issues in the general population, the programming also establishes a relationship between the media and society— educating the media to look for opportunities to serve their community through such outlets as public service radio programming.

**Sustainability:**

The BASICS/VOA collaboration included detailed documentation of the process of creating these radio messages— reporting, producing, adapting to local settings, and placing the radio programs. These procedures will help in easy replication of the activity in other BASICS countries.

**Center for Human Services**  
**CHS**

Population, Health and Nutrition Center and Human Capacity  
Development Center  
Information Technologies Learning Fair  
Project Description

**Title of entry:** The Quality Assurance Kit

**Intended Audience/User:** Health professionals interested in quality assurance learning and quality assurance tools

**Purpose of Application:** The Quality Assurance Kit was produced by the Quality Assurance Project through a contract with USAID. The Quality Assurance Kit is a computer-based learning tool for quality assurance training that attempts to go beyond traditional management training methodologies. The purpose of this CD-ROM-based application is to provide quality assurance methodologies and tools to health providers and support service staff that can be learned and used with no or minimal instructor assistance. This approach provides the user with greater flexibility and more interactivity than a traditional classroom approach. In this manner, the Quality Assurance Kit offers great possibilities in terms of "effectiveness" of quality assurance technical assistance and training. The Kit demonstrates both the latest technology in multi-media learning and computer-based quality assurance tools (written in Visual Basic computer language). We will allow attendees at the conference to view the Quality Assurance Kit through a demonstration of the interactivities and technical material. We will also present results of the evaluation of the Kit as a state-of-the-art management training tool for providers and support staff in developing country health systems. Finally, we will be able to discuss the Quality Assurance Project's recommendations for improvements in computer-assisted learning for health management and quality assurance training.

**Results (if available):** Results from internal testing of the application have been favorable. Further testing by expert users (i.e. users with previous knowledge and training in quality assurance) is currently underway. These internal tests will fuel any refinements for the current version of the application, especially in the area of QA tool use. Once these refinements are made, the Quality Assurance Project hopes to field test the current version of the application, specifically its Problem Solving "track" and its Quality Design "track" in Uganda. The results of this field test will be incorporated into the full version of the Kit.

**Cost and Sustainability Issues, Questions, Observations:** The Quality Assurance Kit is designed to give users the maximum amount of flexibility in the use of the computer-assisted learning tool. By this we mean that users can enter the program and review QA material, or apply a QA tool (such as a matrix or flowchart) or go through one of the learning "tracks" or courses. This flexibility will be a key to maximizing the use, and therefore the effectiveness, of the Kit as an all-around tool to support a quality assurance

program. Moreover, the CD-ROM can be reproduced for as little as \$1, making its use as a training mode, or a supplement to training, highly cost-effective. Questions as to the exact level of the "effectiveness" of the Kit as a training tool and its costs will be answered by the field test later in 1997.

**Lessons Learned (e.g. problems on the design/implementation, challenges in developing world):** One of the greatest challenges in producing the Quality Assurance Kit was the need to create a flexible environment for users. This created the need for numerous "branches" in the logical progression of the program and added significantly to the complexity of the programming task. It is commonly discussed in the multi-media development industry that one can have, with any given multi-media project, fixed cost, fixed price or fixed quality but not all three. In some ways, the Quality Assurance Project and its developer did, in fact, try to get all three out of this project. In the next version, the Project and its multi-media partner will attempt to put more up-front work in the design of the technical content for the program. In this past project, a rapid development approach (which is a valid approach within multi-media development, if it is handled right) meant that technical content was being developed alongside the program's structure. This type of rapid application development needs to be very strictly managed in order to guard against a project growing beyond its original scope.

**Future Outlook of Application:** The Quality Assurance Project expects that this tool will be an integral part of its quality training and management approach around the world. Field testing of the application is expected to guide the project team in deciding where the Kit fits best in a country's institutionalization of quality assurance.

**Population, Health and Nutrition Center and Human Capacity  
Development Center  
Information Technologies Learning Fair  
Project Description**

**Title of entry:** The Interactive Tuberculosis Training Program

**Intended Audience/User:** Health workers, doctors, nurses and clinical officers in developing countries.

**Purpose of Application:** The Interactive Tuberculosis Training Program was produced by the Quality Assurance Project through a cooperative agreement with USAID. The program is an interactive, CD-ROM-based training application that is designed to train health workers, nurses and doctors in all aspects of preventing, diagnosing and treating tuberculosis in developing countries. The current version, a beta version, allows users to walk through a demonstration of all of the major functional areas of the CD-ROM using an audio guided tour. Users are introduced to Dr. Abad, their instructor, who takes them through the Learning Center and a sample "course" on diagnosing tuberculosis. The course features an algorithm for diagnosing tuberculosis in developing countries, which was developed for the CD-ROM in conjunction with subject matter experts. Users are able to sample the knowledge assessment methodology of the Program through the pre-course review and the post-course test. Users are then able to proceed to the Examination Room, the most interactive of the Program's areas. Here a series of case studies (two case studies for the demonstration version) are presented to the trainee for diagnosis and treatment. Audio, video and graphics all combine to give the user a chance to practice their new skills in a simulated clinic examination room using a set of standard diagnostic tools.

**Results (if available):** Currently, the Interactive Tuberculosis Training Program is in demonstration version and this version has been shown to subject matter experts in the United States, Russia, Africa and to experts with the Global Programme on Tuberculosis at the World Health Organization in Geneva, Switzerland. Continuing refinement of the program will be based on feedback from these subject matter experts.

**Cost and Sustainability Issues, Questions, Observations:** This program addresses a key area for developing country doctors, nurses and health workers, the diagnosis and treatment of adult pulmonary tuberculosis. By approaching the training of tuberculosis case management in an interactive, multi-media setting, the Program attempts to increase the effectiveness of training, as measured by users knowledge of TB and their "competency" in a simulated TB diagnosis environment. In that the CD-ROM can be reproduced for approximately \$1, it also raises the possibility that, in certain teaching environments, the use of the Interactive Tuberculosis Training Program would be highly

**Population, Health and Nutrition Center and Human Capacity  
Development Center  
Information Technologies Learning Fair  
Project Description**

**Title of entry:** Integrated Management of Childhood Illness (IMCI) Computer-Based Training Course

**Intended Audience/User:** Health professionals and district health workers in developing countries.

**Purpose of Application** Under a cooperative agreement with USAID, WHO and UNICEF, Bernhardt, et. al. and the Quality Assurance Project have developed a computer-based training (CBT) program that takes users through the IMCI tutorials, introducing them to the major diseases, symptoms and diagnosis algorithms of the IMCI protocol. The program also tests users' skills once they have gone through the major sections of the protocol. Users receive additional review and explanation in areas where they have demonstrated incomplete mastery. Once a satisfactory level is reached, the player then is presented with an overall competency test on the content of IMCI and receives feedback broken down by content areas. Upon reaching a satisfactory level of learning achievement, the user is presented with a series of nine cases based on actual patients from the IMCI validation trial in Siaya, Kenya. The player must actively assess and treat each patient, receiving feedback after each case. The IMCI computer-based training represents a key training innovation for this important child survival tool and work is continuing on the field test for this program. A Windows 3.1 version is available and a version of the program has just been completed for Windows 95 on CD-ROM. Both will be available at the IT Learning Fair, although the latest Windows 95 version will be demonstrated.

**Results (if available):** Currently, there are no results on the use of the IMCI Computer-Based Training Course. However, a pre-test of the application is planned for mid-July 1997 when the computer application will be added to a training course in Uganda and the feasibility and effect of this addition will be assessed. Following this, a full field test of the application will be designed whereby the cost-effectiveness of a course without the addition of the computer application and a course with the application will be compared. The application has been used and assessed anecdotally in Kenya and Uganda, where facilitators and clinical officers gave positive feedback on the application as a learning tool.

**Cost and Sustainability Issues, Questions, Observations:** Results from the field test, expected in Fall 1997, will guide USAID and the Quality Assurance Project in their assessment of the cost-effectiveness of the IMCI Computer-Based Training Course. Preliminary simulations of the cost-effectiveness of a course with and a course without

# **Child Health Research Projects**

**Population, Health and Nutrition Center and Human Capacity Development  
Center  
Information Technologies Learning Fair  
Project Description**

**Title of Entry:** Child Health Research Project Website

**Intended Audience/User:** Program Officers at USAID; CRS; General Public; Press; Researchers in the US and Developing Countries

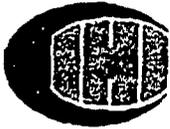
**Purpose of Application:** To Disseminate Project Achievements to a Broad Audience and to Demonstrate Researches Capabilities.

**Results(if Available):** Hit Counter Shows over 1000 Browsers since Inception-Earlier in the year. Guestbook Has Entries From Researchers and Program Officers From Around The World

**Cost and Sustainability Issues, Questions, Observations:** Minimal

**Lesson Learned (e.g. problems on design/implementation, challenges in developing world):**  
Creating and Maintaining a website is quite easy

**Center for International Health  
Information  
CIHI**



**CENTER FOR  
INTERNATIONAL  
HEALTH  
INFORMATION**

1601 N. Kent Street  
Suite 1014  
Arlington, VA 22209

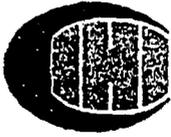
**Title of Entry:** Population, Health and Nutrition Database (PHND)

**Audience:** CIHI provides data and analyses, based on information in the PHND, for program reporting, monitoring and evaluation primarily to USAID's PHNC, both on a continuing and an *ad hoc* basis. CIHI also fills *ad hoc* requests for information and analyses, based on the PHND, from CAs and other individuals and organizations needing statistics and data analysis in population, health and nutrition.

**Purpose of Application:** The PHND brings together in a single database common indicators from a wide range of sources for every country in the world. Primary sources of data in the PHND include the United States Census Bureau, the Demographic and Health Surveys, the United Nations Population Division, the World Health Organization, the United Nations Development Programme, the United Nations Children's Fund (UNICEF) and the World Bank. Data are analyzed and classified for reporting "best estimates" of past, current and probable future situations and trends in PHN. The PHND includes information on population size, growth, age structure and a variety of other demographic variables as well as immunization status of women and children, diarrheal diseases, morbidity, nutritional status and related health services and public health indicators.

CIHI also maintains the PHND to facilitate the production of periodic publications, which include the annual Child Survival reports to Congress and individual country profiles, reviews and briefing papers.

**Future Outlook for Application:** At present the PHND contains data, and CIHI carries out analyses, primarily at national and higher levels of aggregation, but CIHI has plans to expand capabilities to include sub-national units. CIHI also plans to make its services available to a wider audience through the Internet.



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Population, Health and Nutrition Center and Human Capacity Development Center  
Information Technologies Learning Fair

**Project Description**

**Title of Entry:** CIHI Web Site: [www.cihi.com](http://www.cihi.com)

**Intended Audience/User:** CIHI's web site is intended for any person interested in the field of international health, population and nutrition. The site is also geared more specifically for USAID PHNC, regional and mission staff, so that they may have quick and easy access to many of the publications that CIHI has produced.

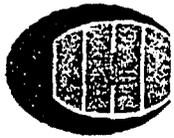
**Purpose of Application:** The main goal of this site is to provide up-to-date information and resources for people engaging in research on the aforementioned topics. The web site links to over forty internet sites that offer a larger picture of the international health world. We also have an on-line order form so that users can request any of our available publications.

**Results (if available):** Measuring results of a web site can be quite difficult because many of the statistical programs available are not completely accurate. We have, however, received feedback from users who have been very impressed with the site's content.

**Cost and Sustainability Issues, Questions, Observations:** The cost of creating, maintaining and hosting a web site can be very expensive. The CIHI web site, however, currently resides on the web server owned by the prime contractor and has not had to incur the expense of hosting or outsourcing the site. The development of this site was the result of work of many CIHI staff members to ensure that the site is up-to-date.

**Lessons Learned (e.g. problems on design/implementation, challenges in developing world):** Because CIHI wants to attract users in the developing world, we have decided not to focus the development of the web site on the new technologies that may be unavailable to users with less sophisticated systems. Many of these new advancements, such as Java, can actually be a hindrance to users who's browsers can not support it. We have learned that we need to focus on the content of the web site more than the aesthetics, but at the same time, the site needs to be sharp, crisp and well designed.

**Future Outlook of Application:** In the near future, CIHI is going to enhance the web site by adding a dynamic, interactive database accessible only to PHNC staff. One step towards this goal includes purchasing our own web server so that we can locally monitor the site. CIHI wants to make the web site as inclusive and informative as possible so that the users have a strong source of information on whom they can rely.



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Suite 1014  
Arlington, VA 22209

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Information Technologies Learning Fair  
Project Description

**Title of Entry:** Global Health Data Viewer (GHDV)

**Intended Audience/User:** PHNC, Bureau and PHN Field Officers, CAs, NGOs/PVOs and the general public

**Purpose of Application:** The GHDV provides a platform to visually compare single time points or trends in data on select population, health and nutrition indicators for countries of the world for the time period beginning in 1980 until the present. The user can view data for one or more indicators at a time and for one or more countries at a time. Data can be viewed in either 2 or 3 dimensions and in bar chart, line graph or pie chart format.

The GHDV allows the user to save scenarios (range of indicators and years and countries) for future easy use. The user can also export graphs and/or data from the GHDV to other software (spreadsheets and word processing software) thus allowing the user to prepare presentations or insert graphs into documents.

**Results (if available):** While beta testing to date has been limited, those who have viewed the software have been very pleased with its flexibility and potential for a wide range of uses.

**Cost and Sustainability Issues, Questions, Observations:** The development of the software has been undertaken through collaboration with PHNC, AFR/SD and CIHI. Once finished beta testing, updates will be carried out either annually or semi-annually as data needs/requirements allow. An education version of the data viewer (based on a similar format) has also been developed by ESDS. The potential exists for future collaboration in creating updates and enhanced versions of the software.

**Lessons Learned (e.g. problems, on design/implementation, challenges in developing world):** While the GHDV has not been widely tested at this point, the general format of the program has been well accepted. Questions arise around how often data can be updated and read/write versions of the data viewer.

**Future Outlook of Application:** Shortly an executable version will be available on diskette free of charge for PHN and other users. It is envisioned that the data viewer will be available to download from the internet (also free of charge). The potential exists for both read and write versions of the software depending on the capabilities and needs of the user.

# **Education Development Center (EDC)**

*Title of Entry:* **Interactive Radio Instruction**

*Purpose of Application:* To improve the quality of learning and development of primary school and preschool children.

*Results:* Interactive radio instruction (IRI) has been used in 17 developing countries over the past 23 years. It has been used in a variety of subjects, including mathematics, language, science, reading, civics, environmental education, health, and adult education. Studies have consistently shown students receiving IRI to outperform students not receiving the radio instruction. Recent applications of IRI have been in the area of early childhood development. These applications use radio and audiocassettes in order to assist caregivers in providing more stimulating activities for children. Studies have shown these activities to be effective.

*Cost and Sustainability Issues, Questions, Observations*

- A study conducted in Bolivia in 1991 showed that, based upon an assumption of reaching 200,000 students, the annual per student cost for IRI was \$1.51 including program development costs. After the program development stage, incremental cost of sustaining use of IRI programs for 200,000 students per year was calculated to be \$.81. In 1996, an estimated 184,490 students followed the Bolivian IRI mathematics series.
- The sustainability of IRI activities has had mixed but generally positive results. Some countries abandoned use of IRI following a pilot study (Nicaragua, Kenya). Some countries have used the original programs for ten years or more (Dominican Republic, Bolivia, Lesotho, Papua New Guinea). Others have not used the original programs but have adopted the IRI methodology for different subjects or audiences (Honduras, Thailand, and Costa Rica). Other countries are just now moving beyond pilot projects to larger scale implementation (South Africa, Pakistan).

*Lessons Learned*

- When radio programs are used to provide classrooms with a significant amount of instruction and not just a minor supplement, teachers use the radio lessons and students do learn.
- The success of IRI depends on careful lesson design informed by content knowledge, audience research, and formative evaluation.
- The use of IRI is increasingly coming within the context of wider, multichannel learning strategies that involve a variety of ways to support education.

*Future Outlook of Application*

- Although IRI has been around for more than two decades, making use of the methodology appears to be attracting fresh interest.
- In many countries, radio continues to be the only feasible technology for reaching large numbers of people on a regular basis.

- The growth of interest in distance education has brought new attention to the educational uses of radio for audiences in and out of school in developing countries.

**Environmental Health Project**  
**EHP**

## **I. T. LEARNING FAIR**

### **Entry from the Environmental Health Project (EHP)**

**Title of Entry:** Community Involvement in the Management of Environmental Pollution (CIMEP) As Applied in Three Secondary Cities in Tunisia: A Video Record

**Intended Audience:** Government officials and NGOs interested in replicating the Tunisia CIMEP experience.

**Results:**

CIMEP—Community Involvement in the Management of Environmental Pollution, an innovative environmental health project initiated in 1995 in Tunisia, has changed the way municipal officials interact with their communities and improved health conditions in the peri-urban or squatter neighborhoods of two secondary cities, Kasserine and Sousse. Through training and practical follow-up sessions that stress communication and dialogue skills, CIMEP creates a cadre of public sector technicians who are able to include client communities in their planning and technical activities.

The video traces the development of CIMEP in Tunisia and covers all phases from assessment to skill building workshops and "practicums" to community-implemented micro-projects and to policymakers roundtables. It is being used in Tunisia to introduce the methodology in municipalities where the Sousse and Kasserine experience will be replicated with funding from the World Bank.

**Cost and Sustainability:**

The video was produced very inexpensively in Tunisia with some assistance from EHP

## **I. T. LEARNING FAIR**

### **Entry from the Environmental Health Project (EHP)**

**Title of Entry:** GIS (Geographic Information System) Mapping to Support Malaria Control Activities in Zambia

**Intended Audience:** Health and environment policymakers and planners and persons responsible for monitoring and evaluation.

**Results:**

The utilization of Geographic Information Systems (GIS) as a tool in EHP activities is an emerging field of expertise. Following its initial introduction, the application of GIS has become a substantial component on a number of projects. EHP is currently conducting GIS work in Kitwe and Lusaka, Zambia, for urban health and malaria prevention and control, respectively; in Eritrea for malaria and dengue prevention and control; and in Blantyre, Malawi, for malaria prevention and control.

GIS is well suited as a tool in the campaign for the prevention of disease. Due to its ability to display data geographically, it can be used to: track cases over time; strategically apply interventions; evaluate treatment protocols; evaluate the location of medical facilities for treatment purposes; and identify environmental factors having a potential impact on the number cases.

EHP has developed base maps for the activities mentioned above, in some cases from scratch, relying on existing map layers developed by other sources and locally obtained hard-copy maps. As these maps are transferred to the field, training takes place to familiarize local counterparts in the operation of the technology. This includes the development of databases and data conversion of health data into a format that can be tied to the electronic map. Among other things this data can be used to show prevalence of disease and the presence of environmental factors which may impact the prevalence.

**Cost and Sustainability :**

The GIS products to date have been produced with modest investments in hardware and software. EHP has worked with two of the three most widely used commercially available software applications, ArcView and Atlas GIS and has produced maps for field use in each. Of critical importance is the precision of GIS map layers in the software prevalent to the region to facilitate the sharing of map information and to enhance sustainability. The hardware and software configurations provided as components of the majority of these activities have also been designed specifically for the local Africa setting.

**Lessons Learned:**

**Future Outlook:**

EHP expects this technology to be used increasingly in disease prevention programs.

**I. T. LEARNING FAIR**  
**Entry from the Environmental Health Project (EHP)**

**Title of Entry:** The Internet site of the Environmental Health Project

**Intended Audience/Users:** AID Washington, USAID Missions and other development organizations.

**Purpose of Application:** To provide information about EHP and disseminate EHP reports, newsletters, and other information.

**Results:** Approximately 500 to 600 organizations use the EHP web site each month. Over 4,000 copies of EHP documents and information are downloaded or viewed each month by users of the web site.

**Cost and Sustainability::** Costs of the EHP web site include the monthly service fee to an Internet Service Provider and EHP staff time in maintaining/updating the site.

**Lessons Learned:**

**Future Outlook:** The Internet will become even more important to developing countries as an information resource in the future.



**ENVIRONMENTAL HEALTH PROJECT**

Visit our Home Page  
<http://www.access.digex.net/~ehp>

1611 N Kent St., Suite 300 Arlington, VA 22209-2111 USA  
Tel. (703) 247-8730 Fax. (703) 243-9004  
E-mail: EHP@ACCESS.DIGEX.COM

**The Futures Group  
The EVALUATION Project**

**Population, Health, and Nutrition Center and  
Human Capacity Development Center  
Information Technologies Learning Fair: Project Description**

**Title of Entry:**

**EASEVAL: Making Analysis of Demographic and Health Survey Data Easy**

**Intended Audience/User:**

Family planning and reproductive health program managers, policy makers, and research analysts. USAID and Cooperating Agency project monitors.

**Purpose of Application:**

EASEVAL is a menu-driven computer software package developed by the EVALUATION Project. It allows users to access directly the Demographic and Health Survey (DHS) data sets without prior knowledge of either the DHS programming language, ISSA, or of statistical programs, such as SPSS. With EASEVAL, the analyst can reproduce all of the findings published in the DHS final report, conduct the same analyses on subsets of the survey sample (such as women living in a specific region), and develop new indicators and simple statistical analyses.

EASEVAL also allows the user to 'import' other population-based data sets, such as the contraceptive prevalence surveys conducted by the Centers for Disease Control. In the case of these non-standard data sets, the user can carry out the same statistical analyses (frequencies, means, cross-tabulations) as for the DHS, but cannot calculate DHS indicators (such as fertility rates, unmet need for contraception, etc.).

EASEVAL is not intended to replace complete statistical packages (e.g., SPSS, SAS, STATA), nor is it designed for extensive analyses. Rather, it allows the user to obtain quick answers to occasional queries without having to transform the DHS into a format compatible with statistical software.

**Results:**

EASEVAL is available on diskette, with an accompanying user's manual. The EVALUATION Project has installed the program in a number of developing countries as well as at USAID Cooperating Agencies, and trained local staff in its use.

Many users find that EASEVAL is sufficient for all of their further analysis needs. Even sophisticated statistical analysts make use of EASEVAL in the preliminary stages of developing a further analysis work plan. Country program managers have reported that EASEVAL training makes them more aware of the utility of large national population surveys, such as the DHS, for their own programming, monitoring, and evaluation.

**Cost and Sustainability Issues, Questions, Observations:**

EASEVAL improves the cost-effectiveness of USAID's investment in large-scale data collection efforts, by increasing the 'pool' of in-country users who are able to utilize the raw data bases.

#### **Lessons Learned:**

Although the user's manual was designed to facilitate self-teaching of the program, the EVALUATION Project has found that hands-on training greatly improves the likelihood that the software will actually be used. A critical mass seems also to be important – it is ultimately more cost-effective to train more several users in fewer institutions than to train a single user each from a larger number of institutions.

#### **Future Outlook of Application:**

A new version of EASEVAL is now in beta-testing, which is based on the latest version of ISSA. It allows better use of computer memory and is essential for analyzing the newer, larger DHS surveys. However, ISSA continues to be a DOS-based program and cannot be run under a WINDOWS environment. Users with Windows95 installed on their computers must shut their computer down and re-start under DOS to run the EASEVAL program. The EVALUATION Project has proposed moving EASEVAL to a WINDOWS platform; however, this will require re-programming ISSA as well.

**The Futures Group  
SOMARC Project**

**Population, Health and Nutrition Center and Human Capacity Development Center  
Information Technologies Learning Fair  
Project Description**

**Title of Entry:** "Building Advocates and Advocacy for Behavior Change"

**Intended Audience/User:** The general public in the Central Asian Republics.

**Purpose of Application:** In Kazakstan, SOMARC needed to bring together the public and private sectors in order to ultimately implement a social marketing scheme. To this end it created Reproductive Health Advisory Boards, comprised of prominent representatives of both groups, whose role it was to provide input to the program and act as a cultural sounding board to deal with sensitive issues. In effect, these Advisory Boards served as the program's public face in dealing with the consumers, media and other influential audiences. SOMARC conducted media and advocacy training which prepared the board members for print and electronic interviews, and developed a video news release which chronicled these efforts. Television and radio stations broadcast interviews with members, as well as certain aspects of the training itself.

**Results:** The Advisory Boards have played an important role in helping to raise awareness of modern contraceptive methods in Kazakstan, and will have an equally significant part in achieving greater acceptance and usage. In the case of the Central Asian Republics, the Boards also represented the first time that representatives of the public and private sectors had ever sat together at the same table to work on a project.

**Cost & Sustainability Issues:** One of the factors which made the use of the Advisory Boards and news releases so attractive was cost effectiveness. The media training was labor intensive, but generated a great deal of exposure for relatively little expenditure in a country with limited media outlets.

**Lessons Learned:** The use of advisory boards has demonstrated the importance of establishing and maintaining a base of local support for SOMARC'S initiatives. Not only do they provide the cultural and political links which are necessary to succeed in a given market, they help to focus the program's efforts and anticipate obstacles.

**Future Outlook of Application:** SOMARC conducted the initial advocacy and media training, created a public relations agency, and trained it in Western promotional techniques. This agency is now capable of duplicating and expanding these initiatives, as well as training others in the Central Asian Republics. By transferring the technology and skills to the local population, SOMARC has ensured that such efforts will continue in the future, and can be initiated and directed internally.

**Population, Health and Nutrition Center and Human Capacity Development Center  
Information Technologies Learning Fair  
Project Description**

**Title of Entry:** "Selling the Health Icon"

**Intended Audience/User:** The Red Apple campaign, in the Central Asian Republics of Kazakhstan and Uzbekistan, was aimed at users of reproductive health services, as well as influencers such as healthcare providers, the media, government and members of the private sector.

**Purpose of Application:** The campaign's purpose was threefold. The initial goal was to generate awareness of modern contraceptive methods under the umbrella of the Red Apple logo. Once this was accomplished, the second goal was to foster widespread acceptance and use of contraceptive services, which in turn would feed into the final goal, sales generation.

**Results:** Thus far there has been a significant increase in public awareness of contraception, surpassing ninety percent.

**Cost & Sustainability Issues:** SOMARC has created a private sector market which can now act as a foundation for building sustainability.

**Lessons Learned:** Instead of the intended contraceptive social marketing project, SOMARC realized that it first had to leverage an almost non-existent private sector in the two republics. By using traditional marketing tools such as television, radio spots, and public relations initiatives, SOMARC created an image for Red Apple which gained recognition and became synonymous with reproductive health services.

**Future Outlook of Application:** Having achieved greater awareness, the Red Apple campaign is looking to use its visibility to affect behavior change, the next step in its three pronged approach toward establishing a firm base for contraceptive marketing.

**Population, Health and Nutrition Center and Human Capacity Development Center  
Information Technologies Learning Fair  
Project Description**

**Title of Entry:** "Desensitizing Vasectomy Through the Soap Opera"

**Intended Audience/User:** Men and women in Jamaica between 28-41 years who do not want to bear any more children.

**Purpose of Application:** By making contraceptive methods, in particular the no-scalpel vasectomy, a topic on Jamaica's most popular television show, "Royal Palm Estate," SOMARC means to spread awareness of and reduce cultural opposition to the procedure.

**Results:** The episodes began running in April of 1997, so quantifiable results are not yet available. They will be monitored through a follow-up omnibus awareness study to determine the impact of the vasectomy series in terms of awareness and attitudes towards the method. There has been increased discussion of issues such as the vasectomy's effect on sexual performance and on relationships.

**Cost & Sustainability Issues:** Costs were minimal. The total price for four episodes dealing directly with vasectomy within the story line, and five which mentioned SOMARC's program (Personal Choice), was \$4,900, and reached about 276,000 people, the largest audience for any local programming.

**Lessons Learned:** In a soap opera, a certain amount of time is required to realistically weave a concept into the plot. One episode generally covers about three days. In order to make an issue credible, some build-up is necessary, and SOMARC learned that other media should be utilized to speak to questions raised by an episode, and which might not be answered immediately because of the structure of the production. The choice of performers who would be dealing with the issue was also found to be important, both on and off the set.

**Future Outlook of Application:** SOMARC hopes to sponsor an additional series of episodes to develop other themes related to the vasectomy, such as acceptance of method after the procedure. It also hopes to enlist the services of the show's stars to promote the procedure outside of the confines of the script, as well as integrating other methods into different programs where opportunities arise.

**Population, Health and Nutrition Center and Human Capacity Development Center  
Information Technologies Learning Fair  
Project Description**

**Title of Entry:** "Promoting Contraceptive Use Through Interactive Radio"

**Intended Audience/User:** Sexually active Ugandans, anyone at risk for HIV/AIDS

**Purpose of Application:** By using the radio format to discuss HIV/AIDS, condom use, and other health issues, the "Capital Doctor" program, started a little over two years ago, sought to reach a wide Ugandan audience without being hampered by the country's low literacy rates. It has succeeded in doing so. Sponsored by SOMARC's "Protector" condom, the show runs every Tuesday evening and features caller questions which are answered by SOMARC-trained healthcare professionals in the studio, with a popular radio personality serving as host.

**Results:** The show has gained wide name recognition even in remote areas, and another popular disk jockey on a different radio network has enlisted to promote the Protector name and host a show similar to "Capital Doctor." Another barometer is the high level of condom sales, which has surpassed ten million annually.

**Cost & Sustainability Issues:** The radio programs have proven very sustainable because of their popularity and the rise in condom sales.

**Lessons Learned:** The use of weekly radio has proven to be a very cost effective intervention. Reputable doctors trained by SOMARC as guests, backed by advertising, have given the program substantial credibility and it in turn has become an important source of information for a high risk population. The program's success has reinforced SOMARC's conviction that traditional marketing initiatives can be an effective means of disseminating information and achieving behavior change.

**Future Outlook of Application:** SOMARC has recently added another popular radio personality, Rasta Johnny, on a different radio station, reaching a different section of Uganda, to promote Protector condoms and host a show similar to "Capital Doctor." By this measure SOMARC hopes to provide information and advice to an even wider audience.

**Population, Health and Nutrition Center and Human Capacity Development Center  
Information Technologies Learning Fair  
Project Description**

**Title of Entry:** "Pushing the Button On Contraceptive Promotion"

**Intended Audience/User:** Sexually active men and women in Peru and Brazil who are potential condom users.

**Purpose of Application:** Television spots were designed to generate trial of new brands of condoms, Piel in Peru, and Prosex in Brazil. In each case the intention was to create a provocative, contemporary image for the new brand which would attract an audience which was already using condoms.

**Results:** Six months after its introduction, Piel became the largest selling brand of condoms in Peru. Prosex is currently being launched, so results are to be determined..

**Cost & Sustainability Issues:** Piel has become a totally self-sufficient product, and Prosex is priced at a point where it will be self-sufficient within one year..

**Lessons Learned:** The Piel campaign reinforced the notion that consumers respond to relevant, contemporary product images which can be conveyed through the existing media.

**Future Outlook of Application:** The television commercials will continue to be an integral part of the marketing mix for each of these products.

# **The Institute for Reproductive Health**

**Population, Health and Nutrition Center and Human Capacity Development  
Center  
Information Technology Learning Fair**

**Title of Entry:** Teaching Reproductive Health Awareness with Distance Learning

**Intended Audience/User:** Organizations providing distant/overseas technical assistance and training.

**Purpose of Application:** To provide technical assistance and training to distant locations without travel and excessive cost.

**Results:** The IRH conducted its Reproductive Health Awareness course with PUCF University in Ecuador using a direct satellite link. The video highlights the benefits and cost-effectiveness of interactive satellite communication and distance education.

**Cost and Sustainability Issues, Questions, Observations:** Distance learning with satellite technology provides a time and cost-effective manner of providing training and technical assistance. With access to appropriate satellite technology, it is an extremely sustainable method of providing educational services.

**Lessons Learned (e.g. problems on design/implementation, challenges in developing world):** The major challenge is access to satellite technology for organizations in developing countries. Additionally, general problems with logistics and getting materials to locations in time for the satellite trainings.

**Future Outlook of Application:** Satellite technology can be used to conduct any number of trainings, conferences, technical assistance and meetings without travel time and expense. Greater use of satellite and computer applications will be a major method of communication as the technology becomes more widespread.

**INTRAH  
PRIME Project**

**Population, Health and Nutrition Center and Human Capacity Development Center  
Information Technologies Learning Fair  
Project Description**

**Title of Entry:** Use of Audio Tape Talk in Training of Low Level Literacy Groups in Underserved Areas of Tanzania

**Intended Audience/User:** Health Attendants in Tanzania, non-professional service providers with no formal training who offer a range of MCH/FP and curative services at health facilities in disadvantaged and underserved areas.

**Purpose of Application:** To support on-site learning by health attendants. The Audio Tape Talks provide application exercises for the learner through a multi-media training approach. This involves a classroom session for introduction of the subject matter and use of the tape talks, followed by practice at the learner's work site. During the practice period, the learner carries out exercises while listening to the tapes. The use of the tapes also encourages the learner who has little or no reading skills to use the accompanying handbook as a reference. If she has difficulty during any part of the exercise, she records this in an exercise book. The trainers and supervisors review the issues in the learner's exercise book with the learner.

**Results:** Not yet available.

**Cost and Sustainability Issues, Questions, Observations:** Initial costs are related to the costs of the tapes and the solar audio tape players, and development/taping of the scripts. Solar panels may need to be replaced from time to time as durability has not yet been established.

**Lessons Learned (e.g., problems of design/implementation, challenges in developing world):** There are several things to consider when planning for and actually taping the script in order for the tapes to be effective learning aides. The language used must be that actually spoken in the area where the tapes will be used. One must also decide whether the voice on the tape should be that of a health professional, radio announcer, or popular entertainment artist.

**Future Outlook of Application:** The approach has a high potential for use in a variety of settings. These include refresher and update courses for service providers, in-service trainers, and pre-service training (PST) tutors. For large pre-service programs, this approach may prove useful for introducing new content areas to students using the tapes as self-instructional materials.

# **JHPIEGO Corporation**

Framework allows examination of program achievements from a variety of perspectives.

**Cost and Sustainability Issues, Questions, Observations:** Installation of the APMS requires an established paper-based monitoring system which is then transferred into and developed as a computer-based system. Training users during the initial development phases must be supported over the long term with ongoing updating/training as the system is tailored to reflect end-user input and refined to meet changing organizational needs.

An organization must be actively using a program monitoring system for it to be effective and this applies to a computer-based system as well. Support from and use by senior management is a key area to ensure the system's use. Funding for computer-programming support and computer equipment are main areas of concern regarding the sustainability of APMS. Like any computer-based system, the APMS requires ongoing maintenance (system back-up, system updating), training, troubleshooting support, and modification over time. The APMS uses the Paradox™ database system; as Paradox™ changes, programming changes may be necessary.

JHPIEGO is currently exploring ways in which the APMS may be adapted to meet monitoring needs of other organizations and projects. It is being customized for monitoring training and research activities in the Family Health and AIDS in West and Central Africa Project.

**Lessons Learned:** An organization must have an established and functioning paper-based program monitoring system to ensure successful computerization of planning and monitoring. Senior management in an organization needs to take an active part in monitoring activities and in using a monitoring system to ensure effective APMS use. There needs to be organization-wide support for standardization through definition of terms and programming processes.

**Future Outlook of Application:** The flexibility of the APMS ensures that it can be responsive to changing organizational needs in monitoring and tracking country and regional programs. The application's strengths are its ability to reflect the planning process for monitoring and to track qualitative as well as quantitative data along with customization to meet a variety of reporting and monitoring needs.

*For more information about this application from JHPIEGO Corporation, contact: Dr. Clayton Ajallo, Phone: 410-614-0575, Fax: 410-614-3458, or E-mail: Clayton@wpo.jhpiego.org*

**Population, Health and Nutrition Center and  
Human Capacity Development Center:**

**Information Technologies Learning Fair  
Project Description**

**Title of entry: ModCal™ Courseware for Reproductive Health Professionals:** computer-assisted learning for reproductive health professionals using interactive multimedia courseware.

**Intended Audience/Users:** ModCal courseware for reproductive health professionals is intended to be used by preservice and inservice training institutions in conjunction with training for physicians, nurses and/or midwives.

**Purpose of Application:** ModCal courseware does *not* replace trainers. It intended to complement or replace formal classroom lecture, and is designed to provide training institutions with another option for course participants to complete the knowledge acquisition phase of a course. ModCal courseware is an extension of the proven competency-based, mastery learning approach pioneered by JHPIEGO and successfully introduced into more than 30 countries. ModCal courseware will eventually cover a range of topics of interest to reproductive health professionals (both service providers and trainers) including at least: most family planning services, infection prevention, postabortion care and training skills.

**Results:** ModCal IUD Courseware, the first offering of the ModCal courseware series has been informally, but extensively tested in a variety of learning environments and with a range of users having varying levels of educational attainment. Initial reaction has been extremely positive and lead to ModCal version 2.1. This latest version has undergone formal beta testing in Zimbabwe with great success. This experience is presented in a technical report available from JHPIEGO. The first routine institutional use of ModCal (version 2.1) is underway now in the Philippines. This small scale implementation (3 institutions) aims to ascertain an optimal pattern for configuring ModCal within a preservice training program. A similar installation of ModCal IUD version 2.1 is slated for Indonesia in late 1997 and early 1998, but emphasis is to be placed on optimizing use of ModCal in both the preservice and inservice learning environments.

**Cost and Sustainability Issues, Questions, Observations:** Development of ModCal Courseware evolved from needs repeatedly expressed by training institutions internationally:

- Provide a cost effective alternative to instructor led lecture for the knowledge acquisition portion of a course using the competency-based, mastery learning model.
- Deliver standardized up-to-date information to large numbers of professionals

ModCal's design (i.e., being self-paced, available anytime/anywhere, and accommodating of multiple learning styles) promotes the process of knowledge acquisition as being learner centered. Its learner-centered approach is believed to create added value as compared to an instructor led lecture in that well designed computer-assisted learning using interactive

**multimedia courseware:**

- **Reduces** learning time needed to cover the same information
- **Increases** the amount of information retained for information covered
- **Increases** learner motivation

In this context, the relative, long term technical and financial sustainability of a ModCal approach to learning verses an instructor led approach is apparent. Compared to creating and maintaining a trainer network, the ModCal courseware approach is: a substantially easier vehicle to update and to use to disseminate information that also provides opportunities for new models of development assistance (technology transfer with public-private sector partnerships); and the more ModCal courseware is used the more affordable it becomes.

**Lessons Learned (e.g., problems/challenges on design/implementation)**

During initial demonstration of ModCal, our experience is that the main issues of concern to our counterparts in the field are:

- **Potential trainer resistance:** is overcome by knowing ModCal helps trainers reallocate their time away from classroom lecture to mentoring/coaching. Also ModCal, built around the mastery learning approach, is already recognized as familiar and effective.
- **Lack of computer experience:** is overcome by knowing that ModCal's well designed, simple interface is easy to use and very intuitive. Also, ModCal comes with an introductory module that explains how to operate the courseware and the computer.
- **Unreliable power supply:** many ask if an unreliable power supply will prevent use of ModCal. With the availability of low cost, battery powered laptops with built in UPS (uninterruptible power supply) systems, ModCal can operate anywhere, anytime.
- **Affordability:** ModCal and its implementation is becoming more affordable each day with the continuing decline in multimedia computer hardware (each serving many learners) prices — now at the \$1200 level. Stand alone CD-ROM devices are even lower cost. Development costs associated with ModCal type courseware (as with well designed printed course materials) is high; but cost of delivery (*unlike information delivered in an instructor led course*) decreases dramatically as the number of learners increases. Consequently, with many learners, overall cost and cost per learner is much lower than for instructor led courses

**Future Outlook of Application:** ModCal Courseware promises to be an effective and cost-efficient approach to the delivery of standardized information to large numbers of reproductive health care professionals.

*For more information about this application from JHPIEGO Corporation, contact: Dr. Clayton Ajello, Phone: 410-614-0575, Fax: 410-614-3458, or E-mail: Clayton@wpo.jhpiego.org*

**Population, Health and Nutrition Center and  
Human Capacity Development Center:**

**Information Technologies Learning Fair  
Project Description**

**Title of Entry: ProTrain®:** Projecting Family Planning/Reproductive Health Training Needs

**Intended Audience/User:** Ministries of Health, Planning, Finance; health development organizations; health training organizations; Medical, Midwifery, Nursing Schools

**Purpose of Application:** ProTrain is a computer-based model designed to project the future number of trained family planning (FP) providers required for a given country or specified area as well as the number of providers who will be available. ProTrain enables governments to compare annual training outputs to projected FP needs, identify gaps in training resources that can best be filled through operations research, and test the effect of alternative training strategies to meet national FP user projections. Various data are collected and entered into the model. The user can then modify selected variables such as "retention rate" or "amount of time spent in FP work" to reduce or eliminate the gap. The process of collecting and modifying the data forms the foundation for developing short-and long-term national training strategies to better meet the projected need for trained FP.

**Results (If available):** The pilot-test of ProTrain in one province in Indonesia shows that training activities, as currently anticipated, will initially yield an oversupply of trained providers to meet the demand for several FP methods, especially in the public sector in that area, but this oversupply will be followed by a deficit in trained providers. If clinical training in these methods were to be provided for midwives at a more steady rate over a 10 year period, the disparities between available and required providers could be lessened. The model also shows how changes in other important factors such as retention rates among trained providers would dramatically affect the gap.

**Cost and Sustainability Issues, Questions, Observations:** ProTrain is most useful when updated and used yearly in major planning exercises both to project future patterns as well as to revise the previous year's assumptions to determine how the human resource profile has changed. A key issue for sustainability of ProTrain as a tool is its use as one component of a training information system (TIS). While it can stand alone, the framework for a TIS ensures that the projections made reflect the existing situation and that training strategies to meet the needs are being implemented. ProTrain needs a constituency (supportive management, responsible unit/staff person) to ensure that it is updated and used and that it is incorporated as a component in a TIS.

Additional sustainability issues center around control of information/data and crossing inter- and intra-ministerial lines of authority for statistics and the maintenance costs once ProTrain is established. And, since this modeling is a complex exercise, both initial training in the use of this tool and longer term support for modeling strategies is needed.

There are a variety questions regarding its sustainability in developing country settings:

- Can ProTrain help determine technical and human resource funding requirements?
- Does ProTrain consider the distribution of providers when analyzing training requirements, and if not, what strategies could be used to address this?
- Where should the responsibility for use of ProTrain reside to ensure its most effective use?
- Who will have "rights" to the data used in the ProTrain projections?
- How to ensure that ProTrain results do not drive policymaking?
- What are the implications if ProTrain analysis shows there are already too many providers trained in an FP method?
- What are the attendant costs of ProTrain in added personnel and support?
- Can use of ProTrain assist in the allocation of resources across health programs?

**Lessons Learned:** Successful use of ProTrain requires the input of many in-country stakeholders. This tool must also be part of a commitment to a training information system.

**Future Outlook of Application:** ProTrain will help set training and service priorities and ensure more efficient use of human resources through development of a comprehensive training strategy to achieve an effective training method mix. Multiple interests and opinions are involved in allocating resources, and the use of this type of tool will improve consensus-building across Ministries and other institutions. Additionally, the portability of the program and its minimum basic hardware requirements can enable decentralized planning to assist in better distribution of resources. ProTrain may be applied to assess training needs for other types of health service delivery as well.

*For more information about this application from JHPIEGO Corporation, contact: Dr. Clayton Ajello, Phone: 410-614-0575, Fax: 410-614-3458, or E-mail: Clayton@wpo.jhpiego.org*

**Population, Health and Nutrition Center and  
Human Capacity Development Center:**

**Information Technologies Learning Fair  
Project Description**

**Title of Entry:** Designing an Internet Service for Reproductive Health Information: **ReproLine®**  
Case Study

**Intended Audience/User:** Reproductive health and family planning professionals and policy makers

**Purpose of Application:** The ReproLine World Wide Web service provides up-to-date scientific information, and graphics that can be used for presentations, on selected reproductive health topics, especially family planning. Trainers can use the service to help them prepare courses; clinicians can find answers to questions on reproductive health; and reproductive health policy makers can find models to use in developing national reproductive health policy and service delivery guidelines or norms.

**Results (if available):** Use of ReproLine is being incorporated in programs to strengthen reproductive health training and services in countries such as Peru.

**Cost and Sustainability Issues, Questions, Observations:** ReproLine is available for free over the Internet to anyone with World Wide Web access. For users with computer equipment and an Internet connection, there are no additional costs unique to ReproLine. ReproLine can be used with relatively modest computer equipment—for computer, modem, and printer, the costs are about \$1,500 US. In a number of countries, Internet access can be obtained for \$20 to 30 US.

Regarding sustainability, the content of ReproLine is derived from print materials that JHPIEGO updates on a regular cycle. Because of this, the ReproLine content will be updated regularly. In addition, JHPIEGO expects ReproLine to help it in distributing new information before new print editions are available.

**Lessons Learned (e.g., problems on design/implementation, challenges in developing world):** Even though the Internet is growing rapidly, there are still areas of the world where Internet access is not readily available. For this reason, the developers of ReproLine plan to offer alternative access methods for the material, such as CD-ROM and e-mail distribution.

**Future Outlook of Application:** JHPIEGO expects continued growth in the number of regions able to access the Internet. For this reason, the content of ReproLine will continue to be expanded and maintained as an information resource.

*For more information about this application from JHPIEGO Corporation, contact: Dr. Clayton Ajello, Phone: 410-614-0575, Fax: 410-614-3458, or E-mail: Clayton@wpo.jhpiego.org*

**Population, Health and Nutrition Center and  
Human Capacity Development Center**

**Information Technologies Learning Fair  
Project Description**

**Title of entry: TeleMentor™:** Low-cost, desktop videoconferencing that supports reproductive health care training and problem-solving in remote areas.

**Intended Audience/Users:** TeleMentor is intended to be used by clinical and non-clinical national training networks by training and service delivery personal.

**Purpose of Application:** TeleMentor is a low-cost, desktop, point-to-point videoconferencing system designed to support professionals working in or interacting with open learning systems. It enables distributed access of specialty expertise usually available only in selected locations to ~~other sites~~ in a system. TeleMentor allows colleagues to exchange information using a *variety of existing telecommunications infrastructure* (regular telephones, local area networks, Internet, and ISDN) through 2-way video and voice transmission, application sharing, chat box, whiteboard communications and remote access.

Globally, competency-based, mastery learning as employed in open learning systems is generally associated with three distinct phases:

- acquisition of knowledge immediately relevant to a skill being learned,
- initial acquisition of skills through practice in a simulated environment, and
- developing and assessing competency through expert coaching and mentoring.

Lack of access to administrative and technical expertise frequently reduces the effectiveness of training and retention, and especially affects the ability to provide coaching, mentoring and followup.

**TeleMentor** offers a cost-effective way to expand access to administrative and technical expertise during and after training. It opens a new avenue for just-in-time training, mentoring, problem solving and post-training support of staff in the use of new skills. **TeleMentor** is ideal for:

- Post-training followup and group discussions.
- Quality assurance activities requiring simultaneous voice and visual inspection capabilities.
- Telemedicine applications facilitating the provision of emergency services by learners who require just-in-time support for clinical services in which they have mastered essential knowledge and acquired initial skills competency, but have minimal

experience.

- Expert coaching and mentoring of professionals in critical technical positions while on the job.
- Sharing of software applications or documents under development between administrative and/or technical professionals.

**Results:** JHPIEGO has installed systems at its offices in Indonesia and the Philippines and is testing effectiveness of transcontinental long distance communication using the system. Preliminary results suggest that the system can be used effectively and reliably using both regular telephone lines and the Internet.

**Cost and Sustainability Issues, Questions, Observations:** The system consists of a camera, microphone, firmware, speaker and software and costs \$1185 for each computer equipped with the system. It can be installed on an existing Pentium computer. Once installed, the system can dramatically reduce communication costs, especially if the Internet is used as the means of communication.

**Lessons Learned:** A simple low cost system that is well integrated into the Windows operating system can increase the effectiveness of training support while reducing the cost of communication and frequently eliminating the need to travel.

**Future Outlook of Application:** As global communication infrastructures improve, video and document conferencing will become standard equipment in every training and service delivery. Integration with the personal computer ensures that data can be exchanged during voice and video communications, a feature that will be considered essential in the future.

*For more information about this application from JHPIEGO Corporation, contact: Dr. Clayton Ajello, Phone: 410-614-0575, Fax: 410-614-3458, or E-mail: Clayton@wpo.jhpiego.org*

**Johns Hopkins University  
Population Information Program  
JHU/PIP**

Population, Health and Nutrition Center and Human Capacity Development  
Center  
Information Technologies Learning Fair  
Project Description

Title of Entry: Condoms: A Multimedia Compilation

Intended Audience/User: Population, family planning, and other health professionals worldwide

Purpose of Application: To provide direct access on compact disc to a unique collection of IEC materials about condoms. Condoms: A Multimedia Compilation demonstrates the integration of video clips, audio segments, full text documents, and bibliographic records into a complete IEC knowledge base.

Almost 6,000 million condoms are being used each year. But more than twice as many-- 13,000 million condoms-- should be used to protect the health and lives of men and women. Closing this gap is a crucial public health challenge. The gap is not in condom production. The gap is in public access to, demand for, and use of condoms. If programs are to achieve their goals of recruiting new adopters and encouraging old adopters, a series of information/education/communication campaigns must be planned and carried out. A knowledge base of information about condoms is already available at JHU/PIP. The purpose of Condoms: A Multimedia Compilation is to disseminate that knowledge to more family planning professionals.

Results (if available): Not yet available

Cost and Sustainability Issues, Questions, Observations: Not yet available

Lessons Learned (e.g. problems on design/implementation, challenges in developing world: One of the challenges in distributing a multimedia CD-ROM to developing countries is locating appropriate equipment for playback. Fortunately, almost all new computers sold are multimedia capable. JHU/PIP maintains a database of family planning organizations in developing countries that are interested in receiving CD-ROM titles. Of those, over 70% have a 80486 or faster PC and 73% have a double speed or faster CD-ROM drive.

Future Outlook of Application: Funding has been requested from UNFPA.

**Population, Health and Nutrition Center and Human Capacity Development  
Center  
Information Technologies Learning Fair  
Project Description**

**Title of Entry: The Population Information Program (PIP) on the Net**

**Intended Audience/User:** The primary audience is individuals and organizations in developing countries who are interested in population, family planning, and related health issues.

**Results (if available):** The Johns Hopkins Center for Communication Programs (CCP) received over 42,000 visits to its Web site in the first three months of 1997. CCP currently receives approximately 5,000 visits per week. The most visited portion of CCP's Internet presence is the full-text version of PIP's *Population Reports*. Also heavily visited and considered one of the most useful features of the CCP web site is the links page 'Guide to Population Related Sites.' Two other major features of the POPLINE portion of the Web site are the POPLINE Search of the Month and POPINFORM, a searchable subset of the POPLINE database. POPINFORM was designed to be a current awareness tool for POPLINE CD-ROM sites. The POPLINE Search of the Month receives about 125 visits per month, and POPINFORM received over 200 visits the first month it was made available.

CCP has documented visits from all over the world including Argentina, Brazil, Egypt, Guatemala, Indonesia, Malaysia, Mauritius, Mexico, Peru, Romania, Russia, Slovenia, South Korea, Thailand, Uruguay, Venezuela, and Zambia.

**Cost and Sustainability Issues, Questions, Observations:** Modern communication technologies, including the Internet, offer health and family planning programs both cost and time savings. PIP is working on ways to use new technologies more efficiently to reach audiences in developing countries. We began this project with a simple do-it-yourself approach using existing staff expertise. The only line item cost was a \$19 monthly charge by an Internet Service Provider.

CCP has recently dedicated one full-time staff member's time to Internet related activities and is working with the Johns Hopkins School of Public Health Information Systems professionals to consolidate our presence and bring all our Internet activities in-house.

**Lessons Learned (e.g. problems on design/implementation, challenges in developing world):**

- **Know your audience:** Who do you want to reach? Where are they located? What computer equipment do they have? What kind of access do they have to the Internet? What kind of materials do they want/need?
- **Have a clear set of goals:** Why put your information on the Internet? How does this fit with the information strategy of your organization? What is the value added over other communication media?

- **Keys to success:** Start with a working group that includes all the departments in your organization. Get feedback from potential users (in advance). Develop 'Internet style guidelines.' Organize your material carefully and logically so that even someone NOT familiar with your organizational structure can find what they need. Start small but have a long-range plan.
- **Promote your Internet resource:** Begin by promoting your resource internally. Use a variety of methods to promote your resource externally including conventional media, electronic mailing list, and cross-links. Register your site and sometimes individual resources within your site with Internet search engines and databases such as Yahoo, Alta Vista, and Infoseek. Advertise with relevant news groups and listservs, but do not forget print media such as newsletters.
- **Maintain and update your site:** While many people think getting a site up and running is the most difficult part of having an Internet presence, we found that it is almost as difficult to keep your site fresh and to keep people coming back. Most importantly, provide material of substance and value such as user assistance, links to and from other resources, educational materials, and a listing of basic products and services. An organization can also add value by providing rapid response to inquiries and feedback.
- **Evaluate your site:** Keep statistics on use and more importantly use this information to plan new resources or new access. Provide ways for users to contact you and to give information about themselves.

**Future Outlook of Application:** The Internet is redefining global communications. The Web provides both a potential wealth of information and a low-cost, creative, easily up-dated way to publicize and distribute informational products and services.

CCP plans to introduce a number of interactive products. These include a demonstration version of SCOPE, an IEC program management tool, and an interactive version of the **Population Reports Quiz** that tests the user's knowledge of facts associated with specific **Population Reports** issues. Also planned are several searchable databases. The links page 'Guide to Population Related Sites' will be soon be searchable by organization name, subject, and full text of the annotated entry and a searchable image database based on items from PIP's Media/Materials Clearinghouse is planned.

PIP remains committed to supplying health and family planning professionals and policy makers with authoritative, accurate, and up-to-date information. The Internet is proving to be an effective way to make PIP's resources more quickly and widely available to developing countries.

**Population, Health and Nutrition Center and Human Capacity Development  
Center  
Information Technologies Learning Fair  
Project Description**

**Title of Entry: POPLINE CD-ROM**

**Intended Audience/User:** Population, family planning, and health professionals and policy-makers in developing countries

**Purpose of Application:** To improve the quality of life and health of people in developing countries by providing health care professionals and policy-makers with information that enables them better to meet the need for family planning and related health care services.

**Results (if available):** In use by 430 organizations in 87 developing countries and Eastern Europe. Each POPLINE CD-ROM site performs an average of 26 searches per month. About 80 new sites are added annually.

**Cost and Sustainability Issues, Questions, Observations:** While USAID funds the production and maintenance of the POPLINE database, the Interregional Branch of the United Nations Population Fund funds the production of POPLINE CD-ROM and half of the user-support activity. This collaboration has ensured a high-quality, comprehensive, easily accessible database.

**Lessons Learned (e.g. problems on design/implementation, challenges in developing world):** POPLINE CD-ROM is a user-friendly system and not difficult to install or use. The two challenges specific to developing countries are: (1) organizations acquiring and maintaining appropriate hardware for its use; an issue that is not part of the POPLINE CD-ROM activity and one in which JHU/PIP can act only in an advisory role, and (2) teaching and assisting sites in the promotion of POPLINE CD-ROM services; ensuring that those who need this type of information know that it exists in their organization.

**Future Outlook of Application:** POPLINE CD-ROM is now available with Spanish and French interfaces; JHU/PIP will analyze use statistics to see if this feature makes an appreciable difference in quantity and quality of use. Technical assistance will be offered on the Internet, i.e. guided help system and listserv.

Population, Health and Nutrition Center and Human Capacity Development  
Center  
Information Technologies Learning Fair  
Project Description

**Title of Entry: Population Reports Computer Quiz**

**Intended Audience/User:** Family planning providers, policy makers, conference attendees, general public.

**Purpose of Application:** A multiple-choice 10-question computerized quiz used as an advocacy tool to increase knowledge about family planning and reproductive health and related topics and to refer quiz takers to relevant issues of **Population Reports** for further reference. Also as an electronic order form to subscribe to **Population Reports**.

**Results (if available):** NA

**Cost and Sustainability Issues, Questions, Observations:** Quiz development is less than \$2,000 per edition. Can be used in a variety of settings and inexpensively adapted for local conditions. JHU/PIP has spun off a version for the ICPD in Cairo in 1994, an Arabic-language version for use in Jordan, and versions for the Habitat Conference in Istanbul and for the Food Summit in Rome in 1996, and for the Internet. Also updated periodically as new issues of **Population Reports** are published.

**Lessons Learned (e.g. problems on design/implementation, challenges in developing world):** Keep the number of questions to ten or fewer. Do not make the questions too long or difficult. (Scores analysis features permit developers to gauge which questions are difficult/easy, which answers are most often selected.)

**Future Outlook of Application:** Could be used as part of a CD-ROM training package. French and Spanish translations could be developed. Versions for specific countries to be used at conferences and meetings will be developed as needed.

**Population, Health and Nutrition Center and  
Human Capacity Development Center:**

**Information Technologies Learning Fair  
Project Description**

**Title of Entry:** Automated Program Monitoring System (APMS) for Organizational Monitoring

**Intended Audience/User:** Cooperating Agencies, health development organizations, health training organizations, organizations interested in monitoring and tracking qualitative and quantitative programmatic information over time.

**Purpose of Application:** The APMS uses programmatic information to support country/project monitoring and program evaluation and also organizes, analyzes, and summarizes this information to meet a variety of needs, from project management to external reporting. The APMS is a set of relational databases and applications; it captures information in a way that allows easy access and manipulation for varied reporting purposes. Aggregation of information is achieved through a powerful querying feature built into the control software. Analysis of information is supported by the database programming language used for software development. Reporting capabilities include routine or periodic summaries, highly specific analyses for project evaluation, and mapping of JHPIEGO's organizational achievements to the AID Results Framework.

JHPIEGO staff utilize the APMS benchmark linking module to monitor and document incremental as well as cumulative achievement on a quarterly/regular basis by linking programmatic information to relevant benchmarks. JHPIEGO-wide use of the APMS provides the means for systematically analyzing and reporting information at all levels of the organization and for external reporting.

**Results (If available):** APMS has been used at JHPIEGO to monitor and track country programs since 1994. Reports for internal audiences are routinely used for quarterly reviews and annual planning. The APMS uses summary data for external reporting for AID and others. It has proven very useful at a variety of levels to track a wide range of information - from the number and type of training activities to the actual start and end dates of activities and information regarding changes in planned activities. On a country program level, the system is effective in assisting program officers to monitor their training programs. On an organizational level, the system allows for the easy and systematic compilation of information into regular and special reports for USAID and other audiences.

The APMS has gone through a number of changes which reflect the input of the users and the changing needs of the organization. The development of a benchmark component to the APMS has allowed JHPIEGO to track progress toward meeting the five objective areas set out in the Fourth Cooperative Agreement between USAID and JHPIEGO. Links between activities and programmatic benchmarks are made by program staff at the project planning stage; these links identify results which are to be achieved in a 2- or 3-year period, and regular monitoring of these benchmarks leads to more effective programming. Additional mapping to the AID Results

Population, Health and Nutrition Center and Human Capacity Development  
Center  
Information Technologies Learning Fair  
Project Description

**Title of Entry:** A Visual Database of Reproductive Health Educational Materials

**Intended Audience/User:** Health education professionals, trainers, materials developers

**Purpose of Application:** The Media/Materials Clearinghouse at JHU/PIP has a unique collection of over 20,000 health education materials from around the world. Access to the collection is provided through a database that until recently was entirely bibliographic in nature. The Clearinghouse began digitizing images of the posters in the collection in 1996. The purpose is to provide visual access to these materials. This will allow development of new materials in a more cost-effective and timely manner and save time identifying suitable existing project materials. A visual database will also be useful as a training and advocacy tool. Over 600 images have been digitized already. By December 1997 4000 posters will be digitized. The Clearinghouse also plans to digitize images of stickers, buttons, t-shirts and campaign materials as well as some flipcharts, cue cards and pamphlets. Initially, access to the database has been provided on site at the JHU/PIP office and through the distribution of mini-databases on floppy disk.

**Results (if available):** No qualitative or quantitative results are available yet. Smaller versions of the database, some with images and some without, are being regularly incorporated into each new version of SCOPE, communication project training software produced by JHU/PCS. Versions now exist for Bangladesh/Nepal, Philippines; Zambia, Zimbabwe and Turkey. A database of UNICEF-produced videos was distributed to UNICEF field offices. A database of AIDS posters was distributed to UNAIDS, the Joint United Nations Programme on HIV/AIDS. A database of the 1,500+ videos in the collection was given to IPPF-London to assist them in cataloging their own video collection. Initial feedback from participants in JHU/CCP workshops who have used the versions in SCOPE recently informed a re-design of the search screen.

**Cost and Sustainability Issues, Questions, Observations:** The primary cost, in addition to staff time, is the cost of digitizing the collection of existing images. On an on-going basis, digitizing can substitute to some extent for 35mm slides. Thus part of the money that would have been spent duplicating slides goes for digitizing images. Once digitized, an image has many more uses--it can be used in the database, on a web site, in videos. The Clearinghouse is also investigating the purchase of CD-ROM writing hardware so that CD-ROMS containing the database, or substantial parts of it, could be produced in-house and distributed on a small scale.

**Lessons Learned (e.g. problems on design/implementation, challenges in the developing world):** Copyright permission must be obtained when developing any database of visual images. In the

future, the Media/Materials Clearinghouse plans to secure permission to digitize and distribute high-quality images at the time materials are acquired. When it is no longer possible to contact the producers of older materials, the Clearinghouse distributes lower-quality images in order to discourage copyright infringements.

The Clearinghouse has found that many developing country organizations are likely to have access to computers with color monitors, Windows software and even CD-ROM drives and are interested in providing access to all or part of the database.

**Future Outlook of Application:** In the short term the Clearinghouse plans to continue to produce and distribute smaller "mini" versions of its database with images, on specific countries and subjects. Several JHU/CCP country offices have expressed interest in having databases in their own offices or resource centers. The Clearinghouse also will be developing a special collection of materials and an image database on female genital mutilation with funding from JHU/PCS. The Clearinghouse will also offer UNFPA country offices versions of the visual databases for each country, on a cost-recovery basis. The Clearinghouse is assessing demand for a CD-ROM containing a database and images on adolescent health. The Clearinghouse will put a small version of the images database on the JHU/CCP web site in the next few months, and will assess the feasibility of and demand for access to the full image database in the future via the world wide web.

**Johns Hopkins University  
Population Communication Services**

**Population, Health and Nutrition Center and Human Capacity Development  
Center  
Information Technologies Learning Fair  
Project Description**

**Title of Entry:** PROMANADE: Using Databases in the Management of Large Projects: Who is doing what?

**Intended Audience/User:** Program officers, Senior Management, and any other personnel that have to manage large, complex projects.

**Purpose of Application:** Large complex projects have the technological capacity to support program management with the creative application of "off the shelf" database software. The John Hopkins University Population Communication Services (JHU/PCS) has developed DB applications which can provide information to USAID and other Cooperation Agencies. PROMANADE which allows regular monitoring of project and output status. The system also allows for the automatic generation of some mandated USAID reports.

**Results:** PROMANADE will be implemented throughout the Center in June, 1997. Feedback based on pre-testing with 15 Program Officers from JHU/PCS was used for project input, search and update enhancements.

**Cost and Sustainability Issues, Questions, Observations:** PROMANADE -- Initial costs include over 16 months of application development, pre-testing, enhancements, and user training. Once implemented, PROMANADE will require continual maintenance as well as creation of specialized reports. Although the investment of time and resources is substantial for implementing PROMANADE, the benefits certainly outweigh the costs. For example, the system will allow for automatic generation of reports and links with other Center databases (ie., Human Resources, Budget Subsystem, M/MC Catalog, and project Expenses Tracking System).

**Lessons Learned:** PROMANADE-- Pre-testing the application with the people who will be using the system the most is crucial, as well as designing and implementing a continual training program. Having Program officers involved in the design process ensured that the application was useable and useful to the people who would be using it the most. Successful implementation of the application will depend on the active endorsements of senior management.

**Future Outlook of Application:** PROMANADE-- an the other center databases will form a data warehouse by which all aspects of project management will be centralized and accessible to JHU/CCP both in country and in Baltimore.

**Population, Health and Nutrition Center and  
Human Capacity Development Center  
IT Learning Fair  
Project Description**

**Title of Entry:**

SCOPE: Strategic COmmunication Planning and Evaluation

**Intended Audience/User:**

Anyone involved with designing, implementing, evaluating and/or advocating for reproductive health programs may find value in using SCOPE. Users include IEC program and project managers and researchers from government organizations, NGOs, donor organizations; policy makers; service providers; and media personnel.

**Purpose of Application:**

SCOPE is an interactive computer software for planning and evaluating health communication programs. The Johns Hopkins University Center for Communication Programs (part of the Johns Hopkins School of Public Health) first developed SCOPE in 1992 as a tool to teach training participants how to apply specific methods and frameworks to information, education and communication (IEC) planning. The computerized exercise had three major advantages over pencil and paper exercises: 1) the computer could store a great deal of quantitative and qualitative data along with descriptive graphics, concepts and photos; 2) since these materials could be easily accessed, the strategy development exercise could use real data already available from actual countries; and 3) access to colorful photobanks and illustrations could stimulate creativity among participants to design interesting activities and storyboards.

SCOPE has now evolved from a simple workshop training exercise to a powerful tool that assists IEC program managers and decision-makers in designing and implementing effective health communication strategies and campaigns. The framework of SCOPE is the P-Process, a five-step communication planning process. The user analyzes real country data from a variety of sources (e.g. DHS, national surveys, World Bank data, etc.). Based on the assessment of the situation, the user then designs an IEC strategy, campaign, and/or activity. SCOPE provides materials development capability, planning worksheets, timelines, monitoring and evaluation tools, linkages with other databases and printing capability for drafting proposals. This software is the first of its kind for health communication.

## **Results:**

To date, 14 country-specific versions exist, representing Asia, Africa, Latin America and the Near East. JHU/CCP has conducted workshops using SCOPE in 15 countries. In addition, workshop alumni who are trained in SCOPE represent 41 countries. Anecdotal evidence from workshop alumni and policy makers who have seen and used this software reveals two key results: 1) an appreciation for the complexity and key role of health communication and 2) a need for a planning tool such as SCOPE to help design and implement more effective health communication campaigns. This software is the only one of its kind and thus, the requests JHU/CCP has received for SCOPE is quite high.

## **Cost and Sustainability Issues, Questions, Observations:**

Recent SCOPE versions can read a wide range of data bases and survey data like DHS data, sample surveys and MIS data bases. This ability makes SCOPE more dynamic as the program construct its own screens instead of relying on predesigned screens. By relying more on existing data bases and survey data, the cost of developing SCOPE country versions has significantly decreased.

Forthcoming are SCOPE versions that users can use for monitoring and planning purposes, taking SCOPE beyond training classrooms. New features would allow users to enter and edit their own data thereby encouraging sustainability and longer life span of the software. SCOPE users would also be able to design and generate standard reports for monitoring and planning.

## **Lessons Learned:**

Our key lesson learned is that computer-based training *is* effective in providing participants with the opportunity to apply immediately, within the context of the workshop, the concepts, principles and skills presented in classroom sessions. It is experiential learning, or learning by doing. By going through the simulation experience with real data, participants gain confidence and skill at applying communication principles effectively. Because SCOPE is user-friendly, prior familiarity with computers has not been an issue, even among participants who have never seen a computer before.

## **Future Outlook of Application:**

To date, SCOPE has been used primarily as a training tool. However, beta testing is currently underway among JHU/CCP workshop alumni for use of SCOPE as a planning tool. To this end, additional modules are under development which will address the more comprehensive needs of an IEC program manager.

**Population, Health and Nutrition Center and Human Capacity Development  
Center  
Information Technologies Learning Fair  
Project Description**

**Title of Entry:** Where the hell is the data.....? (R&E Data Sets Archive)

**Intended Audience/User:** R&E Data Sets Archive--any researcher, student, or policy-maker interested in meta-analysis of JHU/CCP research data.

**Purpose of Application:** Large complex projects now have the technological capacity to support program management with the creative application of "Off the Shelf" database software. The Johns Hopkins University Population Communication Services (JHU/PCS) has developed DB application which can provide information to USAID and other Cooperating Agencies. (R & E Data Sets Archive) has facilitated the archiving and use of data from 38 research projects.

**Result:** R&E Data Sets Archive was initiated in June, 1996. Since then, it has been a useful tool for internal access to JHU/PCS research data. Periodic announcements for available data sets are made on the JHU/CCPO web page.

**Cost and Sustainability Issues, Questions, Observations:** R&E Data Sets Archive --- since this application was developed with "off the shelf" software, the cost for development, maintenance, and enhancements are minimal.

**Lesson Learned:** R&E Data Sets Archive -- having an archive of data sets is just as important as having an archive of project reports or project materials. If organizations collect data, they should be committed to organizing it and making it accessible for further analysis.

**Future Outlook of Application:** R&E Data Set Archives -- will continually be maintained and data will be added as more research is conducted.

**John Snow Incorporated**  
**JSI**

**Population, Health and Nutrition Center and Human Capacity Development  
Center  
Information Technologies Learning Fair**

**Title of Entry:** CCE (Client Contact Estimator)

**Intended Audience/User:** Municipal officials and others concerned with urban reproductive health and family planning.

**Purpose of Application:** The CCE provides an estimate of the number of client contacts an urban family planning program will have to support in the future. It works with the current CPR and method mix and calculates future client loads under varying assumptions of future CPR, method mix, and urban population growth rates.

**Results (if available):** Used to date to create awareness of the future capacity requirements in Bulawayo, Blantyre, and Malawi as part of the 1994 Sub-Saharan Africa Urban Family Planning Study.

**Cost and Sustainability Issues, Questions, Observations:** Given widespread use of computers, purchase of Lotus 1-2-3 software is required. Also, some technical assistance may be needed for start up.

**Lessons Learned (e.g. problems on design/implementation, challenges in developing world):** The usefulness of the program is dependent on the reliability of the input data. Nevertheless, even assumed data provide the user with a dramatic estimate of future capacity requirements.

**Future Outlook of Application:** Second round of Urban Studies (Dakar, Conakry, and other Southern and East African cities will use the approach.

**Population, Health and Nutrition Center and Human Capacity Development  
Center  
Information Technologies Learning Fair  
Project Description**

**Title of Entry:** FPPMES (Family Planning Program Monitoring and Evaluation System)

**Intended Audience/User:** Managers and evaluators of family planning programs.

**Purpose of Application:** The program converts quarterly contraceptive supply data into estimates of contraceptive prevalence rates (CPR) and couple-years of protection (CYP).

**Results (if available):** The FPPMES has proven to be a useful management tool to estimate the prevalence of contraceptive use based on contraceptive commodities distribution. It has been used to track program achievement in between DHS surveys in Zimbabwe since 1992. It has also been applied in Mombasa, Kenya and Blantyre, Malawi in 1993 as part of the Sub-Saharan Urban Family Planning Study. More recently, the FPPMES was installed in the West African Regional Project to track CPR in Burkina Faso, \*

**Cost and Sustainability Issues, Questions, Observations:** Given widespread use of computers, purchase of Lotus 1-2-3 software is required. Also, depending upon experience in data collection and processing, technical assistance in these areas may be required.

**Lessons Learned (e.g. problems on design/implementation, challenges in developing world):** The accuracy of estimates is dependent on the quality, accuracy, and completeness of service data and of estimates of the size of the target population.

**Future Outlook of Application:** Continued use in SEATS and other JSI projects; possible wider use by others including adaptation of the approach to other health outcomes and public health programs.

FPPMES Project Description

Page 2

Results (continued from page 1):

\* Cameroun, Cote d'Ivoire, and Togo. Finally, the approach has been adapted to estimating the achievement and impact of the New York City Tuberculosis Control Program.

Population, Health and Nutrition Center and Human Capacity Development  
Center

Information Technologies Learning Fair

Project Description

Title of entry:

MotherCare Homepage

Intended Audience/User:

The MotherCare Homepage is intended for anyone interested in maternal health issues in the developing world. Users may be in the developing world or may support the field through offices located in donor countries. Other users may include students, universities, and any individuals wanting to learn about safe motherhood issues.

Purpose of Application:

The MotherCare Homepage provides information on the MotherCare Project, its country activities, research projects, and publications. It also provides links to other maternal health projects and international organizations.

Results (if available):

Currently the MotherCare Homepage measures its success through a webcounter and e-mails received from people who have visited the homepage. Users are encouraged to request publications through electronic mail, and MotherCare is increasingly receiving such requests through e-mail. Since January 1997 the homepage has been visited approximately 640 times.

Cost and Sustainability Issues, Questions, Observations:

The major costs for the web page are those associated with time spent on the design and hypertext markup language (HTML). The initial development stage has been completed, and future costs will be associated with time spent updating and increasing information available through the internet. There are also minimal costs associated with maintaining a server. Some considerations for the future depend on accessibility and utilization of the website. Potentially, several MotherCare publications could be made available on-line as separate pages, or through file transfer protocol (FTP) or adobe acrobat. Before time is spent creating such an option, demand must be determined. Information dissemination via internet can reduce significantly both time spent filling publication requests and postage costs. However, the need for tracking publication requests is also important for reporting purposes and has influenced the decision to limit the availability of on-line publications. Developing forms to track such information is possible, but would require

increased labor time.

**Lessons Learned:**

The main challenge at this time is whether or not this application is really accessible in the developing world. In the design process, MotherCare has attempted to minimize the use of graphics so that those using lower speed modems and processors will not have problems loading the page. As the internet expands, however, some of these issues may become less relevant.

**Future Outlook of Application:**

MotherCare will continue using the homepage to provide information on its activities.

Population, Health and Nutrition Center and Human Capacity Development  
Center  
Information Technologies Learning Fair  
Project Description

**Title of entry:**

“Diario de un Destino” -- Radio *novela* on safe motherhood in Bolivia and a television spot promoting the *novela*.

**Intended Audience/User:**

The radio soap opera defines the pregnant woman as the primary audience and the mother-in-law or TBA as a secondary audience. In Bolivia, husbands generally decide whether or not to seek care in the case of complications in pregnancy and are, therefore, also an important target audience.

**Purpose of Application:**

This 60 chapter radio soap opera on safe motherhood teaches women to recognize complications of pregnancy, partum and post-partum periods; when to access health facilities; and what to expect at the health facilities. It also addresses issues of anemia and iron pill intake. This component of the Bolivia IEC strategy is based on results of a Community Diagnosis that was conducted in 1995-1996. The Community Diagnosis identified the family, health services and the media as the three most important channels for finding out information on pregnancy, delivery, the post-partum period, and the neonate. This radio *novela* utilizes mass media (television and radio) to reach broad numbers of people, including those who are illiterate.

**Results (if available):**

Not yet available as implementation has not yet occurred.

**Cost and Sustainability Issues, Questions, Observations:**

The radio program will be broadcast by five Bolivian radio stations, including a rural station with broad coverage. The programs are in Spanish, Quechua and Aymara. The program was developed in country and costs are still under negotiation.

**Lessons Learned:**

Because broadcasting of the radio soap opera is beginning in June of 1997, lessons learned from the implementation are not yet available. However, some lessons were learned in the community diagnosis and have influenced the process of developing the

radio program. During the development process it was decided that although there should be an overarching theme presented in the plot, there should be dramatic situations confronted by the characters, each one dealing with a set of content messages and outcome behaviors. These situations correspond to issues identified in the Community Diagnosis and the communication strategy.

**Future Outlook of Application:**

This application will be implemented in Bolivia starting in June 1997.

# **MACRO International**

**Population, Health and Nutrition Center and Human Capacity Development  
Center  
Information Technologies Learning Fair  
Project Description**

**Title of Entry:** Distribution of Demographic and Health Survey (DHS) Data Files Over The Internet

**Intended Audience/User:** Worldwide/Data Users of DHS Data for Future Analysis/Comparative Analysis Projects.

**Purpose of Application:** To Provide Easy and Free Access To The Data For All Bona-Fide Academic Research Projects.

**Results (If Available):** Contributions to the body of knowledge of comparative reports on Population, Health and Nutrition.

**Cost and Sustainability Issues, Questions, Observations:** Data will be provided free to researchers after they have registered to download the data from the DHS website- [www.macrowt.com/DHS/](http://www.macrowt.com/DHS/)

**Lesson Learned (e.g. problems on design/implementation, challenges in developing world):** While there is limited web access now in many developing countries, it is increasing quickly, and there should be some Web services available in most countries in the near future.

**Future Outlook of Application:** we will continue to add new country Data files to the online archive as surveys are completed and data becomes available.

**Management Sciences for Health  
Family Planning Management  
Development Project**

**Population, Health and Nutrition Center and Human Capacity Development Center  
Information Technologies Learning Fair  
Project Description**

**Title of Entry:**           **Using Electronic Communications to Improve Family Planning Management:  
A Demonstration of the ERC, Presented by James Wolff and Kim Austin**

**Intended Audience/User:**       Reproductive health and family planning professionals including managers, technical staff, program managers, and clinicians around the world.

**Purpose of Application:**

The ERC provides both Web and e-mail users with access to key electronic information related to reproductive health and family planning management in a readily useable format. The design of the ERC is specifically focused on e-mail users because information available via e-mail is minimal and often requires a user to send multiple requests to obtain a single document or piece of information. By accessing the ERC, users are easily able to find a variety of information relevant to health and family planning management in *one place*. ERC members can locate and communicate with colleagues, participate in interactive conferences, share tools and strategies for improving the management of their health and family planning programs, and keep informed about important developments in health and family planning.

The ERC framework is also being used as a model for replication and use by FPMD client organizations in the field. Using the ERC concept, FPMD works with client organizations to identify which electronic communications tools featured in the ERC—conferencing, e-mail directories, document libraries etc.—could be applied to achieve specific goals within their own organizations.

**Results:**

Since the ERC is a new product user results are not currently available, however, we will continually evaluate the product in several ways. We will measure the number of users accessing and using the ERC and where they are visiting from by tracking "hits" on the ERC Web site and tracking how many e-mail users are accessing the various features of the ERC. An ERC Review Board will also be established to review sections of the ERC and to assist us in improving the quality of the ERC and periodic surveys will be distributed to ERC members via the Web and e-mail to learn more about how they are using the ERC.

Finally, FPMD's replication of the ERC model for use in local client organizations provides us with the unique opportunity to get qualitative feedback directly from our colleagues in the field. This feedback is critical to ensuring that the ERC delivers high-quality information in formats appropriate to this new medium.

**Cost and Sustainability Issues, Questions, Observations:**

**Development Costs:** The most significant cost of the ERC has been the initial development cost. These costs include FPMD staff time involved in: conceptualizing the product, designing it to make it useful and user-friendly, and identifying mechanisms to make the maintenance of delivering information to both Web and e-mail users less labor intensive. FPMD's collaboration with SatelLife, a non-profit organization pioneering the use of computer-based communications technology to provide health care workers around the world with affordable access to critical health information has enabled us to do this through electronic communications tools such as GetWeb. GetWeb enables e-mail users to easily obtain Web documents with all of the formatting intact and only requires the ERC Development Team to maintain content on a single Web server rather than on two separate information servers. Once the basic technology for the ERC is in place, the cost of reaching additional users is minimal.

In the future, it will be useful to explore methods of cost recovery that will be affordable and will permit the ERC to maintain the ability to deliver useful, high-quality information while keeping up with new developments in technology.

**End-user Costs:** Once an individual has a connection to the Internet through Web or e-mail, they can access the ERC.

The cost of Internet access, particularly in the developing world, depends on a variety of factors including the quality of a given country's telecommunications infrastructure, the availability of affordable local Internet Service Providers (ISPs), and the fee structures local ISPs offer. For example, some e-mail users are charged for the size (number of bytes) and number of e-mail messages. For this and other reasons, the ERC delivers relatively short documents, filters information, and attempts to give users as much information about each document or piece of information before the user actually makes the request.

**Sustainability:** FPMD's strategy for managing the recurrent costs of operating the ERC is two-pronged: 1) to identify partners (other CA's, health organizations, and local counterparts) to provide content and by putting mechanisms in place that will allow ERC partners to easily add and update the information that they provide; 2) to incorporate the ERC model and lessons learned from developing the ERC into MSH's overall package of technical assistance by providing client organizations with key information about how to effectively use electronic communications technologies (ECT) to enhance institutional capacity.

#### **Lessons Learned:**

The ERC has not been fully launched, however, in the course of developing the ERC there are several lessons we have learned.

- ▶ Providing materials in multiple languages is an essential service given our target audience and the lack of language appropriate material available electronically.
- ▶ Implementing a moderated electronic conference versus an unmoderated conference requires additional human resources and time, however, in most cases it yields higher quality exchanges and does not inundate participants with unwanted messages.
- ▶ Using "off-the-shelf" commercial products is favorable to developing the technology in-house. Many "off-the-shelf" products have "turnkey" features that do not require those who are using or developing the technology to be "UNIX gurus." Mainstream products have the added benefit of being widely available around the world and thus, training for these products is also usually easier to find. Unfortunately (and not surprisingly), there are few commercial products designed with the low-end e-mail user in mind. To meet the needs of these users more customization has been required for the e-mail version than for the Web version of the ERC.
- ▶ Developing and maintaining multiple sets of content formats is difficult and time-consuming. It is very important to identify ways of using the technology to overcome these types of inefficiencies.
- ▶ Keeping pace with the technology is a formidable challenge.

As the ERC is finalized and fully disseminated we will evaluate the ease of use and the quality of the content. We will also document the lessons learned in the technical assistance we provide to client organizations in using ECT and adapting the ERC model for use in local organizations.

#### **Future Outlook of Application:**

We believe that e-mail is going to continue to be an important electronic communications tool in the years to come, especially to our clients in more rural areas where phone and Internet access is poor or non-existent. We will also continue to explore new and emerging technologies as they become available, always keeping the local client organizations in mind and the unique challenges they face as the communications revolution spreads throughout the world. CD-ROM and off-line browsers complete with Internet capabilities, for instance, could be very useful to people throughout the world for both delivering information and offering distance-learning opportunities, thereby expanding the scope of our technical assistance.

**Population, Health and Nutrition Center and Human Capacity Development Center  
Information Technologies Learning Fair  
Project Description**

**Title of Entry:**

Bringing a Community into the Age of Electronic Networking: The FRAC Micro-Network Experience

**Intended Audience/User:**

The FRAC, which stands for the Forum Régional d'Analyse et de Concertation, has been in existence now for tens years. Each year, under the banner of the FRAC, senior level family planning and reproductive health professionals from across Francophone Africa and Haiti come together to discuss issues pertinent to the management of their programs. This forum has been an opportunity for these professionals to share experiences and lessons learned, and to gain exposure to the latest management tools. To date, participation in the FRAC has effectively been limited to only those that have been able to obtain the funding to attend during any given year. This Micro-Network initiative is designed to facilitate this exchange on a more continual basis, drawing in those that have participated in previous FRACs, as well as current and potentially future "FRACceurs". Effectively, the potential audience of this Micro-Network could be envisioned as any Francophone family planning or reproductive health professional working throughout Africa and Haiti. Given the capability of electronic communications to so easily transcend geographical borders, it is even conceivable that the FRAC Micro-Network audience could include other family planning and reproductive health professionals from all throughout the Francophone developing world, and not exclusively Africa and Haiti.

**Purpose of Application:**

The FRAC is a well established and diverse group of Francophone family planning professionals from 14 African countries and Haiti that convenes annually to discuss and share experiences relating to the management of national family planning programs. Into this community, FPMD has introduced the FRAC micro-network, which is based upon affordable electronic networking and conferencing technology, as a way to facilitate the exchange of experiences and lessons learned in the periods between the annual meetings and to allow these professionals to have easy access to valuable sources of information pertinent to their professional work.

**Results (if available):**

Under the USAID Family Planning Management Development (FPMD) Project's FRAC Micro-Network initiative, HealthNet nodes have been established in Mali and Burkina Faso, providing access to the Micro-Network for 7 more FRAC-affiliated organizations that previously had no means of access. Additionally, numerous FRAC participants in Senegal, Madagascar, Haiti, and Kenya have access to the Micro-Network through a variety of

providers and have begun to communicate with their colleagues elsewhere and receive FRAC bulletins via this avenue.

The Micro-Network initiative was debuted during the ninth FRAC in Mali last year, and the methodology of introduction provided FRAC participants with exposure to and opportunities to use the technology and view ways in which it could be used to benefit their programs. FRAC IX attendees were able to participate in a parallel electronic conference on the same topic as that year's FRAC, community management, and interact with e-conference subscribers from over a dozen countries. Additionally, a workshop held during the conference enabled participants to experiment with the Internet and design WWW pages for the FRAC (<http://www.msh.org/fpmd/africa/frac/frac.html>)

### **Cost and Sustainability Issues, Questions, Observations:**

Sustainability of the FRAC in general is a serious concern, though there are many very positive indications that it is likely to remain a viable institution for some years to come. Since full FPMD funding for the FRAC ended in 1994, two more FRACs have been held, in Benin in 1995 and in Mali in 1996. A third is planned for Haiti later this year. While FPMD no longer funds participants to attend the physical FRAC conference or funds its organization, FPMD has committed funding for the development of the FRAC Micro-Network. Additionally, FPMD is seeking the partnership of other organizations and donors to further develop, expand, and maintain the network.

Ultimately, it is intended that FRAC Micro-Network members and partners will become the chief suppliers of content material for the network. Additionally, it is hoped that moderation of the FRAC electronic conference will become the responsibility of designated FRAC members, which will further ensure that ownership and direction of the Micro-Network is in the hands of FRACceurs themselves..

Appropriate and effective training of end users has also been identified as a significant issue for the sustainability of the Micro-Network. FPMD and its partner, SatelLife, are investigating how training for users should best be conducted and how to ensure that users are not simply trained in the operation use of email, but, more importantly, in how the technology could be best used as a tool to aid them in their professional work.

### **Lessons Learned (e.g., problems on design/implementation, challenges in developing world):**

There are many challenges to the introduction of such a micro-network in the developing world. These include the lack or poor quality of telecommunications infrastructure, the level of technological sophistication of the target users, the scarcity of resources (ie. computers, modems, etc), and the adequacy of the technology employed for delivering information effectively to users of different tools of varying sophistication.

In conjunction with the FPMD Publications Unit, designers of the Electronic Resource Center,

and SateILife, the FRAC Micro-Network is being designed and implemented so as to be able to provide the greatest utility to users regardless of whether they have full access to the Internet or only low technology communications tools such as store-and-forward email, or whether they are experienced or novice users of computers. As mentioned above, effective training, not just in the operational aspects, but also in the professional application of technology, has been found to be critically important for enabling users to take advantage of the resources offered by electronic communications.

#### **Future Outlook of Application:**

The establishment of a HealthNet node in Haiti is in progress. It was determined that the existing in-country alternatives for connectivity were not sufficient to allow for the creation of a stable network of family planning and reproductive health professionals. It is planned that the Haitian node will be operational, users connected and trained, and the in-country network mobilized in advance of FRAC X to be held in Haiti in November. An electronic conference on Community Outreach, the topic of this year's FRAC, will then begin several weeks prior to the physical conference, co-moderated by a member of the FRAC X Organizing Committee, and conclude at the end of the actual meeting.

Meanwhile, FPMD will continue to explore ways by which to facilitate the connection of more FRAC members to the FRAC Micro-Network and further develop the mechanisms by which to catalog and deliver information of relevance. From the point of view of sustainability, FPMD is eager to identify partnerships with other organizations and donors that would be interested and capable of providing support to, and participating in, the FRAC Micro-Network.

**Population, Health and Nutrition Center and Human Capacity Development Center  
Information Technologies Learning Fair  
Project Description**

**Title of Entry:**

**Beyond Infrastructure: Facilitating Electronic Forums for Development  
Presented by Donna Monahan, Family Planning Management Development project,  
Management Sciences for Health**

**Intended Audience/User:**

Persons around the world who are interested in participating in an e-mail-based community discussing topics of interest to health and family planning managers in the developing world.

**Purpose of Application:**

While infrastructure issues such as hardware and telephone lines are very important, equally important is training in the use of electronic communications to reach program objectives. This is an effort to help organizations learn to do this, by providing opportunities for hands-on practice and documenting ways in which they might use electronic communications to achieve their objectives. MSH/FPMD is doing the former by conducting electronic forums.

Each electronic forum has its own objectives; however, there are commonalities in process, facilitation and lessons learned. MSH/FPMD is looking at those commonalities as they relate to FPMD's audience and producing documentation to assist organizations in using their available resources to develop and facilitate their own electronic forums.

**Results (if available):**

One analysis of an electronic forum has been completed. COMM-MANAGE was an electronic forum hosted by FPMD that took place from October 7 - November 26, 1996. It was initiated to gather background information on community management of health services for the FRAC conference held in Bamako and was later extended to include interactions with the FRAC participants in Bamako.

COMM-MANAGE was one of FPMD's first attempts at hosting and moderating an electronic forum for an outside audience, and as such has provided us with some lessons we can apply to our future efforts. Lessons learned about the topic were in the areas of facilitating and moderating, language, technical issues, and evaluation.

**Cost and Sustainability Issues, Questions, Observations**

Institutionalization of the use of electronic communications to achieve program objectives depends on many factors, among them:

- Willingness to share information with a global audience
- Adequate training of moderators
- Moderators willing and able to provide training to others within their organizations
- The assurance that, as technology advances, those with low-end systems will continue to be able to interact with persons with high-end technology

**Lessons Learned (e.g., problems on design/implementation, challenges in developing world):**

Many of the lessons learned were common to electronic conference and discussion groups: hone techniques for keeping subscribers involved and interested, provide summaries where possible during the conference, and conduct follow-up in a timely manner. Some lessons specific to facilitating in a developing country context were also learned: language issues must be considered and the forum should be introduced away from a technical setting. The on-site facilitation at the FRAC conference was also crucial to maintaining interest; the experience should be examined to determine if any of the resulting benefits can be achieved through strictly electronic means.

**Future Outlook of Application:**

Research and writing have begun for a Moderator's Guide to Developing and Conducting Electronic Forums, an effort toward helping managers and organizations sort out ideas about using electronic forums to help their programs achieve objectives. Opportunities for providing on-site training in moderation should be explored.

Family Planning Management Development  
Management Sciences for Health  
400 Centre Street  
Newton, MA 02158  
Tel: (617) 527-9202 Fax: (617) 965-2208  
e-mail: [fpmd@msh.org](mailto:fpmd@msh.org)

# **The Manoff Group**

Population, Health and Nutrition Center and Human Capacity Development Center  
Information Technologies Learning Fair  
Project Description

**Title of Entry:**

Getting wired for micronutrients: the OMNI Flash

**Intended Audience/User:**

Public health and nutrition workers worldwide including:

- public health professionals working on USAID funded nutrition and public health programs
- public health professionals working for unilateral and bilateral organizations that support public health and nutrition activities
- government workers and officials in the Ministries of Health or Public Health and other related Ministries including Education and Agriculture.
- non-profit organizations working in the areas of public health and nutrition
- universities working in public health and nutrition
- volunteer workers engaged in supporting public health and nutrition activities such as Peace Corps members
- students of nutrition and public health worldwide

**Results:**

Reach:

Currently, the OMNI FLASH is reaching 750 subscribers worldwide. Of those 750 subscribers, 52% are from North America; 15% are from Africa; 11.7% are from Asia; 9% are from Latin American and the Caribbean; 7% are from Europe and 5.13% are from the Middle East, the Pacific and Eastern Europe.

Requests filled:

In April of this year, 43 requests for materials were received via email in response to the OMNI FLASH. In March, 69 requests were received and filled in response to the OMNI FLASH. Given that the OMNI FLASH announces the availability of publications and other resources, responses to requests for information are clearly demand-driven. This ensures that the materials OMNI is providing to individuals are materials that the user needs and will most likely put to use.

Certain publications announced in the OMNI FLASH are also available in electronic form from the OMNI World Wide Web site. This way users who prefer to receive the electronic form of selected documents have the opportunity to do so.

#### **Cost and Sustainability Issues, Questions, Observations:**

Although connectivity costs vary considerably, electronic mail is generally not an expensive medium of communication, particularly when compared to the costs of sending information via fax or regular postage. Charges for access vary between \$10 and \$100 dollars a month worldwide. Increasingly, countries throughout the world are obtaining access to email in a variety of ways such as via phone lines and satellites. In Latin America and the Caribbean with the connection of Paraguay to the Internet last year, all of the LAC countries have at least some form of connection established. As of January of this year, 23 capital cities in Africa are benefiting from full Internet connectivity. Although only Senegal and South Africa have connectivity outside capital cities, more of their African neighbors are likely to join them in future as more and more communities recognize the benefits and discover a need for this medium.

Important issues regarding the use of electronic mail as a medium for disseminating information in developing countries include:

- how to increase accessibility to the technology
- how to ensure that there is a local pool of experts in-country who are familiar with the technology and can assist those who are attempting to implement it
- caution against pushing the technology where it is not feasible or appropriate
- caution against not taking advantage of the technology where it is feasible and appropriate

#### **Lessons Learned (e.g. problems on design/implementation, challenges in developing world):**

One of the important lessons learned with the OMNI FLASH has been the value of short, concise information. Given that the cost of receiving emails in developing countries may be higher than what we are accustomed to here, if we choose to use electronic mail as a medium, we must take this into account. Sending large quantities of information through email to developing countries is highly inconsiderate and often not appreciated by the receiver.

#### **Future Outlook of Application:**

The outlook of the OMNI FLASH and similar efforts to disseminate information via electronic mail is very good. With increasingly available and accessible technology, public health and nutrition workers can look to this medium more and more as a feasible way for disseminating information. The ideal would be to have the FLASH or similar initiatives originating in-country that disseminate information horizontally across the South.

**PATH**

**Information Technologies Learning Fair  
Project Description**

**PATH (Program for Appropriate Technology in Health)**

**Title of Entry:**

**PATH Interactive Counseling Tools for Reproductive Health (RH)**

**Intended Audiences/Users:**

- 1) RH counselors, outreach workers, peer educators**
- 2) RH clients (15-45 years of age)**

**Purpose of Application:**

- 1. To improve the cost-effectiveness and quality of RH counseling by using interactive tools to train counselors and other outreach staff in appropriate contraceptive and AIDS/STD counseling techniques.**
- 2. To improve client understanding of contraceptive choices and personal AIDS/STD risk reduction strategies.**
- 3. To distribute an interactive counseling support tool for use during RH counseling sessions and as a stand-alone, educational resource.**

**This suite of Windows-based visual aids and decision-making software consists of three components:**

- AIDS/STD RiskAdvisor and RiskTeacher - interactive tools to promote accurate risk perception and foster behavior change. Appropriate for clinicians and clients.**
- Which Birth Control Method is Right for You? - multimedia tools to assist with contraception education and decision-making. Appropriate for clinicians and clients.**
- How To Use A Condom Correctly - three alternative methods for teaching condom use: a cute animation, illustrated step-by-step instructions, and common questions and answers. These functions are also available at PATH's website ([www.path.org](http://www.path.org)).**

**RiskAdvisor has been translated into Bahasa Indonesia and Tagalog. The English version is being used by many groups worldwide.**

**Which Method is still in the beta stage of in-house testing and field testing.**

**Results of Evaluations and Lessons Learned:**

**Evaluations conducted in Seattle, USA and Manila, Philippines among individuals with high risk behaviors found that:**

- **counselors find that the program facilitates assessment of behaviors and client needs and improves communication about reproductive health issues;**
- **clients are intrigued by the interactivity of the software and by the multimedia elements;**
- **clients perceive the computer to be non-judgmental and are more willing to be honest in their answers to sensitive questions;**
- **the graphic “risk meter” in RiskAdvisor is a powerful visual aid; and**
- **clients place high credibility what they read on the computer screen.**

**Future Outlook of Application:**

**The USAID-funded PRIME project (managed by INTRAH) will support adaptation of RiskAdvisor for Spanish-speaking youth. PRIME may also support adaptation of Which Method.**

**PATH is exploring partnerships with health departments and PVOs in US cities to adapt and introduce RiskAdvisor, Which Method, and How to Use a Condom.**

**PATH is seeking additional partners for international adaptation and introduction.**

# **Population Council**

**TITLE:** The Population Council's INOPAL III Homepage - Reaching a Far Flung Audience

**INTENDED AUDIENCE/USER:** Program Managers/Directors at US-based Cooperating Agencies, PHN Staff, Bureau Staff, Mission Staff and International NGOs.

**PURPOSE OF APPLICATION:** To provide access to information about the INOPAL III Operations Research/Technical Assistance Project to a wide audience in the US, Latin America and around the world.

**(PRELIMINARY) RESULTS:** Feedback to initial efforts is positive. Audience would like to see more technical information (reports, data and instruments) available directly from the home page.

**COST & SUSTAINABILITY ISSUES:** Start up costs are quite small. Ongoing time commitment needed to update homepage and deal with technical problems that may arise.

**LESSONS LEARNED:** Use of graphics and fancy interfaces should be minimized to save download time and make homepage accessible to users with limited technology. On the other hand, more information should be downloadable directly from the website (as opposed to information that can be "ordered" using a form on the website). "Publishing" on the internet involves many of the same editing and formatting tasks as traditional publishing, as well as some new technical complications. Links to other websites help to avoid duplications of efforts and encourage users to continue accessing the site.

**FUTURE OUTLOOK:** The homepage will play a key role in the INOPAL III dissemination strategy. More information will be downloadable directly from the page, and a larger audience will access the page on a regular basis. However, the homepage will not replace traditional dissemination tools; instead, it will complement them.

# **Population Reference Bureau**

**Population, Health ;and Nutrition Center and Human Capacity Development  
Center  
Information Technologies Learning Fair  
Project Description**

**Title of Entry:** POPNET, The Source for Global Population Information

**Intended Audience/User:** People interested in a wide variety of topics within the area of population.

**Purpose of Application:** To offer a clearinghouse of population-related sites in the web. The sites are divided into different categories, there's a clickable map and a keyword search.

**Result (if available):** New, results not yet available

**Cost and Sustainability Issues, Questions, Observations:**

**Lessons Leaned (e.g. problems on design/ implementation, challenges in developing world):**  
Kinds of technology available in different areas and by different users.

**Future Outlook of Application:** Continue to expand the base of entries with an increased emphasis in LDCS

# **U.S. Pharmacopeial Convention**

**Title of Entry:** Electronic Resources for Drug Information

**Intended Audience/User:** Government Administrators, Physicians, Pharmacists, Drug Sellers, NGOs (Non-Government Organizations)

**Purpose of Application:**

1. To provide local access and adaptation of drug information for different countries
2. To collect data on drug information queries
3. To provide patient counseling

**Results:**

Locally specific drug information products and/or programs designed to inform health care practitioners and consumers about the composition of pharmaceuticals, indications, contra indications, side effects, dosage amounts and forms available, precautions, and storage conditions required in Nepal and Russia. For example:

- A Nepal-specific adaptation of the USP drug information database
- Russian book on psychotropic drugs
- Patient education and information activities in Nepal conducted by local organizations

**Cost & Sustainability Issues, Questions, Observations:** The development of these products is financially supported by USAID and USP through the Rational Pharmaceuticals Management Project. The objective is to provide information products that require a minimum of maintenance yet continue to provide valuable, useful and modifiable drug information. Each country will be able to sustain their drug information activities by creating spin-off products that can generate revenue, e.g., regional or hospital formularies, drug information bulletins, patient information leaflets, etc. The drug information resources are managed by drug information centers within a variety of institutions, e.g., Ministries of Health, teaching hospitals, government hospitals, professional associations and NGOs. It is anticipated that local government or philanthropic support can be generated by demonstrating the demand for information being fulfilled by the centers.

**Lessons Learned:** Our biggest obstacle has been communication with local counterparts. Distance, language and cultural differences have been at the root of many delays. As with many programs, a feeling of local ownership is slow to develop. Greater local participation in needs assessment and workplan creation are recommended, and will be more fully incorporated in future activities.

Products with practical applications built in, as opposed to academic products, are needed.

USP counterparts can identify the purpose of information products, but they are by and large health care planners and providers; they do not have technical computer skills. Such skills, taken for granted in the U.S., are rare in Nepal and Mozambique. Instructions for installation, adaptation and use must be developed for each product. "Help" functions may need to be created for particular programs.

**Future Outlook of Application:**

USP will expand the access to its drug information database to Mozambique through a Portuguese translation provided through the University of Sao Paolo. Plans are to develop at least three drug information centers: one in Maputo, and two in outer provinces.

Training needs to be developed to assist counterparts with the creation of their own products, such as locally derived formularies.

In addition, the applications are being examined for ways they can be used to support specific health care interventions in developing countries such as integrated management of child illnesses (IMCI), tuberculosis and malaria control, and emergency obstetrics.