

PDABG 167

83022

**Clearinghouse on Development
Communication**

SEVENTH SEMI-ANNUAL REPORT

MARCH 1992

Clearinghouse on Development Communication

Seventh Semi-annual Report

September 1st, 1991 - February 29th, 1992



**Clearinghouse on
Development
Communication**

Institute for International Research
1815 North Fort Myer Drive
Arlington, VA 22209 USA
Telephone: (703) 527-5546
Fax: (703) 527-4661

Sponsored by the U.S. Agency for International Development, Bureau for Science & Technology, Office of Education

To: Mr James Hoxeng, R&D/Education

From: Mr Mike Laflin, Project Director

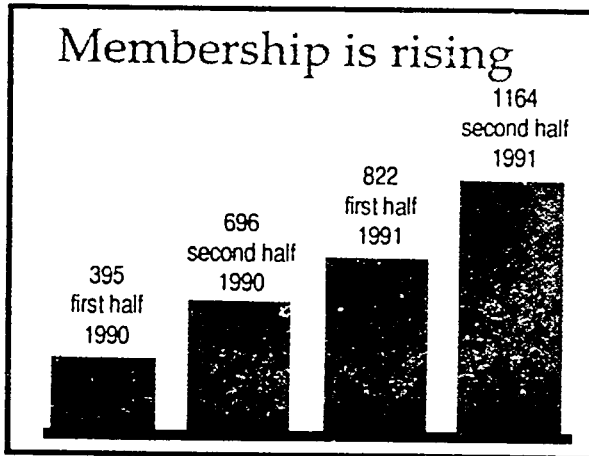
Seventh Semi-Annual Report on the Clearinghouse on Development Communication

I am pleased to submit the semi-annual project report on activities for the recently completed semester. The CDC continues to flourish and to provide much-needed services to our overseas users. As you know, our initial emphasis was on measures to improve internal efficiency. Our continuing emphasis is on extending the range of ways to reach people in remote locations. Now, our emphasis will be on extending the number of mass produced products (as opposed to individualized research services) that we have to offer our users. We enclose a draft of one such product, a practical monograph on producing radio drama, which is currently being reviewed by our Advisory Committee.

March 1992

6600 members: who are they?

- 80% live in developing countries.
- 636 work for A.I.D.
- About two-thirds work in communication.
- About half work in education and training, about a quarter in health and population, and about 20% in agriculture.
- 80% work in administration, planning, evaluation or production.
- 11% work in universities and other formal education institutions.
- Two-thirds work with print media and about one-third with radio. About 15% work with TV or video. 13% work in journalism or mass media.



Clearinghouse services include:

- information and research services
- publications
- technical assistance services
- referrals to other sources of information
- a 15,000 volume library facility
- an electronic bulletin board service

**The Clearinghouse is
located at**

**1815 North Fort Myer Drive, #600,
Arlington VA 22209, U.S.A.**

Telephone: (703) 527-5546
Fax: (703) 527-4661

**BBS: (202) 296-7778 (2400 baud) or
(202) 466-5353
(1200, 9600, 14400 baud)**

Clearinghouse on Development Communication

*The Clearinghouse focuses on
development communication applications
in the fields of education, agriculture, health,
environment, nutrition and community
development — especially those programs
designed to reach large numbers of people
with information and specific skills aimed
at improving their quality of life.*

Sponsored by the
U.S. Agency for International Development
Bureau for Research and Development,
Office of Education
Tel: (703) 875-4490



The Clearinghouse services are available to planners and practitioners who make use of communication or who work in the development communication profession.

Services are free to people in developing countries. There is an annual subscription of U.S.\$10 for users in the industrialized countries, which includes the quarterly journal, "Development Communication Report".

Information Search Services

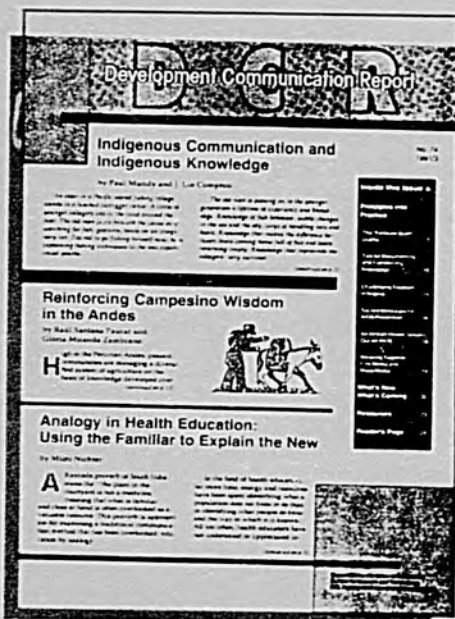
CDC members may request individual information services. These have included:

- environmental education materials;
- information on radio for rural development in Africa and Asia;
- financing telecommunications products in the Third World;
- folk media and traditional knowledge in development communication;
- visual materials for women in primary health care and family planning.

Recent CDC Publications

- Communicating Through Characters: Radio Drama and Behavior Change; February 1992: 82 pp.
- A.I.D. and Development Communication; October 1991: 16 pp.
- The Role of Telecommunications in Guatemala's Development, January 1992: 59 pp.
- Bibliography on Distance Education.
- Directory of Training and Study Programs in Development Communication.

A complete catalog of publications is available.



What some of the 32,000 readers say about the DCR

"...very informative, relevant, and useful in my radio program for our extension workers..."

Susan T. Banah, Radio Station DXMU-AM, Central Mindanao University, Philippines

"I find it an extremely useful issue for my work and will keep it nearby as a handy reference tool."

Maria Ng Lee Hoon, I.D.R.C., Singapore

"I would like to congratulate you on the new face of the DCR..."

Julia Mora, Multicentro, Cali, Colombia

"...it will be useful to health administrators and researchers in setting up a new project..."

Mal Aduma Hassan, Family Health Center, Hong Kong State, Nigeria

"I deeply appreciate specificity of the articles, the worldwide orientation, and the succinctness of the writing."

Prof. Don Ely, Syracuse University

"We propose to you to send copies to our women leaders at district level so that such information could easily be transferred to our rural groups of women."

Paul Odemei, Uganda Women Tree Planting Movement, Kampala, Uganda

"...not only we would use the past issues to prepare the social communication course, but that we should bring your quarterly to the attention of our professional media course participants..."

Robert Brunwin de Jong, Radio Nederland Training Centre, Hilversum, The Netherlands

OUTREACH ACTIVITIES

1. "Information with legs..."

We said in our proposal that we would try to provide "information with legs", an information service that reached out to people overseas rather than sat in Washington and waited for people to come to the Clearinghouse. While all CDC operations have continued as before, this period has seen several new initiatives to reach out come to fruition.

The CDCNet Bulletin Board is now operational and has 94 subscribers.

The library electronic database has been put on CD ROM and is now part of the A.I.D. library service to Missions.

A letter has been sent to 217 A.I.D. staff members overseas, reminding them of CDC services and asking them to nominate up to 10 new overseas members for the mailing list, people whom they believe would benefit from receiving the DCR. Several have responded.

The Clearinghouse was invited to make presentations on rural radio at meetings with U.N. agencies in Rome and with UNICEF regional representatives in the Cote d'Ivoire.

Kathy Selvaggio organized a well-received workshop at the AWID fifth annual international forum entitled, called "Involving Women through Innovative Communication Strategies". It included three dynamic demonstrations of different communication approaches.

The new look, 24-page DCR continues to receive glowing reports from its primary audience of practitioners overseas, but also a surprising number from university departments--Cornell (Colle), Indiana (Burke), Wisconsin (Maurer) and Syracuse (Ely)-who use it for instructional purposes.

2. New Subscriptions

New and renewing paid subscriptions remains at about the same level as the previous periods.

	9/91-3/92	3/91-8/91	9/90-3/91	3/90-9/90	9/89-3/90
Paying renewals	114	120	125	204	90
New paying subs	84	72	128	106	50

New free subscriptions amounted to 505 this period. The higher level of new free subscriptions last semester can be accounted for by the special offer we made to encourage responses to the Readers' Survey which was included in DCR #71. To encourage readers to respond, they were told that a friend could get a free one-year subscription if they returned

4

the survey. We received about 1200 responses to the survey and with it, an increase in new subscriptions.

As we receive responses from Missions to our letter, we expect the number of free subscriptions to surge again. After that, we shall be back to our budget limit of about 6500 subscribers.

3. The DCR Mailing

The DCR is sent to readers in both this country (25%) and overseas (75%). In addition to the actual initial mailing, further copies are distributed later. We often receive requests for multiple copies, such as a recent request from the USCEFA for 100 copies of the "Education For All" DCR.

DESTINATION	9/1/91 - 2/29/9		3/1/91 - 8/31/91	
	#75	#74	#73	#72
U.S. Domestic	1,369	1,399	1,364	1,323
Overseas	4,297	4,200	4,035	3,602
*Multiple	25	35	42	34
TOTAL	5,666	5,599	5,441	4,959

*More than one copy for each of these addresses (e.g. 100 copies to UNICEF for distribution to its country offices worldwide).

4. Information services

Responding to information requests is perhaps the most useful function we perform on an individual level. A sample of typical requests are listed below:

Bela Mody wanted information on	Agricultural Communications
Kathy Long	Distance Learning
Edward Palmer	Health Education & Media for Children
Tierno Bah	Radio Broadcasting
Lou Furman	Folk Media
Aaron Buseh	Breastfeeding Campaigns
Melanie Henriques	Video Technology & Development
Ibrahim Suleiman	Distance Learning & Africa

The Clearinghouse received a total of 264 information requests during this period. Information requests came from each region of the world as follows:

Information Requests by Region	9/91-2/92	3/91-9/91	9/90-3/91
Africa	70	122	59
Asia/Pacific	89	147	24
Latin America/Caribbean	29	39	26
Middle East/North Africa	3	8	7
Europe/North America	73	104	101
TOTAL	264	420	217

Information requests were received from each of the following countries:

Africa:

Benin (1), Botswana (1), Cameroon (1), Cape Verde (1), Ethiopia (2), Ghana (3), Guinea (1), Kenya (5), Lesotho (1), Mali (1), Malawi (2), Mauritius (2), Niger (1), Nigeria (24), Rwanda (1), Sierra Leone (1), South Africa (6), Swaziland (1), Tanzania (3), Togo (2), Uganda (2), Zaire (4), Zambia (1), Zimbabwe (3).

Asia/Pacific:

Australia (1), Bangladesh (1), Bhutan (1), China (1), Fiji (3), India (48), Indonesia (1), Malaysia (2), Nepal (3), New Caledonia (1), Pakistan (5), Palau (1), Philippines (11), Singapore (3), Sri Lanka (4), Thailand (1), Tonga (2).

Latin America/Caribbean:

Argentina (1), Bolivia (3), Brazil (1), Colombia (2), Costa Rica (1), Dominican Republic (1), Ecuador (7), Honduras (1), Jamaica (1), Mexico (1), Paraguay (1), Peru (7), Trinidad and Tobago (1), Uruguay (1).

Middle East/North Africa:

Iran (1), Syria (1), Turkey (1).

Europe/North America:

Austria (1), Belgium (1), Canada (5), England (4), France (2), Netherlands (5), Russia (1), Switzerland (1), United States (53).

5. Requests for recent CDC publications

CDC PUBLICATIONS REQUESTED	9/91-2/92	3/91-8/91	9/90-2/91
Back issues of the DCR	100	162	--
Spanish DCRs	15	17	6
French DCRs	13	16	17
Development Communication Directory	71	111	26
Distance Education Bibliography	33	46	49

6. CDCNet

94 people signed on to the CDCNet, and many others dipped into it for information. The CDCNet was developed as a means to disseminate information services more quickly and more regularly than the quarterly DCR permitted. We also looked for a delivery service that would be supported primarily by user fees.

The electronic bulletin board service was advertised in the most recent DCR, #75. DCRs #72-74 are now on the BBS and #75 is being prepared for inclusion. Mark Prado, the System Operator, has been updating the system. He reorganized the announcements section by subject so that callers can go directly to their area of interest. He has found that the areas that people have been looking at, in order of popularity are as follows:

- Announcements of future events
- International message conferences on development, via Internet
- DCR articles
- Other

We have not yet received any requests for Clearinghouse publications via the bulletin board.

The first time people sign on, they are asked to complete a brief questionnaire that asks how they heard of the bulletin board and their purpose in contacting the CDC. During the first semester that the bulletin board was operating, 21 new people signed on. During this past semester 94 new people signed on. This number does not include people who accessed the bulletin board by signing on through other means than through CDCNET or people who declined to answer the questionnaire.

7. Raising the CDC profile with A.I.D. Field Staff

A letter was sent to 217 AID staff members overseas, including the Mission Directors, Agriculture, Health, and Education Officers to remind them of the Clearinghouse services and to invite them to use the services. The letter also asked the field staff if there are other organizations or individuals that should be added to the mailing list. They were provided

A

with a form to fill out of names to be added to the mailing list. They were also provided with a recent issue of the DCR and the new brochure.

8. Consultations with U.N. Agencies

The Director was invited to two international conferences this semester: in September 1991, the international donors conference was hosted by the FAO in Rome, at which the major topic of discussion was the use of rural radio for development purposes. Case studies were featured, including the A.I.D.-sponsored Liberian Rural Communication Network.

In late February 1992, UNICEF paid a visit to the same Liberian rural radio project and discovered that the radio stations were still broadcasting despite the wholesale destruction of most other social and economic systems. UNICEF is interested in providing further support to development programming on the network, and contacted the Clearinghouse for technical advice. As a result of that conversation, UNICEF paid for the CDC Director to attend its regional conference in the Cote d'Ivoire to brief UNICEF staff on training needs for developing rural radio in other countries.

9. Association for Women in Development (AWID) Conference

Kathy Selvaggio organized an excellent and well-received workshop at the AWID fifth annual international forum entitled *Learning Together/Working Together: A South-North Dialogue* from November 21-24, 1991 in Washington D.C. Kathy's workshop was called "Involving Women through Innovative Communication Strategies" and it included three dynamic demonstrations of different communication approaches. They were:

- Focus group discussion on radio use in multi-media for child abuse awareness, Bonnie Cain, D.C. Office of Latino Affairs;
- Popular theater in Jamaica: games and theater techniques used with poor women, Lana Finikin and Hilary Micholson, SISTERN; and
- Constructing information centers to be more user-friendly, Vicki Semler, International Women's Tribune Center.

Participants expressed their excitement about the session.

10. Visitors

During this period 41 people from 12 countries visited the Clearinghouse. Countries represented included Kenya, Pakistan, Jamaica, Canada, Sweden, Italy, Chile, India, Mexico, Liberia, Germany, and the United States.

International visitors included:

Hilary Ng'weno, a heavyweight in the Kenya newspaper publishing business, who is looking for guidance on training and informing journalists more completely so that they are more effective in the development process;

Sven Winberg, Director of the Swedish Save the Children;

Naheed Aziz from UNICEF/Pakistan;

Luciá A. Castelloñ, director of the Escuela de Periodismo at the Universidad Diego Portales in Chile, who was also looking for ideas on pre-service training for journalists in development issues; and

Manfred Oepen, a contributor to the DCR, formerly with Friedrich-Naumann Foundation in Indonesia and currently a private consultant based in Germany.

Some of the visitors had been to the Clearinghouse before. For example, Raquel Schlosser, a media producer from the Ministry of Health in Mexico, who has produced highly engaging soap operas on health, gender and family planning issues, made her third visit to the Clearinghouse. Daniel J. Henrich, Director of Pentaline Services International in Nairobi, visited the Clearinghouse Library for the second time in January.

U.S. visitors include Ellen Nayeri and Flemming Neegard from the AID-funded Vector Biology and Control Project; Bill Thomas of the World Community Radio Association; Michael Cacich, research assistant at AID/PPC/CDIE; and Alberto Cardelle of the American Medical Student Association.

11. The Library

When visitors come to the Clearinghouse, they come primarily to use the library facilities. 6729 volumes have been catalogued and entered onto the database, and the internal distribution by category is now as follows:

AGRICULTURE	240
BROADCASTING & TELECOMMUNICATIONS	2021
COMMUNICATION RESEARCH	289
DEVELOPMENT COMMUNICATION ISSUES	442
EDUCATION	1385
ENVIRONMENT	608
FOLK MEDIA	85
FAMILY PLANNING	354
HEALTH	1144
NUTRITION	114
REFERENCE	47
TOTAL	6729

Documents added this period totaled 929. In addition, permission was given to Paul Howard of LTS Corp. to add the library collection to CD-ROM disk.

12. An unusual intern

We have had a series of interns working at the Clearinghouse during previous years. They have generally been university students pursuing communication studies. During this period, we were happy to work with Robert Gaul, a retired AID Foreign Service Officer, who is completing a Masters degree in Library Science at the University of Maryland. To finish his studies, he is conducting an internship with the Clearinghouse during the spring semester. He is reviewing Clearinghouse library operations and is also offering informal advice on meeting the needs of A.I.D. field staff more effectively.

Two areas that he will concentrate on are to: 1) determine how the Clearinghouse can more effectively serve USAID project personnel overseas; and 2) review the current process for responding to information from developing countries.

Mr. Gaul is currently indexing all the past DCRs. Although portions of some DCRs have been indexed, Mr. Gaul is taking a more thorough approach. He is including DCRs from the very beginning, and practically all of the items in each DCR, including articles, book reviews, resources, and other information that would interest the readers. In addition to subject, author, and title categories, he is adding length, page number, and kind of item (book review, announcement, letter to the editor, etc.). The results can then be put on the MICRODIS database so that articles can be easily accessed along with other library materials.

We are pleased to have Mr. Gaul here at the Clearinghouse. His library science background, overseas experience, and interest in information systems will serve the Clearinghouse well.

PUBLICATIONS

1. The *Development Communication Report*

During the period of September 1 - March 1, 1992, The Development Communication Report published two issues. DCR# 74 (1991/3), *Indigenous Knowledge and Communication* featured diverse articles about communicating through traditional means. The majority of the authors were from third world countries and wrote about using old networks to tackle modern problems. The Clearinghouse chose to use a lighter weight paper in order to maximize the content (24 pages).

DCR# 75 (1991/4) focused on Information Technology and Telecommunications. This issue looked at successful communications technologies which were cost effective for practitioners. The issue was also 24 pages and has received a good response.

The position of Editor went through a period of transition during the production of DCR #75 as Kathy Selvaggio went on maternity leave and later left the job permanently. Andrea Bosch, a staffperson of Creative Associates, replaced her.

Another transition, Aldus Pagemaker Desktop Publishing software is currently being used to produce the DCR. Mariel Escudero has set up templates for the DCR format which will greatly reduced the time needed during the production phase.

2. Future DCR issues

To date, future issues of the DCR have been planned through the end of the year. They will feature the following themes:

- DCR# 76 (1992/1): Environmental communication revisited.
- DCR# 77 (1992/2): What's New, What's True in Health Communications over the past decade.
- DCR# 78 (1992/3): Development Communication: Where Is It Now?"
- DCR# 79 (1992/4): Education and Communication: How are education systems being affected by development communication?

The choice of DCR# 79 is still tentative.

3. New additions

Over the past two issues, the DCR made several additions based on requests by the readers. The *Reader's Page*, a page where the readers can respond to articles or issues from other issues has not yet been used fully. While we do receive many letters from readers, they usually compliment rather than offer constructive criticism. We have, however, found limited success with this page and will continue to publish selected letters.

4. Reprints

- From the DCR 70, "Women and Water: The Bucket Stops Here" by May Yacoob was adapted and printed in *The Agricultural Information Development Bulletin*, December 1991, Vol. 13, No. 4.
- From the DCR 65, excerpts from "Grassroots Communication: Lessons from a Tree-Planting Campaign" by Philip Decker were printed in Communication for Development in the Third World: Theory and Practice by Srinivas Melkote, Sage Publications, 1991. (p. 237-9)

In addition, articles published in the DCR have received free publicity in several publications or have been ordered by university professors who wish to use them in their classes:

- In *International Dateline*, February 1992, the following description publicized the DCR based on DCR no. 72, the issue on evaluation: *Measuring the Effectiveness of Communication Programs Related to Development is the subject of a 24 page newsletter produced by an American NGO. The special issue of the quarterly publication, Development Communication Report, contains a series of articles that provide guidance ... The newsletter presents a range of perspectives on the issues.*

5. Letters to the Editor

Below are comments written to the editor during the period of September 1991 - March 1992.

"I always read the DCR with great attention, especially about low-tech and grassroots communication". **Francisco Gutierrez Sanin, Santa Fe de Bogota, Colombia.**

"I received the copies of the DCR which you sent. I was pleased with how the article was layed out. Can I have a few more copies for some colleagues in the Philippines?" **Mimi Nichter, Project Manager, Teen Lifestyle Project, Arizona, USA.**

"We received with great pleasure the DCR no. 73 because we are involved in the labor of radio communication in a Bolivian institute. I think that it is just that you describe the programs of peoples who are rural or marginalized". **Dr. Nancy Romero Berrios, La Paz, Bolivia.**

"I noticed you are planning a special issue on Development Communication: where it is now? Would a contribution by me be appreciated?" **Jan Servaes, Institute for Mass Communication, Nijmegen, The Netherlands.**

"I received another letter regarding the computer piece in DCR no. 73. I have received a lot of correspondence, e-mail, etc. It's good to know that the newsletter is reaching such a diverse audience". **Benedict Tisa, New Jersey, USA.**

"I am a qualified medical officer working in the remote part of Brong Ahafo region of Ghana. I am interested in communication. Please send me more information about computer graphics for the production of educational materials". **Dr. Donker, Goka Eye Clinic, Ghana.**

"I am writing to tell you I have found the last three issues of the DCR, on evaluation,

community communication and indigenous knowledge to have been very well done and a real contribution to communication strategies which reflect a more participatory, dialogical framework". **Judi Aubel, Dakar, Senegal.**

"I enjoy receiving the DCR and find the articles in it interesting and helpful to my work". **Joy Morrison, Assistant Professor of Mass Communications, University of Alaska at Fairbanks, USA.**

"The accompanying paper is in response to your intelligent announcement of future themes and invitation to contribute. I hope you have a good mailbag!" **M. Miles, Birmingham, U.K.**

"For some years, I have benefitted from the contents of the Development Communication Report kindly sent by you. I remain grateful to you and your team for your very useful report and wish you more power". **Sunil Pandya, Bombay, India.**

"Could you please send me back issues? I'll put on reserve for my students in the library". **Sheldon Annis, Professor of Geography and Environmental Studies, Boston University, Boston, MA, USA.**

"I received the 74th publication and the arrangement is much better. For us, it is an excellent opportunity to show our work and to exchange experiences". **Jane Galvao, Executive Secretary, ARCO, Rio de Janiero, Brazil.**

"I left the Clearinghouse with quite a bundle of goodies which will prove useful in upcoming papers". **Carole Seubert.**

"I would appreciate ten copies of DCR #74. I intend to send them to the projects mentioned in the article". **Victor Valbuena, Senior Programme Specialist, Asian Mass Communication Research and Information Centre, Singapore.**

"Congratulations on a job well done. I have already had a number of requests for the issue, mostly from faculty on campus. Would it be possible to order 50 additional copies?" **Kristin Cashman, Center for Indigenous Knowledge for Agriculture and Rural Development, Iowa State University.**

"[The new design of the DCR] is really a facelift as it looks brighter and more attractive. I also found the copy No.72 as interesting and especially informative". **Simon Uweh, Nigeria.**

" Your publication will be quite useful for teaching, research, and extension assignments. It will be an immense use for my more effective participation in the Monthly Zonal Workshop organized each month by the State Department of Agriculture, Horticulture, Oil Seeds, Seed Certification and Agricultural Marketing in my region". **N.V. Sujathkumar, Tamilnadu Veterinary and Animal Sciences University, India.**

"Thank you very much for sending us the DCR news. I appreciate the cover page design which is attractive as well as informative". **Director, Read, Orissa, India.**

"Recently I had the opportunity to read your newsletter. As a programmer, I found it very informative and useful". **Dr. Kamal Islam, Project Officer, Health and Nutrition, UNICEF, Bangladesh.**

"Your newsletter contains very useful information and helps me and my team members in various ways by refreshing and adding knowledge". **Gokul, Maharashtra, India.**

"First of all, I would like to congratulate you for the new look. It is certainly more attractive both in terms of layout and content and the typefaces make the reading that much easier". **A.G. Mwaloma, Nairobi, Kenya.**

"I am absolutely interested in continuing to receive the DCR. In fact, I have been an enthusiastic reader and user of the DCR since its beginnings, while I was a PhD student at Stanford University." **Eduardo Contrera-Budge, Quito, Ecuador.**

"I appreciate so much the importance of the DCR towards enhancing the applications of communication technology to development problems". **Iloabuchi Gilbert Okoye, Ibadan, Nigeria.**

"I find that the DCR is very educational and relevant to the type of work I perform." **Prem Sushil Prasad, Health Education Officer, Suba, Fiji.**

" I am dealing with farm extension and I read the Development Communication Report by borrowing it from a subscriber. It is very useful in my day-to-day activities". **Jobir Tsegaye, Eastern Gojjam, Ethiopia.**

"I am a vaccinator at the Basic Health Unit Dhabeji in a remote area. We serve people in scattered villages. We are very interested in the DCR to enrich our knowledge of health education". **Mohammed Idrees Memon, Pakistan.**

"Due to present economic situation, exchange regulations and other constraints, it becomes very difficult to subscribe to foreign newsletters. Please continue to send me the DCR as it helps me and my students". **Professor Saleheen, Dept of Geography, Dhaka, Bangladesh.**

"I have found each issue of the DCR to be useful and interesting". **H.M. Somaratne, Senior Manager, National Water Supply and Drainage Board, Sri Lanka.**

"Your report is excellent and very efficient in making it possible for your readers to stay informed and up-to-date". **Terje Bodogaard, Maun, Botswana.**

"I fortuitously came across the publication and I admire the content therein. Suffice it to say that it will please me to propagate the course of this, your famous publication". **Ugwu Vitus Chukwuma, Nigeria.**

"I am working in the Basic Health Care System for Afghan Refugees. The DCR is useful in improving different programs for health education". **Dr. Obaid ul Islam Butt, Pakistan.**

"I would like to say I like very much you format and find the "how to" articles very interesting, especially the Picture Perfect: Generating Graphics Electronically". **Mary Soucek, Grenada, West Indies.**

"Our's is a voluntary organization working in the backward villages of Madurai in India. The DCR is discussing many of the valuable lessons and techniques which are useful for the development groups". **P. Subburengan, Trust for Human Resource and Unity Development, Tamilnadu, India.**

"I have been a fan of the newsletter for many years". **Theodore Hutchcroft, Winrock International.**

"I have been reading the report for three years and find it very informative. I am no longer working as the Editor for the International Wilderness Leadership Foundation and I miss the excellent articles". **Amy Lockwood, Colorado, USA.**

"Thank you for the latest issue no.73. I particularly enjoyed the article about the use of computers to produce camera ready artwork. I am currently producing an environmental magazine and it was very useful". **Meg Thompson, Lusaka, Zambia.**

BUDGET

The Clearinghouse had delivered 172 months of services at the end of February 1992, 16 months more rather than the 156 months that we anticipated would have been spent by this stage of the project. The 16 extra person/months are largely accounted for by the technical services provided to Missions through buy-ins under the "add-on arrangements" described on page 19 of the contract (an issue that is being reviewed by the Contract Officer).

The expenditures to date of \$1,193,165 are \$128,364 more than the \$1,064,801 we had expected to spend by this stage, and extra expenditures can be accounted for by the approximately \$200,000 buy-ins for technical services in Central America. (The difference between \$128,364 extra expenditures and \$200,000 buy-in is accounted for by the fact that not all the \$200,000 has yet been spent, and we have made considerable savings in other areas of operations).

We will make every attempt to deliver all the products required under the contract and to deliver all the services that comprise the Clearinghouse operations. In terms of servicing overseas Mission requests, in the bumper, 24-page issues of the *Development Communication Report* which are regularly 50% bigger than before, and in our use of electronic networks to boost outreach, we have plainly already exceeded our contractual requirements. However, it may be that some scaling back of operations will be required if the contract cannot be amended to meet the intentions of the RFP.

APPENDIX A: *Development Communication Reports*
produced during this period

Indigenous Communication and Indigenous Knowledge

No. 71
1991.3

by Paul Mundy and J. Lin Compton

An elder in a Pacific island fishing village stands in a beached outrigger canoe. A circle of younger villagers sits in the sand around the boat. The old man peers beneath the canoe as if searching for fish, gestures, hauls on an imaginary net. Too old to go fishing himself now, he is explaining fishing techniques to the less experienced youths.

The old man is passing on to the younger generation a lifetime of experience and knowledge. Knowledge of fish behavior, subtle changes in the sea and the sky, ways of handling nets and boats. Knowledge that means the difference between boats coming home full of fish and boats returning empty. Knowledge that represents the villagers' very survival.

(continued on p. 2)

Reinforcing Campesino Wisdom in the Andes

by Raul Santana Paucar and Gloria Miranda Zambrano

High in the Peruvian Andes, peasant communities are managing a diversified system of agriculture on the basis of knowledge developed over

(continued on p. 12)



Analogy in Health Education: Using the Familiar to Explain the New

by Mimi Nichter

A Kannada proverb of South India states that "the plant in the courtyard is not a medicine," meaning that what is familiar and close at hand is often overlooked as a valuable resource. This proverb is appropriate for examining a traditional communication method that has been overlooked: education by analogy.

In the field of health education, far more time, energy and resources have been spent identifying what a population *does not know or do* than in identifying what people *do know* and the way in which it is known. All too often, health educators have not understood or appreciated in-

(continued on p. 5)

Inside this Issue ...

Principles into Practice

The "Fertilizer Bush" Drama _____ 7

Tips for Documenting and Transferring Knowledge _____ 10

Challenging Tradition in Nigeria _____ 15

Sacred Messages for AIDS Prevention _____ 16

An African Healer Speaks Out on AIDS _____ 18

Weaving Together Folk Media and Mass Media _____ 19

What's New, What's Coming _____ 22

Resources _____ 23

Reader's Page _____ 24



Development Communication Report

Development Communication Report, published quarterly by the Clearinghouse on Development Communication, has a circulation of over 7,000. The newsletter is available free of charge to readers in the developing world and at a charge of \$10.00 per year to readers in industrialized countries.

A center for materials and information on important applications of communication technology to development problems, the Clearinghouse is operated by the Institute for International Research, in association with Creative Associates International and supported by the U.S. Agency for International Development, Bureau for Science and Technology, Office of Education, as part of its program in educational technology and development communication.

The views expressed in the *Development Communication Report* are those of the authors and not necessarily of its sponsors. Original material in the Report may be reproduced without prior permission provided that full credit is given and that two copies of the reprint are sent to the Editor.

Clearinghouse on Development Communication
1815 North Fort Myer Drive,
Suite 600
Arlington, VA 22209 USA
Telephone: (703) 527-5546
Fax: (703) 527-4661

Michael Laflin, Director
Kathleen Selvaggio, Editor
Valerie Lamont,
Information Specialist
Earlington McLetchie,
Librarian

Development Communication Report is produced using desktop publishing under A.I.D. contract DR-5831-Z-00-8028-00.

Indigenous Communication, continued from p. 1

Trends

An old woman has just died in this village in Kenya. She was the last person to know of a forest plant that could be used to treat epilepsy attacks. She had no children and no pupils. No one wanted to learn her skills. Now her wisdom is gone forever.

*The agricultural researchers were satisfied with their farming systems project. They had successfully introduced a new rice planting technique in southern Sumatra. Instead of waiting for their fields to flood in the rainy season before transplanting their rice, farmers now plant rice seen in the fields as soon as the rains begin. The new technique, called *gogorancah* in Indonesian, gives the plants a head start; a *gogorancah* crop could be harvested at least two weeks earlier than a transplanted crop. That leaves time for an extra crop of soybeans.*

*The farmers didn't know, and the researchers sometimes forgot, that *gogorancah* was not a new technique. It had been used for many years by rice farmers in other parts of Indonesia. The researchers had merely adapted it for the climate, soils and rice varieties of Sumatra.*

Indigenous technical knowledge is a new focus in development circles. Growing numbers of scientists and organizations are recognizing that it offers cheap, locally adapted solutions to development problems, or that it can be melded with scientific knowledge to boost productivity and living standards.

But, as the above examples illustrate, most indigenous knowledge is not written down. It is held in people's heads, passed down from one generation to the next by word of mouth. But how is this information communicated? How do people learn indigenous knowledge? Who is involved? How is the communication organized? We have few answers to these questions.

Indigenous communication includes the transmission of entertainment, news, persuasion, announcements and social exchanges of every type. While these topics are important, this article focuses on the communication of technical information,

since this parallels the interest in indigenous knowledge for development.

Why Study It?

Studying indigenous communication is important for many reasons.

Indigenous communication has value in its own right. It is an important aspect of culture and it is the means by which a culture is preserved, handed down and adapted. But indigenous communication is being eroded by exogenous systems — the mass media, schools, agricultural extension, bureaucracies — endangering the survival of much valuable information.

Exogenous channels have limited range. Television and newspapers are largely confined to urban areas in the Third World. Even the most widespread exogenous channels, extension personnel and radio, fail to reach many rural people. Indigenous channels, by contrast, are ubiquitous. They are needed to convey messages to people out of the reach of exogenous channels.

Indigenous channels have high credibility. Because they are familiar and are controlled locally, indigenous channels are highly credible. Local audiences are often skeptical of the externally controlled mass media.

Indigenous channels are important conduits of change. Research has shown the importance of informal, interpersonal contacts in persuading people to adopt, or reject, innovations. Such contacts are often made through indigenous channels.

Development programs can use indigenous communication to collect and to disseminate information. Outsiders can tap indigenous channels for information on the local situation and for feedback on project initiatives. Many projects rely on indigenous channels to diffuse innovations and development messages. Some have made explicit use of indigenous channels such as folk media and village organizations. There remains much untapped potential in using such approaches.

Indigenous channels offer opportunities for participation by local people in development efforts. They allow local people to

communicate among themselves and with development professionals and decision makers. Local people can retain control over local media more easily than over technology-intensive media.

If indigenous communication is ignored, the result might be inappropriate development efforts. For instance, planners failed to recognize the role of a network of "water temples" in controlling irrigation in Bali, Indonesia. This led them to introduce cropping methods and construct canals and dams that were not appropriate to local conditions.

Forms and Channels

Indigenous communication can take many different forms. Here are six.

Folk media. Folk media are the indigenous equivalents of mass media. They are used primarily for entertainment, but also to promote education, values and cultural continuity. They include festivals, plays and puppet shows, dance, song, story telling, poetry, debates such as the Filipino *balagtasan*, parades and carnivals. Many have been adapted to transmit messages about family planning, politics and other exogenous topics.

Indigenous organizations and social gatherings. Indigenous organizations include religious groups, village meetings, irrigation associations, mothers' clubs and loan associations. Apart from the formal communication they permit, such organizations provide many opportunities for informal interaction.

Deliberate instruction. Parents teach children, craftspeople instruct apprentices, elders guide young people, adolescents undergo initiation rites. Many societies have traditional, often religious, schools. Most of what we need to survive, we learn not through the occasional puppet show, or even at school or through the media, but through deliberate instruction. This is true even in modern societies. Yet deliberate instruction has received little attention from development specialists.

Records. Many societies keep formal records — written, carved, painted or

memorized. South Asian treatises on animal management written on palm leaves, ancient *bai lam* scripts on leaves preserved in Thai Buddhist temples, and similar leaves containing records of land ownership and tax obligations in Bali are examples. Such records do not have to be written: African storytellers narrate memorized historical epics and genealogies at length. Proverbs and folklore are other vehicles.

Unstructured channels. Indigenous communication occurs in many other settings: talk at home and at the well, in the fields and on the road, in the teahouse and coffee shop, in the chief's house and at the market, and wherever else people meet and talk. This communication is not organized or orchestrated but spontaneous and informal. The importance of such channels is illustrated by the role of informal networks in Iranian bazaars in the overthrow of the Shah of Iran.

Direct observation. Communication doesn't have to be intentional. A farmer may see a neighbor's bumper crop and conclude that the variety or technique used is good. Nor does the source have to be another person: a dark cloud tells us a thunderstorm is coming just as clearly as another person could.

The Knowledge/Communication Link

Technical information can be transmitted through both indigenous means or through exogenous channels such as mass media and schools. And the information can be based on exogenous or indigenous knowledge. So we can think of four types of communication (see table, p. 4).

Exogenous communication of exogenous information. This is the extension worker telling farmers of the latest rice variety, the school science teacher's biology lesson, and the village doctor explaining a disease to a patient in terms of germ theory. It's a necessary and growing part of all societies, and it has received the lion's share of research attention. But it's not the only form of communication, or even the most important.

(continued on p. 4)

Indigenous communication is being eroded, endangering the survival of much valuable information.

	Exogenous Knowledge	Indigenous Knowledge
Exogenous Communication	Technology Transfer	Indigenous-knowledge-based development
Indigenous Communication	Diffusion; co-opting of folk media	Cultural continuity and change

Indigenous communication of indigenous information. Just as exogenous information is communicated mainly by exogenous channels, indigenous information is transmitted almost exclusively through indigenous channels.

The study of traditional communication has fallen to cultural anthropologists.

We can think of two types of communication in this quadrant. Intergenerational communication is the passing down of knowledge from father to son, mother to daughter, teacher to pupil. Lateral communication is the spread of information among peers and from place to place.

Indigenous communication of exogenous information. A new crop variety spreads without promotion by the extension service. Traditional midwives, trained in oral rehydration therapy, teach mothers how to use this inexpensive way of treating diarrhea. A puppet show includes messages on family planning as well as traditional themes.

Two main areas cover this quadrant. Diffusion research has focused on how innovations spread through a society. This research has shown the importance of such features as opinion leadership, the importance of homophily, socio-economic status, interpersonal networks, and so forth. But most studies have looked at innovations developed by outsiders rather than by local people. We know very little about how indigenously generated innovations spread.

Folk media began to attract attention in the 1970s. They have been used to promote themes as diverse as family planning, agriculture and politics. But they have two major problems when used for such purposes.

Though they may contain morals or substantive messages, they are primarily entertainment in the same way as are Western mass media. And audiences may resent the adaptation of traditional forms to convey development messages.

Exogenous communication of indigenous information. Indigenous information isn't often transmitted via exogenous channels, though there's great growth potential for this. One such area is represented by the growing scientific literature on indigenous knowledge and the efforts of Iowa State University's Center for Indigenous Knowledge for Agricultural and Rural Development (CIKARD — see description on p. 21). Another is farming systems research and the movement toward farmer-managed research. This allows local technologies to enter the scientific information system, and from there to filter through to the extension services or to neighboring farmers.

Another area of potential growth is using exogenous channels to help farmers to learn indigenous knowledge. Among the few examples of this in the developing world is *Minka*, a low-cost magazine for farmers in the Peruvian Andes that summarizes other farmers' knowledge. (See article, p. 1) The "farm tips" pages of US farm magazines and the growing number of sustainable agriculture newsletters are First World equivalents. The potential for developing research and extension systems that draw on indigenous knowledge and farmers' proclivity to experiment is enormous.

82

*Paul Mundu, from the United Kingdom, is an associate of Iowa State University's Center for Indigenous Knowledge for Agriculture and Rural Development (CIKARD). He is currently studying for his PhD at the University of Wisconsin-Madison. J. Lin Compton is professor of extension education and international agriculture at the University of Wisconsin, Madison. This article is adapted from a chapter by the authors in a forthcoming book entitled *Indigenous Knowledge Systems: The Cultural Dimension*, edited by D. Michael Warren, David Brokensha and L. Jan Slikkerceer.*



21

Analogy, continued from p. 1

indigenous health behavior and the common sense upon which it is based. Also overlooked is the use of analogy as a mode of communication. The value of this communication strategy is that rather than introducing new "bits" of information into a culture regardless of preexisting knowledge and experience, new information can be introduced in a context of existing associations, experiences and concerns.

I first became interested in the use of analogy as a communication strategy while conducting research on anthropology of health in South India. During my fieldwork I observed the methods used by popular religious leaders, indigenous medical practitioners, astrologers and politicians in communicating to villagers. What emerged was a keen appreciation for how analogies were effectively used to include the known and familiar while locating and often encompassing the new.

Similarly, I observed a range of health and nutrition monologues between health educators and villagers. These attempts to introduce new ideas were largely ineffective because they did not address people's health concerns and were introduced without reference to local illness categories, ideas about illness causation, and beliefs about food. Villagers were asked to put aside their own thinking on these subjects and blindly accept new health ideas.

Developing an Analogy

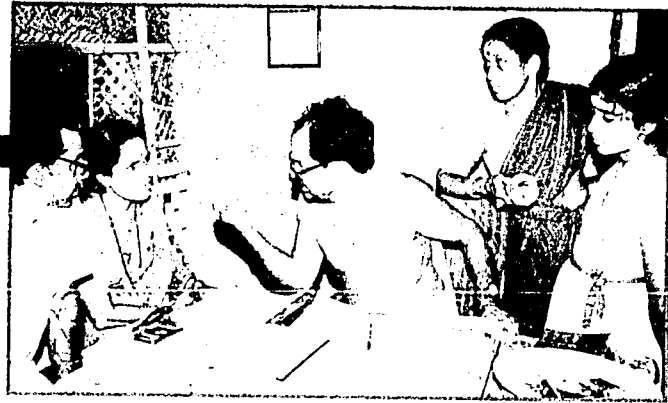
How does a health educator begin to generate analogical messages? Appropriate analogies cannot be developed in a top-down manner. Rather, participatory research is essential to identify villagers' health concerns and their images of health and illness and to develop and test appropriate analogies. The approach draws upon a popular existing pattern of effective communication.

To provide a more structured sense of the process, six steps in framing appropriate analogies for health education are outlined below.

- 1 Break down health/nutrition messages into underlying assumptions and con-

cepts; i.e., identify the main point(s) of the message.

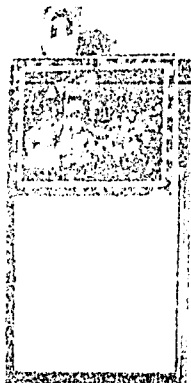
- 2 Collect data on local health concerns, ideas about foods, and underlying assumptions and concepts of health.
- 3 Identify points of convergence between traditional and modern thinking about health. For example, a common concern for health as a state of balance, good digestion and positive health was identified in South India.
- 4 Collect a list of common analogies, metaphors and proverbs in the local language.
- 5 Develop an analogy for an initial message. It might focus on similarities between local ideas and the concept being introduced. It may also use experience in one domain of life to shed light on another domain, such as comparing agriculture with health.
- 6 Present an analogical lead-in message to a group of community members for their response. They may reject, refine, elaborate and/or generate alternative, more appropriate analogies. Linkage to local sayings, proverbs and stories strengthens the points being made. In addition, posing analogies serves as entertainment to villagers by providing an environment in which individuals can share their wit as well as their knowledge.



Nurturing Crops, Nurturing the Body

In South India, a formal nutrition education message directed at villagers was "Eat a mixed, balanced diet." Foods recommended by health workers were typically categorized into three or four groups, based on nutrient content. But the grouping of foods in this manner was not under-

(continued on p. 6)



stood by villagers.

Foods that nutritionists group into one category are often classified by villagers in different categories that have distinct properties in accord with local beliefs about food. Research revealed that foods are classified with regard to ideas about hot-cold, lightness-heaviness, and their effect on body humors.

Initial data collection revealed the following cultural resources:

- The process of rice cultivation was well known to villagers. This process requires a proper balancing and regulation of fertilizer and water.
- Rice is the staple crop of the region and is a central metaphor for life used in daily conversation. For example, a growing child is often referred to as a developing rice stalk.
- Health as balance is an important cultural concept.

As a result, the following analogy was developed: *Just as fertilizers in the field must be balanced, so foods in the body must be balanced.*

Then, the following message was framed around a traditional metaphor for development, the growing rice plant:

When cultivating rice, what is necessary? Good soil, a properly plowed field, leaf manure, cow dung and ash. What happens if there is too little manure, green leaf or ash? [A discussion typically ensues about crop height, seed head size, weight, rice illnesses and overall yield.] Your body is like a field. If the proper mix of nutrients are not given to the field inside, your yield - your health - is poor and your blood weak.

The field needs to be well prepared to cultivate a good rice crop. Preparing the field so the earth can "digest" fertilizer is like enhancing the stomach's digestive capacity so the body can take food and turn it into blood.

Just as enough good soil is needed for rice growth in the field, so enough rice is needed in our bodies for energy and strength. To improve your crop - your health - other things are needed as well. Just as the field

needs green leaf manure, so the body requires green leafy vegetables, but as in the case of fertilizer not all leaves are suitable for manure and the best leaves need to be identified in each season. Like dung in the field, the body requires strength giving foods like fish and pulses. Like ash for the field, the body requires foods which when cooked by the stomach fire provide the body with ash minerals. As in the field, if too much of one item is used and not enough of another, balance is not obtained and when there is no balance, illness may come by many means.

This message served as an alternative to monologues on food groups presented by health staff. Once the referential framework of agriculture was introduced, it was found that it could be extended to address other nutrition education issues as well.

Negotiating Knowledge

Although associations expressed through analogy, metaphor and proverbs may not be logical in a strictly "scientific" sense, they can serve to facilitate understanding of unfamiliar concepts by grounding them in the known. The process of generating analogies is dynamic and brings the health educator into a process of negotiating knowledge with the audience. In this way, the distinction between "those who know" and "those who don't know" is blurred. This approach is a movement towards what Andre Fuglesang has termed "appropriate conceptualization" to complement appropriate technology.

As Fuglesang has noted: "Why should we expect the illiterate villager to adjust to the way of thinking of the educated man? Why should he alter his perception of the world to understand us? It is perfectly possible for an educated man to adapt to the concepts used by the illiterate villager, but he has to study them."

■

Mimi Nichter is an anthropologist and communication consultant. Presently she is the project manager of a longitudinal study on adolescent health in Tucson, Arizona. To contact her, write the University of Arizona, Department of Anthropology, Tucson, AZ 85721, USA.

22

The "Fertilizer Bush" Drama

Principles into Practice

by Kristin Cashman

Many approaches for sustainable, ecologically safe agriculture now being heralded by development agencies have their roots in farmers' age-old knowledge and techniques. This is true of an agroforestry method called alley farming, which is championed by the International Livestock Center for Africa (ILCA) and the International Institute of Tropical Agriculture (IITA). During 1984-88, I worked with IITA and ILCA on various on-farm research projects that introduced this method to Nigerian farmers. To encourage farmer participation, we used local theater and songs for promoting knowledge and skills. Indigenous channels of communication also allowed us to transcend cultural norms, both Nigerian and Western, that had previously limited the transfer of alley cropping to men.

The Indigenous Origins of Alley Farming

Alternating cultivation with periods of fallow — known as bush fallow, shifting cultivation or slash-and-burn agriculture — is an indigenous crop production system common in tropical Africa, Asia and Latin America. Developed over centuries from experience and observation, tropical farmers perfected this method because fallow periods are linked to soil regeneration based on the regrowth of deep-rooted trees and shrubs that recycle plant nutrients.

However, in Africa today, this method is not practical because the demands of a growing population drive farmers to shorten fallow periods, which degrades the already fragile tropical soil and leads to a decline in crop yield. At the same time, while arable land lies fallow, forested and more marginal areas are cleared for food production.

Only a few decades ago scientists recognized the validity of the indigenous bush fallow system and developed alley farming, an adapted technique that capitalizes on the beneficial features of bush fallow yet also overcomes some of its limitations. In alley farming, food crops are grown in wide rows that alternate with strips of nutrient-rich trees. Tree rows are pruned periodically, and

their clippings are used as mulch, replenishing soil nutrients, inhibiting weed growth and increasing moisture retention. Tree branches and leaves also furnish animal fodder, crop staking material and firewood.

Like traditional bush fallow, alley farming is an ecologically stabilizing process. Yet unlike bush fallow, it allows farmers to defer fallow periods and extend their hold on farmland, thus increasing the variety and yield of crops.

Women's Gain

The majority of African farmers are small-scale, resource-poor and female. The adoption of alley farming can bring tremendous benefits for women. It offers a low-cost method of increasing crop yields at a time when women's traditional income sources are disappearing; it makes the most of the marginal land that women are often forced to cultivate by enriching the soil for extended growing periods; it saves women time and distance searching for firewood; and it increases the value of their livestock by providing nutritious animal fodder.

(continued on p. 8)



Kristin Cashman



Perhaps most important, it enhances land tenure for women, who own less than one percent of the land in Africa even though they produce 60 to 90 percent of the food. Since women are not allowed to own land but can maintain tenure as long as they cultivate a piece of land, they often unwisely extend growing periods rather than risk losing the land by letting it lie fallow. Alley farming allows them to safely extend growing periods.

Despite these clear benefits, promoting alley farming among women in Africa faces enormous challenges. Ninety-seven percent of all extension agents in Africa are male and they largely extend alley farming to men. Extension personnel often understand little about what rural women

know. The difficulty is not only reaching women, but also articulating the appropriateness of alley farming from a female farmer's viewpoint. For example, trees are considered a “male” crop in Nigeria, stemming from a colonial legacy which relegated land to men along with the belief that only landowners can plant trees.

Therefore, when extensionist described alley farming to male and female farmers with the masculine imagery of trees, it was designated as a man's technique. Women, on the other hand, did not see themselves as an important part of the process — and neither did the men.

Transforming the Tree

It made little sense to me to develop an approach to increase food production and decrease deforestation that was inaccessible to the majority of African farmers — women! Thus, I decided that our on-farm research project should make alley cropping equally available to female and male farmers.

But introducing alley cropping at the village level wasn't easy. Despite the dis-

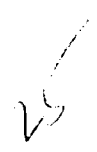
parity between men's and women's access to resources, their initial reaction to alley farming is often very similar. When I would encourage farmers to try planting trees on their farms, their basic response was, “You've got to be crazy! Do you think we cleared all the trees out so some white whimsy-looking woman could tell us we're doing it wrong?”

“Besides,” I was often asked, “what does an alley have to do with farming?” This question was difficult to address since local dialects in Africa often do not have a word for the urban term “alley.”

To overcome my frustration at being unable to get farmers, especially women, to even *listen* to an explanation of alley farming I decided to do away with the phrase alley farming. Instead I started referring to it as *igbo ajile*, or “fertilizer bush.” The phrase conveyed the primary benefit of the system in two short words while removing the threat of the permanency of trees, making the practice immediately appealing. So now I could at least capture women's, as well as men's, attention.

Changing the name helped, but many villagers still could not, or would not, take time out to sit and listen to my long-winded description. I was doing too much talking! I felt more like a saleswoman than an on-farm researcher. To overcome this constraint I made use of the long-standing tradition of sharing information through stories and songs. I wrote a play called “The Fertilizer Bush,” using farmers' most common questions as the basis for the script. The five-member village theater troupe, which agreed to perform the play, was amazingly adept at thinking up catchy tunes to describe the powers of the fertilizer bush.

Although my initial script was finely detailed, the troupe was too spontaneous to conform to my rather restricting Western ways. The play was never the same twice, making it all the more dramatic and just as interesting to attend, whether it was the first performance or the fiftieth. Although the troupe kept me guessing, they always highlighted the salient features and processes necessary for success, allowing the



community to judge the merit of alley farming.

Performed in 13 villages of varying size, the play addressed men and women as equals. Alley farming was presented within the framework of a family squabble, where the husband tries to pass his worthless farm off to his wife while he shifts to other land. She is annoyed, but feels pressured to take it despite its low worth, lest she be left with nothing. A friendly peer arrives on the scene, with a child hoisted on her back, offering advice about her alley farming experiences. This character was deliberately cast as a woman in order to encourage women to participate.

For example, when asked how to go about planting, the alley farmer leads the couple through the steps, explaining tree spacing by using a ruler as a measuring tool. The squabbling couple tease her mercilessly for adopting Western ways. After joining them in a good laugh, she helps the couple develop a more practical measure: "Let's see . . . 25 centimeters is about the size of your foot, and the five meters between rows is roughly equal to five strides."

Sustaining the Practice

The fertilizer bush drama was a smashing success as an introductory tool for raising awareness and making alley farming appealing to farmers, regardless of gender. Many families participated in our alley cropping trials and more would have followed suit if we hadn't run out of seed. Yet further intervention is required to help adopters integrate the practice into their daily routine. We cannot expect farmers, completely naive about alley farming one day, to be expert and sophisticated users the next.

I found that farmers needed continual encouragement and advice when making the transition from the sporadic management of bush fallow to a new form of production that requires *regular* and *consistent* attention. Some raised intense personal concerns, such as women's fear of losing their land, while others ran into technical or management problems, such as to what

extent prunings should be used for animal fodder vs. for soil nutrients. In response to these various problems and concerns, we established different information programs. For example, we recruited high school students to help convey practical solutions to their parents, and also established a support group, through which alley farmers could help one another with information, advice and reassurance. We found that farmers relied chiefly on other farmers for a realistic assessment of the innovation.

Lessons Learned

Several lessons surfaced from this experience. First, a participatory research approach that solicits farmers' concerns, needs, constraints and skills is critical to introducing and sustaining a new innovation. Farmers' concerns should be continually reassessed at each stage of the adoption process.

Second, agricultural researchers and extensionists can make greater use of indigenous knowledge and communication skills for transferring innovations more effectively. Mobilizing these resources not only enhances communication between researchers and farmers, but it makes local people the "experts" in the innovation process, relegating the researcher to role of catalyst or facilitator.

Finally, cultural and social norms, beliefs and taboos must be dealt with actively to preclude them from retarding, or biasing the benefits of innovation. Rather than defending or creating injustice, such as the exclusion of women, cultural traditions can be carefully reshaped to drive a process of sociocultural change. The experience described here demonstrated that when an innovation was introduced in a way congruent with local socio-cultural circumstances, men and women adopted it in equal numbers.

Kristin Cashman is a Research Associate with the Center for Indigenous Knowledge for Agriculture and Rural Development. For more information, contact her through CIKARD, 324 Curtiss Hall, Iowa State University, Ames, Iowa 50011, USA.

*The phrase
"fertilizer
bush"
conveyed the
primary
benefit of the
system in
two short
words.*

Tips for Documenting and Transferring Local Knowledge

There is growing agreement that there is an urgent need to safeguard and reaffirm indigenous knowledge. Yet, much systematic work must be done to locate, document and disseminate indigenous knowledge before it can become part of the body of development solutions. Furthermore, tapping into the vast stores of indigenous knowledge is not always easy. Local experts seldom realize how much they know, so direct inquiry may be difficult. They usually did not acquire this knowledge in a formal school setting, but at their mother's or father's knee, or through interaction with other local experts. Sometimes, too, such knowledge is considered the "property" of a privileged or professional few who may not be eager to share it.

The process of gathering the knowledge is often as critical as the final product. As Anil Gupta of the Indian Institute of Management notes, "It is not just the . . . documentation of local innovations which is important. The process of enquiry, interaction with the farmers individually and in groups, search for new conceptual relationships among old variables, feedback to the farmers . . . are also important."

Outlined below are preliminary guidelines for acquiring and preserving indigenous knowledge, drawing upon anthropological methods of ethnoscientific and participatory rural appraisal techniques.

1. Identifying the information

- Assemble an interdisciplinary team involving the relevant technicians, biological and social scientists (social psychologists, anthropologists, linguists, physicians, biologists), and persons completely fluent in the local language and familiar with local customs. The team must include local experts.
- Identify key informants. Survey methods might not be useful since different individuals in a community perform different functions. Rather, locate those who have the most knowledge about the subject, e.g. village elders, healers, midwives, farmers, fishermen or hunters.

2. Documenting local knowledge and practices

- Elicit, in the local language, names of items or categories in the subject of interest, e.g., types of soil systems, weather patterns, herbal remedies, etc. Note indigenous terms and forms of categorization. This task may require the expertise of a linguist skilled in posing controlled questions and semantic organization.

- Interview the local experts, exploring the practice or knowledge on several dimensions: its ecological context (e.g., what soil, climate, or seasonal conditions exist); the historical context (e.g., what event or circumstances led to the adoption of the practice); the socio-economic context (e.g., who uses the practice); and the communication context (e.g., how the person first learned about the practice and how he/she shares it with others?).
- Observe the application of the practice, tool, or remedy and describe it, taking note of its unique features, how it differs from Western methods, conditions under which it is used most often or its effectiveness is increased, and the user's assessment of its limitations.
- Collect and label samples of materials, where relevant (tools, plants, seeds, roots, potions, recipes, etc.)
- Use standard nomenclature or conventions for documentation, if they exist. In fields such as ethnobotany, protocols are well developed and may be obtained through museums, research institutes or universities.
- Where visual aids might facilitate understanding, use cameras, videotape or illustration for recording, with the permission of the local experts.

3. Transferring local knowledge

— *Among other local experts and users*

- Share findings first with the providers of knowledge, explaining why they have been collected and how they can contribute to scientific theory. Seek their permission to use the knowledge outside the local setting. Where patents or copyrights are advisable, offer suggestions for acquiring them.
- Build on and strengthen existing village-level communication networks, e.g. agricultural cooperatives, associations of traditional healers or veterinarians, marketplace discussion, women's or youth organizations, local drama or entertainment groups, etc.
- Apply knowledge to ongoing activities to demonstrate its utility, where possible. Mobilize local organizations to participate in such demonstrations.
- Where appropriate, use existing radio programs, publications or other mass media, through which local experts can report and discuss their own practices and innovations and ask questions of one another. Likewise, researchers and extensionists could share useful findings of their own.

— *To researchers, extensionists and other professionals*

- To the extent possible, translate local concepts and practices into Western scientific concepts and terminology, e.g., convert local measurement units into metric units; plant or disease names into universal scientific Latin; and local beliefs into the Western equivalent.
- Help organize on-site research that gives local experts a significant role in the design of experiments and allow them to suggest modifications, according to their experience, beliefs and needs. Scientists and local experts can mutually collaborate in implementing each other's solutions.
- Obtain scientific explanation or analysis of a local skill or technique, reasons for its success, and how it might be improved upon or modified through modern scientific methods.
- For both ethical and scientific purposes, always acknowledge by name the source of knowledge or innovation, be it a single villager or group, especially in formal research papers, publications and conferences.
- Take steps to ensure that valid local knowledge and practices are integrated into training programs and materials for extension agents, graduate and post-graduate curriculum for scientists, and education programs for researchers and media specialists.
- Encourage the integration of local experts into formal extension or outreach programs, or arrange collaboration between Western-style and traditional practitioners.

Sources:

Gupta, Anil. "Documenting Farmers' Innovations." *Center for Management in Agriculture, Indian Institute of Management, Vastrapur, Ahmedabad 380-056, India, 1990.*

Gupta, Anil. "Linkages for Lateral Learning Among Farmers, Scientists and Extension Workers." 1989. *International Service for National Agricultural Research, PO Box 93375, 2509 AJ The Hague, Netherlands.*

McCorkle, Constance, et al. "A Case Study on Farmer Innovations and Communication in Niger." August 1988. Available from the *Academy for Educational Development, 1255 23rd St., NW, Washington, DC, 20037.*

Special thanks are extended to Wachiiri Kamoji, a private consultant and former lecturer with Kenyatta University in Nairobi, for his contributions to these guidelines.

Why Document Indigenous Knowledge?

"When a knowledgeable old person dies, a whole library disappears."

African proverb

"Nowhere do people live in a state of ignorance about the world around them. Not only do local people know 'a lot,' in certain domains they often know more than Western or Western-trained scientists."

Constance McCorkle, "Toward a Knowledge of Local Knowledge," *Agriculture and Human Values* (1989)

"Unlike modern science which is recorded in books, films, computers, etc., indigenous local knowledge is an unwritten body of knowledge. There is no systematic record to describe what it is, what it does, how it does it, means of changing it, its operations, its boundaries and its applications. . . . It is held in different brains, languages and skills in as many groups, languages, cultures, and environments."

David Atte, "Indigenous Local Knowledge as a Key to Local-Level Development," Unpublished paper (1989)

"[The challenge] is to extensively document and disseminate the existing body of indigenous local knowledge resources in each country and locality. Evidence of where and how it has worked and where it has been successfully modified to meet present needs must be widely publicized. Once the elites know this, they will develop respect for rural people which will reduce the paternalism born out of ignorance and communication gap."

David Atte

"[One] consequence of the decline of indigenous local knowledge is the wastage of tremendous resources of native talent which can be used to amplify and accelerate research, planning and development. [Another consequence] is the inefficient allocation of resources and manpower to inappropriate [development] strategies which have done little to alleviate rural poverty."

David Atte

"What we establish now as modern knowledge. . . will, in 20 years, be indigenous knowledge, for this include accumulation of past experience. You cannot fix indigenous knowledge; it has to evolve."

Thomas Odhiambo, Director of the International Center of Insect Physiology and Ecology, Nairobi, in an interview with ILEIA (1990)

Reinforcing Campesino Wisdom, continued from p. 1

thousands of years. In valleys and on steep mountain slopes, they raise livestock and grow tubers, cereals, vegetables, fruits, grasses, shrubs and trees. Andean agriculture not only sustains the campesino families, but also helps to provide food security to the cities. And with more than 200 native varieties of potato, along with diverse strains of other crops, the Andes region has the genetic potential to become the seed basket of the world.

The campesino producers of the highlands are nonetheless beset by problems. The average family has access to only one-quarter of a hectare of land (approximately three-fifths of an acre), and this is often distributed among several small plots at different altitudes. They do not necessarily own their own tools or draft animals. Beyond this, they must cope with the effects of a supposedly more advanced system of agricultural management based on the indiscriminate use of chemical fertilizers and pesticides. The result is toxic contamination and eventual loss of soil fertility. Extension systems have little to offer beyond creating further dependency on these modern methods and packaged

tools. Meanwhile, valuable indigenous knowledge is slowly lost.

At Grupo Talpuy, we assert that Andean indigenous knowledge in agriculture can provide the basis for constructing an Andean technological system that allows communities to produce more, at lower cost, without damage to the environment and without external dependency. Modern scientific knowledge has a role to play in this process. The key is to use it to help explain and develop Andean farmers' own technology. We work to uncover the scientific basis of popular Andean knowledge, while at the same time popularizing other types of scientific knowledge.

Grupo Talpuy was founded in 1979 in Huancayo, Peru, and works principally among the peasant communities of the adjacent Mantaro Valley. Non-profit and non-governmental, the group focuses on communication and training. The members are professionals with extensive experience and commitment to rural development in the Andes. A special role is played by campesino experts, who contribute their technical knowledge of agro-industry and forestry, along with an understanding of the socio-economic and cultural make-up of campesino communities. Through dialogue with our staff and through our magazine, they are able to share their experiences and knowledge of agricultural techniques with other campesinos. Since they also identify information needs and gaps in their knowledge, we also draw upon scientific literature and work with scientific advisers in rural technology and development to bridge this gap.

The first step is to demonstrate that indigenous practices often bring results equal or superior to those of commercial agriculture, and without ecological degradation or dependency. The second step is to develop these practices with contributions from Western science, based on needs the campesinos themselves identify.

A Magazine for Campesinos

The group's central activity is the publication of the magazine *Minka*, which comes out three times a year. *Minka* — the term is Andean for cooperative group labor — is aimed primarily at local campesinos, but it is also read by professionals, technicians and students, and by experts from regions and countries outside the Andes. Ap-



The caption to this illustration from *Minka* reads: "Research centers, in their eagerness to serve farmers, adapt foreign technologies that are ill-suited to farmers' conditions."





Minka, no. 25, p.8

proximately 6,000 copies of each issue are distributed. The magazine deals with problems of paramount concern to the Andean highland farmer. Each issue focuses on a single theme, such as "harvesting and storing crops," "controlling plagues and pests," or "irrigation the Andean way."

Three aspects of *Minka* are of primary importance in communicating with its

campesino readership: the text, the graphics, and the use of the native language, Quechua.

The Text. Communicating with campesinos through the written word involves a complex process of systematization and style. The results of research and productive practice must be translated into language accessible to the Andean peasant. To do this, we use popular expressions rich in meaning and symbolism, and base accounts on the peasant's own experiences. The *Minka* style employs short phrases, sentences and paragraphs, and exclamatory titles. Articles propose alternatives, make suggestions for reflection, comparisons, etc. The first-person plural is often used. It is written in a simple style, but the resulting texts are never simplistic.

Although many campesinos are only barely literate, the magazine is distributed to literate farmer promoters, who read and use the illustrations to explain the content to fellow farmers. The magazine is also used in schools, and children are encouraged to read it to their parents.

The Graphics. Many of these same criteria hold for the use of graphics. The artists, many of them campesinos themselves, are deeply familiar with the Andean psyche, culture and value systems. They interpret and systematize the written messages to create the art that accompanies and supports the text.

Given the low levels of literacy, graphics play a very important role. The artwork helps the reader decode the messages and reinforces the messages and the magazine's cultural identity. Original drawings are created for each issue, including the diagrams and small designs. The magazine's format is based on detailed planning of every space. The colors used on the cover, the size of the type, the titles, etc. are all selected to correlate with the content and theme of the magazine. The result is a carefully crafted melding of textual and visual media.

The Language. Use of the native language, Quechua, provides the foundation for validating Andean culture. Our language must be used for diverse forms of expression, going beyond the stories, myths and legends, which are its com-

monly accepted uses among the larger population. The process of "revalorizing" and developing the language involves using it for daily activities related to production, technical management, and social organization.

Each article in *Minka* is presented first in Spanish, followed by a Quechua summary. Quechua terms are used together with their scientific equivalents, helping the campesinos to understand their place in a larger world of shared knowledge. In an article on pests affecting the potato plant, for example, the different infestations are identified first by their popular name, then by their scientific name — e.g. *kutri-kutri* (*Epitrix* sp.); *shacra* (*Premnotrypes* sp.); *polilla* (*Phthorimaea operculella*). Each issue also includes a glossary of technical words in both Spanish and Quechua. Thus the native language acquires value for practical daily use.

Knowledge Returned to Its Source

The research and practice we use to uncover indigenous Andean knowledge are based on a methodology of communication and training. It incorporates the following principles:

- Information needs and topics for *Minka* are developed jointly with campesinos, who are in charge of the process. Campesino groups participate through their families and communities. The campesino's small plot of land is the basis for analysis, experimentation and validation of farming methods.
- The Grupo Talpuy team includes an agronomist, forester, veterinary technician and two Quechua promoters. We, the technical resource people, act as advisors and motivators.
- The values of solidarity, creativity and critical reflection underlie our relations with campesinos.
- We attempt to persuade the individual farmer to



The *Minka* caption reads: "Influenced by commercial advertising, farmers use damaging chemical insecticides."

Farmers in the Know

adopt solutions and to continue using them. Furthermore, we work to disseminate the practices throughout the entire community as well as throughout the entire ecological region.

- Since materials distributed free of charge are assumed to have little or no value, the magazine is sold to campesinos at a nominal fee, not given away.
- We contribute to the development of an Andean science.
- We strive for global, sustainable changes in agricultural practice.

In sum, Talpuy is based on an anthropological/technical approach. This does not mean that we all become anthropologists or technicians, but to produce *Minka* we must have an Andean social and technological consciousness. We must understand the integrated and interrelated nature of scientific knowledge and of daily life. *Minka's* contribution reaffirms what others have said: even the most valuable and groundbreaking studies have no worth or meaning until they are translated into the people's language and returned to the source where they were obtained.

■
Raúl Santana Paucar is Coordinator of Grupo Talpuy and Gloria Miranda Zambrano is managing editor of Minka. For further information, write them at Grupo Talpuy, Apartado 222, Huancayo, Peru. Translation and editing of this article was conducted by Catherine Sunshine, with additional insights and editing by Constance McCorkle.

Small farmers in Niger command detailed knowledge about cultivation techniques, seeds, crop protection, and environmental conditions. Much of this knowledge had been passed down from elders and through multiple social networks. But far from resisting modern innovations, farmers tend to experiment extensively with new approaches that they learn about through a variety of sources. What's more, they exchange research results with one another, usually outside of the formal agricultural research and extension systems.

These are the major findings of a 1988 study carried out by the Communication for Technology Transfer in Agriculture project, sponsored by the US Agency for International Development. As part of the study, researchers produced 20 mini-case studies documenting Nigerien farmers' adoption or rejection of agricultural techniques, some age-old, others new. Below are highlights:

- To prevent rats from feeding on cereal stocks, farmers had usually sprinkled chemicals around the granary — a dangerous and expensive solution. Several farmers learned about a better approach during trips to other regions. By placing a large basin of water into a hole near the granary and baiting its lip with bran, rats would fall into the container and drown. When villagers observed this simple technique, they all began to use it.
- One farmer learned a natural fertilizing method from a Moslem holy man. He placed manure directly into seed pockets, so that termites would break down the "burning" effects of the manure on seeds. After the first rain, he reopened pockets and planted seeds dressed in insecticide, which wards off termites. The new technique is cheaper and at least as effective as commercial fertilizers.
- The president of an agriculture cooperative discovered a promising local variety of millet seed. Chatting informally with project researchers, he pointed out the grain's superior qualities and speculated on its prospects. An older farmer on the periphery listened carefully to the discussion. Later, he silently gathered out of the sack all the loose grains that had fallen out of the open sack and stored them in his pocket — presumably for planting.

Aside from studying farmers' practices, researchers were able to identify a range of communication channels through which they exchange information. As the above examples suggest, they depended mostly on interpersonal and group contact. An influential role was played by respected village elders and by "innovators" — generally older men who traveled widely. Peer groups such as farmer cooperatives and youth groups were equally important. "Farm talk" was also commonplace in marketplaces, mosques, at planting and harvesting work parties, or ceremonial occasions such as funerals. The mass media, primarily radio, appeared to be mainly useful for keeping farmers up to date on climatic conditions and market prices.

Ironically, Nigerien farmers generally had a negative view of agricultural extension services. They tended to ignore extensionists' recommendations or adapt them according to local conditions, their normal practices, or their financial and technical capabilities. Several case studies illustrated farmers' rejection of innovations introduced by the extension service, because they were either inferior to local solutions, too expensive, or went against traditional practices. As one farmer remarked, "The extension service is not honest because it refuses to work with the realities of our village."

Based on "A Case Study on Farmer Innovations and Communication in Niger," by Constance McCorkle, Robert H. Brandstetter and Gail D. McClure (1988). Available for US \$10 (free to readers from developing countries) from the CTTA project, Academy for Educational Development, 1255 23rd St., NW, Washington, DC 20037, USA.

Challenging Tradition in Nigeria

Principles into Practice

by K.E. Supriya

Editor's note: Not all traditional beliefs or practices are worth preserving. Some can be harmful to human health or perpetuate social and economic injustice. The experience below relates how traditional health care providers are working to reverse the long-standing practice of female circumcision.

For centuries, parents in regions of Nigeria had called in the *olola* (circumcisor) to alter or remove parts of their daughters' genitals, in the belief that this would prevent them from becoming promiscuous. Yet this ancient custom caused girls tremendous physical suffering, ranging from shock to blood loss, infection, and increased susceptibility to AIDS — not to mention emotional and psychological trauma. Nevertheless, female circumcision was infrequently discussed and rarely challenged, especially by "outside" health organizations that could be accused of meddling in cultural values and traditions.

However, a communication project is helping to change this deeply entrenched practice — and using traditional media and traditional health care workers to do so. Since 1987, the National Association of Nigeria Nurses and Midwives (NANNM) has led an effort to oppose female circumcision, as well as other harmful traditions such as early marriage, taboos surrounding pregnancy and childbirth, and scarification (bodily cuts that function as ethnic or tribal markers). The program involves about half of NANNM's 60,000 members, made up of nurses, midwives and traditional birth attendants, who sometimes performed circumcision operations. NANNM has received technical assistance and financial support from the US-based Program for Appropriate Technology for Health and the Population Crisis Committee.

The objectives of the communication campaign are twofold: to persuade nurses and midwives to halt the harmful practices, and then to deploy them to influence communities to do the same. Through awareness workshops at the national and the state level, NANNM members were made aware of the harmful health consequences of female circumcision and other traditions. They also learned to conduct focus group discussions in order to assess women's knowledge, beliefs, and practices.

Interestingly, when they returned to communities, they found that focus groups offered women an opportunity to

raise "taboo" topics such as their loss of sexual pleasure after circumcision — and to express deeply felt emotions. "The project organizers were surprised at how angry women became when they realized that circumcision was unnecessary," says Susan Rich of the Population Crisis Committee. "They found that they could harness this anger to get women to act as advocates for the eradication of the practice — like new converts."

Booklets, leaflets and videos were then developed and pretested prior to use in community-based activities. Communities responded by developing media with local nuances and messages. For example, one traditional chief designed a dress with a decorative motif of tattoos and bodily cuts. By wearing the dress, women

could symbolize their entry into womanhood without having to endure the actual tattooing and scarring. In some states, local theater troupes and nursing students wrote and performed plays and songs. One drama series titled "Why?" explored the trauma of circumcision and suggested steps for its eradication. Local artists carved models of female genitalia before and after circumcision.

As a result, silence no longer shrouds the practice of female circumcision. The topic is now widely debated in health talk shows on national television and women's magazines. There has even been demand for talk show reruns, and states not targeted for the campaign have requested inclusion.

Perhaps most important, the project has demonstrated that it is possible to challenge culture and tradition rather than accept them as given, when such practices are oppressive to women or other groups. The usual objection that such initiatives "impose" outside values or beliefs was avoided because African women themselves wanted to eradicate the practice and sought outside assistance. Community women became some of the strongest opponents of circumcision. Rich remarks, "The emotions of women who wept in pain and anger at what they were forced to experience — it was one of the most powerful scenes I had seen in my whole life."

K.E. Supriya, a graduate student in communication at the University of Illinois, was a summer research intern with the Clearinghouse on Development Communication. For more information about the project, contact the Program for Appropriate Technology for Health, 1990 M St., NW, Suite 700, Washington, DC, 20036. Telephone: (202) 822-0033.



Illustration from campaign booklet shows mother refusing to let her daughter be circumcised.

Sacred Messages for AIDS Prevention

Principles into Practice

by Jane Galvao

"The spell cast by Oxum [the chief deity] turned blood into one of the most well-known symbols of Candomblé: the red parrot feather. The importance of this symbol is so great that novices, during their initiation ceremony... wear a red feather on their forehead."

"In Candomblé, blood is considered a main source of sacred power. For this reason, great care must be taken when coming in contact with it. Some rites require the use of cutting instruments, such as knives and razor blades. On these occasions, bloodiness can occur, which might result in contamination of someone."

Thus warns a newly released booklet that uses the concepts and practices of traditional Afro-Brazilian religion to introduce information about AIDS. The Portuguese-language booklet is directed at religious leaders of Candomblé, a traditional Afro-Brazilian spirit cult that traces its origins to the Yoruba people of western Africa.

Candomblé was introduced to Brazil by slaves shipped from Africa, but generations of contact with Europeans resulted in a fusion between this traditional religion and Catholicism. Religious activities include private daily obligations and public, all-night dancing ceremonies, during which initiates appeal to saint-like divinities, called *orixás*, for guidance.

Believers accept the idea that *orixás* return to earth through mediums to offer humans medical remedies or other material assistance. Candomblé priests and priestesses are often consulted by people afflicted with illness, sometimes after Western medicine has failed to provide a cure. They seek to cure not only the spirit, but also the body.

Candomblé and Umbanda, a close variant practiced in other parts of Brazil, are the most widely observed forms of religion in the country. It is commonplace to hear that "everyone in Brazil is Catholic," followed by "yet most are also believers in Afro-Brazilian religion." However, quantifying this statement is difficult. Comparisons of the number of religious centers

provide a clue. The number of Catholic parishes in the entire country is estimated at 19,000 but, according to various counts, in only three of Brazil's largest states (excluding Bahia, the most "African" state) there are more than 55,000 Afro-Brazilian religious centers: 30,000 in Rio de Janeiro, 16,000 in Sao Paulo, and 11,700 in Rio Grande do Sul.

Afro-Brazilian religion is therefore an important part of Brazilian identity and culture. Unlike Christian religions, however, its force is not manifested in institutional forms, such as formal mass media, schools, hospitals, etc. In fact, official circles of the government and the Catholic Church have historically looked askance and even repressed these religions, causing many believers to conceal their beliefs and activities.

An Arc Across Two Cultures

Religious Support Against AIDS, known by its Portuguese acronym ARCA, specializes in building bridges — we like to think of them as arcs — between the religious and secular sectors in Brazil around the prevention of AIDS. Our work consists of consciousness-raising and education around the social and psychological aspects of the disease, in order to be more effective in combatting the epidemic and the prejudice against those who suffer from AIDS. ARCA is a project of the Institute for Religious Studies, a non-profit organization founded in 1970 that promotes social improvement through religious and cultural activities. Among the group's other projects are training and technical assistance to grassroots Christian communities, a school for street children, and assistance to the National Network of Prostitutes.

In May 1989, we sponsored a meeting involving Candomblé priests and priestesses from the state of Rio de Janeiro. This event followed similar meetings held with Catholic and Protestant groups and a major regional study session in 1988, "The Latin American Churches' Inquiry on AIDS," supported by the World Council of Churches. The purpose of the meeting with



Oliveira Filho

Yemanjá, the Candomblé goddess of the sea.

Candomblé religious leaders and traditional healers was to explore what they were doing in relation to AIDS and how we at ARCA could help them. We recognized that they had access to the poorer segments of the Brazilian population and also had knowledge of traditional cures and medicinal plants.

The event exceeded all expectations. The Candomblé leaders took part with great interest, relating cases of AIDS patients they had treated and calling for additional information. They specifically requested that we produce educational materials on AIDS that could be used in their communities.

However, we foresaw several difficulties. One was that the lack of public channels of expression and the emphasis on private ceremonial rites might raise suspicions among believers about our motives and goals. There was also the danger of stigmatizing Candomblé followers, since there is a widespread prejudice that many practitioners of these religions are homosexual — leading people to fear that there is greater risk of contracting the HIV virus at Candomblé religious sites. These difficulties made the priests and priestesses understandably standoffish and wary of support from outsiders.

ODO YA! Tales from Candomblé

Nevertheless, we accepted the challenge and sought the assistance of an anthropologist plus a historian/religious leader who is an authority on the *orixá* divinities. The work began with the preparation of a basic text, which underwent several revisions. The final versions include contributions gathered from Candomblé priests, priestesses and healers. We decided to select well-known tales from the Candomblé tradition and related them to general information on health and, more specifically, on AIDS. The idea was to use religious-cultural traditions as a frame of reference for understanding new concepts and practices. We secured financial support for the project from Swedish and Dutch private foundations and from the

World Health Organization's Global Program on AIDS.

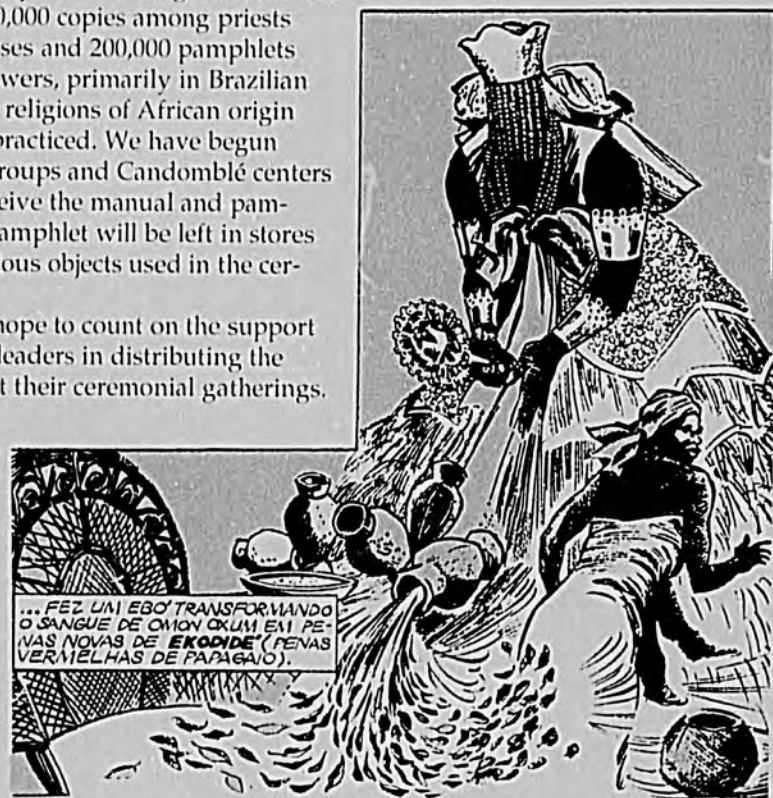
The three Candomblé stories are presented in comic strip form, featuring graphics and captions. This medium was chosen in order to capture language traversing both written discourse and the narrative oral tradition, and to reproduce the visual richness of Afro-Brazilian symbolism. A famous creator of the art form was asked to illustrate the strip.

In preparing the material, we came to appreciate the importance of inter-disciplinary teamwork. Team members included the anthropologist and historian mentioned above, religious leaders who participated at our meetings, graphic artists, two educators, and the state health secretariat's coordinator for AIDS programs.

The manual, titled ODO YA! — a greeting to Yemanjá, the Candomblé goddess of the sea — was finished in August 1991 and released in September. Altogether, we will distribute 50,000 copies among priests and priestesses and 200,000 pamphlets among followers, primarily in Brazilian cities where religions of African origin are widely practiced. We have begun surveying groups and Candomblé centers that will receive the manual and pamphlet. The pamphlet will be left in stores that sell various objects used in the ceremonies.

We also hope to count on the support of religious leaders in distributing the pamphlets at their ceremonial gatherings. Religious leaders who know about the project are already requesting that we speak on their grounds. Besides bringing together followers for religious

Oliveira Filho



The ODO YA! comic book relates a Candomblé parable about the transformation of blood into red feathers.

An African Traditional Healer Speaks Out on AIDS

rites, these sites are places where strong community relationships are formed and sustained.

Looking Ahead

We are not yet certain whether the use of the manual and pamphlet will bring about changes in behavior if, for instance, Candomblé practitioners will disinfect the razor blades used in certain ceremonies. Following their distribution, we will conduct an impact evaluation in the state of Rio de Janeiro.

Still, ODO YA! is a bold experiment, given the history of controversy and mistrust surrounding the Candomblé religion. We have talked about sacred matters, we have even interfered to an extent with these sacred traditions. At the same time, the possibility of dialogue with a religious tradition that is so rich in symbolism, so popular and yet so marginalized from the formal power structure in Brazil excites us.

Jane Galvao, a Brazilian anthropologist, is Executive Secretary of the ARCA project. Translation of this article from Portuguese was done by Antony Zinesky. For more information, contact: ISFER, ARCA Project, Ladeira da Gloria 98, 22211 Rio de Janeiro, Brazil. Tel: (55-21) 265-5747. Fax: (55-21) 205-4796.

Editor's note: Halfway around the world from Brazil, traditional healers in Zimbabwe are also playing an active role in AIDS education and prevention. Last year at a workshop for African NGOs involved in AIDS prevention, participants collectively interviewed Tarisayi Mark Musara, National AIDS Coordinator of the Zimbabwe National Traditional Healers Association. Below are excerpts.

Q: How were you trained as a traditional healer?

A: In Zimbabwe, we don't train traditional healers. To become a traditional healer you must have talent.... This inborn talent is upgraded.... In Zimbabwe, we are making healers aware of AIDS as part of upgrading their knowledge and abilities.

Q: How does a traditional healer work on HIV and AIDS?

A: First of all, HIV and AIDS are not traditional problems... it's a foreign disease. But ... all the traditional healers have put their heads together for an AIDS awareness campaign. Why? Because at first there was a lot of resistance in our community when people from Western cultures said AIDS has no cure. But now we know AIDS has no cure, except to change our behavior.

Q: Are traditional healers involved in counseling people about AIDS?

A: In Zimbabwe, two-thirds of the healers' work is counseling; they are not only treating the physical problems of patients. So we're polishing their counseling skills.... When a patient comes back to a healer in the home village, we call the family and the problem is explained to them.... Confidentiality is kept by the family as a whole.

Q: What difficulties did you have in getting traditional healers to advocate the use of condoms?

A: The problem is not with getting the traditional healers to use condoms, it is with getting the people to use them. We started ... with the view that we should break this resistance. Then we taught traditional healers how to use the condoms and the next question that came was, "Can you make a female

condom?" The traditional healers are keeping boxes of condoms, especially for those people who are already infected.

Q: There are certain traditional practices which may increase the spread of HIV/AIDS, like polygamy. Are traditional healers trying to discourage polygamy, and if so, how do communities react?

A: Yes, there are a good number of aspects in our culture that may cause the spread of AIDS, such as polygamy. This is why we have embarked on the campaign ... where we cover the dangers caused by those activities and we totally discourage them ... We don't say "don't do it," but we give suggestions and they choose what they should do.

Q: What do you tell people about HIV infection through razor blades? [Note: Razor blades and bleeding are used in some traditional healing practices.]

A: We advise the patient to bring his own blade, or the traditional healer will have many on hand that he will sell to the patient. Also, we have a new method of spreading the medicine first and then cutting with the razor blade.

Q: We hear that there is underreporting of HIV infection in Zimbabwe because many people with traditional beliefs believe in going to traditional healers.

A: At the moment, the project is to assist the government to increase the number of cases that are being treated. That is, the traditional healer is taught the signs and symptoms of AIDS.... He should then refer suspected cases to the government clinics.

Excerpted from Tradition and Transition: NGOs Respond to AIDS in Africa, edited by Mary Anne Mercer and Sally J. Scott (June 1991). Available for US \$5 from HAPA Support Program, Johns Hopkins School of Hygiene and Public Health, Institute for International Programs, 103 E. Mount Royal Avenue, Baltimore, Maryland 21202, USA. Make checks payable to Johns Hopkins University.

25

Weaving Together Folk Media and Mass Media

Principles into Practice

by Victor T. Valbuena

In the early 1970s, folk media attracted attention as a viable alternative and/or complement to mass media in promoting development concerns such as health, family planning, and agricultural productivity. Experimentation during this period, and a review of the role of folk media in national independence movements, helped program implementors and communicators identify major issues in harnessing the potential of folk media for development campaigns. These included concern about the destruction of the original folk media form; resentment of artists and audiences against the adaptation of traditional forms to convey development messages; and objections by local community leaders and politicians to highlighting sensitive issues in folk media presentations. However, these problems have been minimized through an enlightened understanding of the form, function and context of folk media, active participation of artists and audience in the development of communication messages, and providing local officials the "right to reply."

Communicators have also experimented with the use of folk media in conjunction with more modern mass media. Can folk media be effectively integrated with mass media? Yes, provided some basic principles are followed.

■ Select the media form carefully.

Select a folk media form that is widely known, is flexible, and has some characteristics similar to mass media. Not all folk media can make the transition to mass media.

In the Philippines, the *balagtasan*, *balitao* and *bantayonon* are types of poetic jousts that have traditionally attracted large audiences who *listen* to the protagonists' arguments. They are essentially oral media and, as such, can easily be used on radio. They are also flexible: as forms of debate, they can accommodate almost any issue. They can be lengthened or shortened depending on time constraints.

The *balagtasan* and its derivatives still feature regularly in the programming of both Philippine government and commercial radio stations. From 1987 to 1990, a project sponsored by the United Nations Environment Program used the *balagtasan*, both in original form in public performance and in adapted form for radio, to demonstrate the feasibility of using folk media to promote environmental conservation. The radio adaptation was essentially a shorter version, to conform to limitations of air time. It did away with the verbal diversions and sub-arguments usual in community performance, and concentrated instead on main arguments. This more focused presentation helped clarify the issues for the audience.

In Sri Lanka, the Mahaweli Community Radio has successfully adapted part of the *thovil* ritual in its regular programming. *Thovil* is a traditional devil-exorcism ritual performed mainly in the southern part of the island. In the course of the ritual, there is cross-talk between the exorcists and the accompanying drummer. Since this cross-talk is oral, it lends itself well to radio adaptation.

The usual scenario is a dialogue between the exorcist, who identifies a social problem and poses a solution, and the drummer, who presents the popular view of the problem. At the end of the argument and counter-arguments, both arrive at an understanding on how to exorcise the "demon." *Thovil's* flexibility allowed contemporary social evils such as malaria, diarrhea, alcoholism, etc., to be symbolized as demons in the radio adaptation.

■ Make sure the adaptation strengthens the media form.

Adaptation for mass media need not alter or destroy the folk media form. In fact, it can help preserve it and effectively assist in cultural development.

Since 1986, the Guirandurukotte Community Radio (GCR) in Sri Lanka has been



Martin Moulton

(continued on p. 20)

broadcasting *kavikolaya* as a means of social control. The *kavikolaya* is a folk verse traditionally used to report social deviance - suicide, thefts, rapes, and other crimes. In its original form, it is printed as a pamphlet, read aloud in a public place and sold to interested listeners. At GCR, the *kavikolaya* is used for the same purpose, i.e., to report and/or comment on violations of social norms. It is prepared in its original form, except that it is presented over radio rather than in a public setting.

The form is actively preserved and enhanced by GCR's encouraging members of the audience to write and present their own *kavikolaya*. This is possible because, again, the form is very versatile; it can accommodate any topic or issue, and it does not require sophisticated skills to produce. Listeners with a comparatively low level of education can prepare them. In fact, at GCR, all aspects of the *kavikolaya* program are handled by villagers themselves. Most villagers send their *kavikolaya* in verse, while others tell their story to the producer, or mail their story in prose. Between 1986 and 1988, over 500 *kavikolaya* were broadcast over GCR.

Also in Sri Lanka, the Mahaweli Community Radio (MCR) actively records folk songs during production visits to villages and uses them in broadcasts. Those with flexible lyrics are used to carry development messages. The rest are used in cultural programs. This practice has resulted in the preservation of previously unrecorded folk music and has contributed to increased awareness of local culture. To ensure wider dissemination, MCR sells the songs on audio cassette tapes.

In Malaysia, the government actively promotes various folk media songs, dances, choral recitations, folk drama on government radio and television stations as a means of conveying social messages and strengthening cultural identity. This practice has not been lost on the implementors of an environmental communication project implemented by the Asian Mass Communication Research and Information Center (AMIC) and the Federation of Malaysian Consumers' Association. The project is cur-

rently using *dikir barat* (choral singing) and *bangsawan* (folk drama) in village performances as well as on radio and TV, to communicate environmental conservation messages, and to promote these media forms as means of reinforcing Malaysian cultural identity.

■ Relate the message to local needs.

Folk media have sociological roots: their use and adaptation should be related to local events and their production consistent with the needs of the social environment.

The Guirandurukotte Community Radio broadcast area covers Sri Lankan villages whose residents are settlers from other parts of the country, and who have experienced stress following resettlement. This stress has manifested itself in alcohol consumption, sexual deviancy and petty crimes. At GCR, the *kavikolaya* was deemed an appropriate folk medium for reporting these incidents, with a view to restoring social control. The station saw the need to open channels for listeners to voice their concern about social problems and contribute toward social justice.

In the 1970s and 1980s, Filipino *zarzuelas* (satirical musical dramas) were written, developed and produced for live performances in community theaters as well as in adapted versions for film and television. This revival was initially seen as a way to preserve the form. More significant, however, it also provided a viable, alternative medium for highlighting social events and articulating social issues not addressed by the mainstream media during the Marcos regime, e.g., political repression, human rights violations, "cultural imperialism," poverty and economic dislocation.

■ Bring folk artists and mass media producers together.

Collaboration between folk artists and mass media producers is absolutely necessary for successful integration of the two forms.

In projects using traditional media in environmental communication in Indonesia,

Adaptation of folk media for mass media can help preserve it and effectively assist in cultural development.

Philippines, Thailand and India, AMIC ensured that performing artists were actively involved in the development of strategies and messages. The artists and the producers sat down together in production workshops. The artists educated the producers on their art and on the possibilities of conveying the environmental messages through plots, dialogues, humorous interludes, or songs and other musical intermissions, without destroying the essence of particular folk media. The mass media producers, for their part, enlightened the folk artists on the potential and limitations of the mass media. In this interface, it was essential to treat the folk artists, many of whom were uneducated, as equals or experts. They knew their art better than the producers and deserved due respect. The results were successful collaborative productions.

For example, in Tamilnadu, India, the leading *therukoothu* (street theater) artist and his performing troupe, the project staff, representatives of the state environmental agency, and video producers collectively looked at the *Mahabharata* (a Hindu epic tale) and identified an incident in the epic which could be used to convey messages on forestry and protection of natural fauna: a canto about Arjuna's sojourn to the forest. The artists were given a free hand to explore how to convey the message.

The resulting script was pretested via a live performance in a village. It was a success and led to requests from other villagers for similar performances. The *therukoothu* troupe has so far given over 75 such performances and is now booked for the next two years. Some performances have been videotaped and arrangements are now being finalized for airing these over Doordarshan, India's television network.

Mutual Reinforcement

Traditional media or forms of folk expression survive to this day as active cultural institutions. They can be effectively combined with mass media not only to expand audience outreach but also to preserve them and enrich their repertoire. Whether in their authentic form, or combined with mass media, they can continue to be functional and meaningful channels of communication in developing societies.

Victor T. Valbuena, from the Philippines, works as Senior Program Specialist and Coordinator of the Seminars and Institutional Development Program, Asian Mass Communication Researcher and Information Center (AMIC). He served as coordinator or advisor to the projects cited in this article. For further information, write him at AMIC, 39 Newton Road, Singapore 1130.

International Center on Indigenous Knowledge

Leading the worldwide effort to identify, preserve and disseminate traditional wisdom of farmers and indigenous societies is the **Center for Indigenous Knowledge for Agriculture and Rural Development (CIKARD)** based at Iowa State University. Established in 1987, CIKARD attempts to make this knowledge available to development professionals and researchers who recognize its value.

CIKARD's five major activities are to

- document, collect, and disseminate information on indigenous knowledge and communication;
- support the development of methodologies for recording indigenous knowledge and for incorporating it into formal and informal education and development programs;
- sponsor lectures and seminars and conduct training workshops on the use of indigenous knowledge;
- facilitate cross-disciplinary research; and
- promote the establishment of regional and national resource centers on indigenous knowledge. So far, these include an African regional center, based in Nigeria, and an Asian regional center, based in the Philippines.



CIKARD responds to information requests and publishes bibliographies and monographs. It also invites contributions of documents on topics relevant to its clearinghouse. Its quarterly newsletter, *CIKARD News*, is an excellent source of news, development, events and resources related to indigenous knowledge. Since CIKARD operates on limited funds, it charges for materials and welcomes donations from individuals or organizations. For a publication and price list, contact: CIKARD, Iowa State University, 318 Curtiss Hall, Iowa 50011, USA. Telephone: (515) 294-9503.

Traditions for Tomorrow

Since 1986, Traditions for Tomorrow has collaborated with groups in Central and South America that work to preserve and strengthen their ethnic identity. By helping groups obtain equipment and materials, it supports locally initiated projects related to indigenous traditions. For example, the group currently assists

- an oral tradition workshop created by a Nahuatl Indian community in Mexico, which publishes a volume of stories, stages dramas, and conducts research on medicinal plants;
- a printing workshop in Guatemala that publishes works on Mayan culture;
- efforts by Peruvian Indians to produce a "peasant encyclopedia," which documents local tools, musical instruments, songs, supernatural visions, etc. and is also used to boost literacy.

Although Traditions for Tomorrow is not itself a funding organization, it acts as a liaison between community groups and potential donors, both private and public. It will not support pre-existing projects but instead encourages groups to invite them for a site visit to discuss project ideas. Contact: Traditions for Tomorrow, BP 477-07, 75327 Paris Cedex 07, France. Tel: (33-1) 47-05-1624. Fax: (33-1) 45-56-05-51.

Resources

Indigenous Knowledge

■ The Information Center for Low-External-Input and Sustainable Agriculture (ILEIA) collects, exchanges and disseminates information on sustainable agriculture through a network of some 4,500 affiliated groups and individuals. The 1990, no. 1, edition of its quarterly newsletter is devoted to local agricultural knowledge and features many articles from Third World specialists as well as an extensive resource listing. Cost: US \$12.50 for Third World organizations (groups may also apply for a free subscription), \$25 for others. Contact: ILEIA, Kastanjelaan 5, PO Box 64, 3830 AB Leusden, The Netherlands. Tel: (31-33) 94-30-86. Fax: (31-33) 94-07-91.

■ We have found the following three papers especially valuable as background in understanding the importance of indigenous knowledge:

- "Toward a Knowledge of Local Knowledge," by Constance McCorkle, originally published in *Agriculture and Human Values* (Summer 1989);
- "Indigenous Knowledge as a Key to Local Development" by David Atte (1989);
- "Using Indigenous Knowledge in Agricultural Development" by Michael Warren (1990).

All three draw upon concrete examples throughout the Third World to illustrate the rich diversity of existing local knowledge; how it can benefit research, development and extension; and the consequences of ignoring this knowledge. Importantly, McCorkle also raises caveats about the dangers of "romanticizing" local knowledge systems. The first two papers are available for \$2 and \$8 respectively, by writing the Clearinghouse at the address on p. 2. Warren's paper is available for \$5.95 from World Bank Publications, PO Box 7247-8619, Philadelphia, PA 19170-8619, USA; cite order no. 11884.

■ On the horizon, *Indigenous Knowledge Systems: The Cultural Dimension of Development*, edited by Michael Warren, David Brokensha and Jan Slikkerveer, promises to be a definitive scholarly examination of local people's existing knowledge, modes

of decision-making, organizational forms, and experiments and innovations. The book contains chapters by 70 contributors from 11 countries who span fields ranging from anthropology to veterinary medicine. Available by late 1991 for US \$76.50 from Kegan Paul International, PO Box 256, 118 Bedford Court Mansions, Bedford Ave., London WC1B 3FW, UK.

■ A special edition of *Agriculture and Human Values*, vol. 8, nos. 1&2, also edited by Michael Warren, will focus on indigenous agriculture and environment knowledge systems and development. The volume will examine the role of indigenous agricultural knowledge and feature case examples from countries ranging from China to Kenya. Available for \$18 (individuals) or \$20 (institutions) from the journal's editorial offices, PO Box 14938, Gainesville, FL 32604, USA.

Indigenous Communication

■ An annotated bibliography on indigenous communication is currently being developed by Paul Mundy and Lin Compton (authors of article, p. 1) and will be available by July 1992. It attempts to go beyond existing bibliographies on folk media to include entries on the communication aspects of indigenous organizations, indigenous forms of instruction, and the indigenous communication of technical information through record-keeping, demonstration, etc. An index of key words allows access by topic and geographical area. Available for \$7.50 from CIKARD (see box, p. 21, for address).

■ For a historical and analytical view of the role of performing arts in development, pick up Kees P. Eskamp's *Theater in Search of Social Change* (1989). This well-researched book, based on literature reviews as well as the author's extensive travels, presents numerous case studies from Africa, Asia, and Latin America. Cost: \$22.50 (\$16 for those from developing countries). Available from the Center for the Study of Education in Developing Countries, Nieuwe Parklaan 9, PO Box 90734, 2509 LS The Hague, The Netherlands. Tel: (31-70) 35-10-591. Fax: (31-70) 35-10-596.

What's New, What's Coming

Communication Research

A newly established Participatory Communication Research Network invites individuals to submit papers for a discussion that will take place during the next International Association for Mass Communication Research conference in Brazil, August 16-23, 1992. The network has been created to strengthen participatory research for communication policy and planning. The discussion will summarize basic characteristics of participatory research methods, address critical issues and present case studies. Topics include folk media, social movements, national and cultural identity, assessment of extension programs, quantitative and qualitative research methods, action research and more. Submit abstracts by January 1 and full papers by May 1, 1992, to Jan Servaes, Catholic University of Nijmegen, Institute for Mass Communication, PO Box 9108, 6500 HK Nijmegen, The Netherlands, Tel: (31-80) 612-322, Fax: (31-80) 615-938; or to Tom Jacobson, State University of New York at Buffalo, Department of Communication, 338 MFAC - Ellicott Complex, Buffalo, New York 14261, USA, tel: (716) 636-2141, Fax: (716) 636-2086.

New Publications

Technology Transfer from Researchers to Users by **Herbert F. Lionberger and Paul H. Gwin**. University of Missouri Press, 1991. 189 pp. US \$12.50. (Extension Publications, University of Missouri, 2800 Maguire, Columbia, MO 65211).

Lionberger and Gwin, both longtime authorities in the development communication field, have produced an extensively revised edition of their 1982 textbook, formerly titled *Communication Strategies*. In nine chapters, they cover topics such as basic agricultural extension concepts and practice, applications from diffusion research, and the respective roles of interpersonal and mass media communication.

Most chapters close with suggestions for practical strategies — for example, pointers on communicating with groups, guidelines for media development, and worksheets for planning national and local extension programs. Annotated references guide motivated readers toward more in-depth study. The textbook has been used to train extension workers in Egypt, Pakistan, and African countries, and plans for a Mandarin Chinese edition are being discussed.

Editing and Publication: A Training Manual and A Handbook for Trainers of Editing and Publication by **Ian Montagnes**. Manila: International Rice Research Institute, 1990. Cost for both books: US \$32 for industrialized countries, \$7 for developing countries. Add \$11 for air or \$3 for surface mail postage. Available from the IRRI Information Center, PO Box 933, 1099 Manila, Philippines.

Scientific research conducted in developing countries is ultimately intended to be used by extension workers, farmers, health care professionals, teachers, and other practitioners. But often research results never reach these people. According to this training manual and its companion handbook, what is needed to overcome the problem are more trained editors who can report the results of scientific research to those who can use it. Both books are the result of an editing and publication training course conducted from 1985 to 1988.

The training manual provides simple, clear lessons in proofreading, editing, production management, and publication design. It also includes chapters on editing for the specialist and as well as for the nonspecialist, highlighting the editor's important role as a bridge between the researcher and the audience. The manual can serve a useful reference tool as well.

The handbook includes sample exercises for trainers and provides guidance in developing a training course. Both books were created with an international audience in mind and use examples from developing countries covering a range of disciplines to illustrate the lessons.

—Valerie Lamont

Contributors Invited

The *Journal of Development Communication*, a new and promising quarterly journal published in Malaysia, invites academics, journalists and development communication practitioners to contribute articles on any development communication topic. Papers should be no longer than 20 pages, double-spaced, and should include references. Authors should provide a short description of their background and a passport-sized black-and-white photo.

Although the journal emphasizes scholarly research and analysis, short reports on project development, research, seminar findings as well as notices of future events are also welcome. The journal also encourages authors and publishers to send publications for review. Submit materials to: The Editor, *Journal of Development Communication*, AIDCOM, APDC Building, 9th floor, Persiaran Duta, 50480 Kuala Lumpur, Malaysia. Fax: (603) 254-3785.

Request to Readers

If you follow up on a notice or resource listed in these pages, say that you heard about it through the *Development Communication Report!*

Reader's Page



Letter to the editor:

I am writing in response to Alfonso Gumucio-Dagron's observations on social marketing [DCR, no. 73]... to lend a different perspective based on my experience as director of a program that used social marketing strategy to promote family planning ... in Jamaica.

I appreciate [the author's] candor . . . Without doubt, there is similarity between social marketing and the "trickle-down" relationship between North and South that was prevalent in the '60s and early '70s. However, although social marketing embraces the use of straight advertising techniques, it does not rely entirely on raw advertising . . . and I daresay it would be a dismal failure if it did.

The genesis of social marketing strategy may be in the United States, but its growth and development has taken place in developing countries, where various groups and organizations have successfully employed these techniques to raise people's consciousness and sensitivity about one or another socio-economic issue. As with any imported idea, be it from the North or the South, some . . . tailoring must occur to make it appropriate and useful to local needs; and there have been measurable successes in Jamaica, Mexico, Singapore, Nigeria, Zimbabwe, to name a few countries. . . .

Contrary to the charge that "development communication and social marketing can merge no better than water and oil can mix," I suggest that there cannot be effective social marketing without development communication. Mass media campaigns do not a program make. While these channels are the easiest means to influence a large and diverse population, greater effectiveness is achieved when they are combined with an interpersonal approach. Small group and person-to-person discussions as well as the availability of efficient service is an integral part of any social marketing strategy. It is here that the strategy of raising consciousness or reaching a "passive audience" turns to one of motivating community participation and action. And while [social marketing] may rely largely on influencing the individual, it also relies heavily on peer group influence to sustain its effect . . .

However, one significant drawback of social marketing is the expense involved. Often, too much money is required to develop, pre-test, and run a successful mass media program and not enough is put into maintaining efficient participatory communication and social development.

*Barbara Reuben-Powell
Former Director of Information,
Education and Communication
National Family Planning Board
Jamaica*

To Our Readers:

With this edition, we introduce a regular "Reader's Page," at the request of many readers who responded to the 1990 survey. It will feature letters, commentary, news of projects, and humorous items. Once again, we encourage readers to submit contributions — we cannot accommodate your request for greater involvement if you do not cooperate! Contributions to this page should be brief (100-400 words) and should address timely, current topics.

We will also use this page to announce future DCR themes. Themes of the next four editions are:

- DCR no. 75 (1991/4): "Information Technology and Telecommunications" covering the revolution in the use of fax, and current trends in telecommunications and satellite based information systems. Deadline: December 1, 1991.
- DCR no. 76 (1992/1): "Environmental Communication Revisited," with emphasis on the role of journalists and communication strategies related to urban environment. Deadline: February 1, 1992.
- DCR no. 77 (1992/2): "What's New, What's True in Health Communication?" reflecting on the experience over the last decade. Deadline: May 1, 1992.
- DCR no. 78 (1992/3): "Development Communication: Where Is It Now?" presenting current debates and thinking in the field and interviews with Development Communication specialists. Deadline: August 1, 1992.

Themes and schedules are subject to revision.

We invite contributions to these issues in the form of articles, case studies, book reviews, notices of resources or events, and commentary. Materials might address field experiences, research findings or opinions related to the topic. However, we cannot guarantee publication of all submissions. Articles that present an original experience or analysis and that are written in clear, concise prose are more likely to be accepted. Also, we give priority to contributions from Third World authors working at the grassroots level.

Contributions should be brief — 1,200 words or less for articles, 750 words or less for editorial commentary and book reviews — and should be accompanied by a brief description of the author, as well as a complete contact address, telephone and fax numbers, if available. We also encourage the submission of photographs or illustrations to accompany written materials; they will be returned following publication. Please submit all materials to the Editor at the address listed on page 2.

— The Editor



41

Information Technology: What About the Plain Old Telephone?

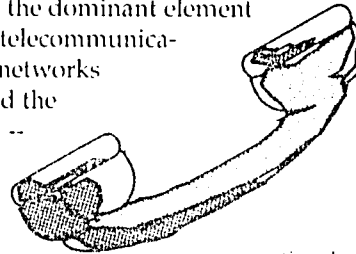
No. 75
1991/4

by Greta S. Nettleton

While researchers and development practitioners are rightly excited about the opportunities afforded by new telecommunications technologies such as CD-ROM, data broadcasting, small satellite antennas, and remote database access, there is a tendency for everyone to overlook perhaps the most important telecommunications element of all--the

plain old telephone.

Voice telephone service is still by far the dominant element in all telecommunications networks around the world -- par-



(continued on p. 2)

Inside this Issue ...

Principles into Practice

Econet:
The Environmental
Computer Network ... 11

When Disaster Strikes:
Communications
Technology in the Sky ... 12

When Disaster Strikes:
Making Decisions on
the Ground ... 13

The (Solar) Power to
Communicate ... 18

Resources ... 21

Reader's Page ... 21

What's New,
What's Coming ... 22

Yes, but ...

The Information Revolution
Need Not Exclude the
Poor ... 24

Packet Radio - The "Missing Link?"

by Gary Garriott

The lack of reliable communication with remote regions has posed a difficult obstacle in the implementation of development projects for decades. While regions in Asia, Africa and Latin America are expanding communications channels through modern digital switching equipment and even fiber

optic technology, many rural areas continue to be isolated. The development of telephone circuits accessible to economically marginal groups is occurring slowly, when at all. Inexpensive digital technologies such as packet radio, however, while not replacing the lure and utility of voice telephone, may now be a viable low-cost

(continued on p. 5)

Satellife: Lifelines throughout Africa

by Kathleen Selvaggio

Throughout Africa, efforts to spread the news of epidemics, advise health care workers in times of need, or simply report and administer immunization programs are frustrated by the inability to communicate. Without the precious resource of timely and accurate health information, the value of health care providers and medicines are drastically reduced. Now, a brand-new project known as Satellife is designed to

make this resource available to health care workers across the region. Using microsattellites and ground stations, Satellife will link health care providers and health researchers who depend critically on up-to-date information to address medical and health problems.

Satellife was conceived in 1985 as initiative of International Physicians for the Prevention of Nuclear

(continued on p. 8)



Development Communication Report

Development Communication Report, published quarterly by the Clearinghouse on Development Communication, has a circulation of over 7,000. The newsletter is available free of charge to readers in the developing world and at a charge of \$10.00 per year to readers in industrialized countries.

A center for materials and information on important applications of communication technology to development problems, the Clearinghouse is operated by the Institute for International Research, in association with Creative Associates International and supported by the U.S. Agency for International Development, Bureau for Science and Technology, Office of Education, as part of its program in educational technology and development communication.

The views expressed in the *Development Communication Report* are those of the authors and not necessarily of its sponsors. Original material in the Report may be reproduced without prior permission provided that full credit is given and that two copies of the reprint are sent to the Editor.

Clearinghouse on
Development Communication
1815 North Fort Myer Drive,
Suite 600
Arlington, VA 22209 USA
Telephone: (703) 527-5546
Fax: (703) 527-4661

Michael Laflin, Director
Kathleen Selvaggio and
Andrea Bosch, CoEditors
Valerie Lamont,
Information Specialist
Earlington McLetchie,
Librarian
Mariel Escudero, Production &
Circulation Manager

Development Communication Report is produced using desktop publishing under A.I.D. contract DR-5831-Z-00-8028-00.

... the Plain Old Telephone, continued from p. 1

ticularly in developing countries. DCR's own survey in 1989 revealed that the readers rated the telephone as the most important information technology in your daily work (39 percent) followed by regular mail (17 percent) and personal computers (14 percent).

In spite of this, the value of telephone service for health, community development, social linkages, education, and government administration remains almost totally unexplored. The only available studies assess the economic growth associated with improved infrastructure and are heavily slanted towards convincing policy makers to invest. Other than these papers and a few user surveys done in Senegal, Costa Rica, Egypt, and Sri Lanka, little analysis shows the impact of the telephone upon the lives of people. The evidence lies in the stories told in villages without telephones.

Without a Phone

During a stay in a small village in Central America, one researcher came across a man who was fatally injured in an accident. The only available car was broken down. Without the timely arrival of the researcher, the man would not have reached a clinic.

An unusual illness hit a remote community in Africa. Local medical professionals were unable to contact their colleagues to warn them or to access advice. More people than needed be, fell deathly ill.

Telephone service does more than connect voices far apart in distance. Much of the "high technology" telecommunications systems today rely on the fundamental technology of telephone lines. Facsimile, packet radio (see VITA, p.1), and electronic mail (see EcoNet, p.11) use the telephone infrastructure. Once connected to the outside world by telephone, the complementary technologies are countless and the difference in information exchange is invaluable.

Waiting for a Line

Despite the clear contribution of tele-

phones, they are still scarce in many areas of developing countries. Potential subscribers in areas that have infrastructure may have to queue up for years to get a new line installed and most rural areas do not have the basic access. Similarly, existing urban service can be of such poor quality that attempting to make a call during busy hours may prove frustrating. It may seem that the transmission of electronic mail or a facsimile may not be worth the expense. Potentially poor reception should not be a deterrent in deciding whether to build and improve telephone systems, however. Error correcting technology can enhance transmission and the capability of telephone lines significantly. (see VITA, p.1 for specific information)

Trends

Significant progress in telecommunications occurred in newly industrialized countries where communications was made a priority by the government. The most outstanding examples are in Asia, where Hong Kong, Singapore, Taiwan and South Korea have attained telephone density statistics equal or better than countries in southern Europe. In the 1960s and 1970s, Brazil developed the best system in Latin America, although it has since lost ground due to insufficient investment. Other countries, such as Mexico, Malaysia, Thailand, and the oil-exporting Arab states, have pursued comprehensive telecommunications expansion programs with notable success. Still, it is difficult to define the investment in communications infrastructure as a cause or result of successful development. Either way, it is clear that all other areas of development can be enhanced through the sharing of information.

Recent figures show that over the last 25 years, developing countries in general have made significant strides towards expanding telephone service. In 1969, developing countries (comprising about three quarters of the world's population) only had about 7 percent of all installed telephone lines in the world. By 1988, this figure had nearly doubled to 12 percent with the average telephone line density for developed countries



at 35.1 per 100 people, compared with (still comparatively low) 1.5 per 100 people in developing countries.

This positive development reflects changes in underlying attitudes toward the telephone as a tool for economic and perhaps, social development. Twenty-five years ago, many development practitioners would have disregarded telephone service as a luxury when compared to other needs, such as agricultural extension, transportation systems, etc. Today, the question is not whether to extend basic telephone services, but who should own them.

The Telephone of the '90s

Even though the telephone still looks more or less the same as it did ten years ago, the range of services it can access has changed dramatically. In nearly every country in the world, the public telephone networks that used to provide mainly voice telephone service are slowly being made capable of transmitting faster and larger amounts of information. Behind the scenes, in the telephone switching stations and under the streets in the cable conduits, old analog technology is being replaced by digital technology and copper wires by optic fiber cables.

In most urban areas in Latin America, and many urban areas in Asia and Africa, one can unplug one's telephone and plug in a facsimile machine and transmit information as easily as making a voice call. Slow and medium speed modems can do the same thing with the textual information from a personal computer.

Technologies are merging. Whether it is one person talking to another, one fax machine talking to another, or one small computer talking to another, the process and much of the infrastructure is the same. New technologies such as cellular or mobile telephones also indicate that telephone systems are expanding into other areas of communications as well. The network broadens.

Evidence shows that people want telephone service. Statistics put out by the International Telecommunications Union show that modern communications tools such as leased data lines and facsimile machines are spreading rapidly in the devel-

Table 1

	1986	1988		1986	1988
Botswana	122	812	Iran	150	620
Brazil	n.a.	20,090	Malaysia	1,415	13,702
Colombia	n.a.	17,090	Thailand	1,512	5,453

* Figures are probably much higher, in reality

Table 2

	1981	1988		1981	1988
Brazil	58	20,821	Malaysia	n.a.	8,206
Colombia	150	16,314	Mauritius	11	112
Fiji	13	233	Rwanda	3	3
Ethiopia	0	13	Senegal	n.a.	512
Ghana	n.a.	15	Tanzania	11	715
Indonesia	n.a.	1,628	Thailand	38	11,913

* Special digital line used primarily by business to electronic transfer of large amounts of data electronically

oping world. (See tables 1 and 2) Leased data lines are not part of the public network and are very expensive to use, but they are one of the few available statistics to show how much new technology is spreading to developing countries. (Facsimile statistics are estimates, and are probably much higher in reality.)

Development Agencies and the Telephone

Historically, there has been a bias against telephones in social development programs. Development agencies and NGOs are only just beginning to involve

(continued on p. 4)





Inter-American Development Bank

This woman can now make calls from San Jose de los Pozos in Central Panama where public telephones have recently been installed.

themselves with these types of communications networks. In the past, where simple technologies were preferred, telephones were unavoidably "high technology". On the other hand, where complex technology was encouraged, telephones were often taken for granted. Perhaps the desire for the glamor of a new, magical solution to old problems deterred them.

In social development projects, where money is almost always tight, cost plays a tremendous role in determining what kind of telecommunications technology which can be considered. Newer but costly technology such as cellular phones, for example, will probably not play a

large role in the developing world. Although the purchase of the machine may be difficult and expensive due to import duties, facsimile can be used for essentially the same price as a regular phone. At the same time, electronic mail and linkages to telecommunications networks can be extremely cost effective.

There are also institutional problems. Efforts to expand telephone access are usually dependent on resolving difficult external problems that are beyond the control of the phone company itself, much less a development agency outside of the sector. Moreover, telephone companies that pro-

vide poor service are seldom popular with their users. Finally, the telephone company in developing countries is almost always controlled by the government and can be used as a tool for information control and public surveillance. The privatization of telephone services is rapidly becoming a focal area to development agencies. Should public telephone companies be owned privately, systems could face a whole new set of assets and liabilities for its users.

Other services outside of the voice telephone network should be considered. In rare instances, telegraph service, although very slow, is highly subsidized by the government, and may be the cheapest option for short messages. More commonly, telex is still a good communication as option for some purposes in many developing countries because it avoids the congested public telecommunications network altogether and is therefore more reliable. As a result, telex is still growing rapidly in developing countries, even as it is being dropped by users in the developed world.

When making a decision about whether to include a telecommunications component into a project or to begin the design of a telecommunications project, it is important to remember that the fascination with the engineering details is far less important to the eventual success of the project than is a sound framework of thinking about needs, users, budget and the availability of local infrastructure. While there is usually more than one way to solve a communications problem, and all should be considered, engineers can often solve technical problems. The real planning vision is needed in designing a project that effectively serves the needs of the intended people and sets the stage for increasing the capability of the system over time. Today, as was true decades ago, the telephone is still the technology of choice.

Greta Nettleton is a private consultant specializing in telecommunications in developing countries. For further information, contact her at P.O. Box 75, Palisades, New York 10964. Telephone and fax: (914) 359-0513.

Packet Radio, continued from p. 1

Trends

New CDC Bulletin Board Service

The Clearinghouse on Development Communication offers a Bulletin Board Service (BBS) called CDCNET accessible through computer communications software packages and computer modems. CDCNET will present listings of upcoming events of interests to development communication practitioners and others.

Callers to the CDCNET BBS will be able to view and download articles from current issues of the DCR. Issues can be ordered by leaving a message for Earl McLetchie or Valerie Lamont in the Clearinghouse electronic mailbox. Technical questions should be directed to Mark Prado. Further information on how to order Clearinghouse publications, both from the US and abroad will be provided on the screen.

The service is available via baud modem by dialing (202) 296-7778 for 2400 baud modem users. Individuals equipped with 1200, 9600 and 14400 baud modems can also dial (202) 466-5353.

Addresses include: E-mail: Internet cdc@f349.n109.z1.fidonet.org
Fidonet: E:109/349
Information about the service is also available by writing the DCR.

The cost of using the CDCNET BBS will be based on the user long distance telephone carrier. Local access is free.

alternative in bridging the "last mile" gap which plagues the distant client or the end-user with specialized requirements.

What is Packet Radio?

Packet radio combines two mature and relatively low-cost technologies -- two-way radio and personal computers -- in a system that permits the computers to communicate with each other over radio circuits. Analogous to computer communication via modem over telephone lines, packet radio is easy to use and permits the transmission of messages, letters, spreadsheets and reports without the need for manual transcription or intervention. Packet radio networks can be simple or complex, depending on communication needs.

The "terminal node controller" (TNC) or, more simply, the packet controller is the distinguishing device which marries the personal computer to the two-way radio. The TNC performs many functions including error-checking, where short

bursts of audio tones containing the digital information are checked. Unlike normal fax and some other digital transmission modes that do not check for and correct errors, the high reliability with which packet radio encodes and decodes digital information means that sophisticated computer programs, data files and even graphics can be transferred from one point to another accurately.

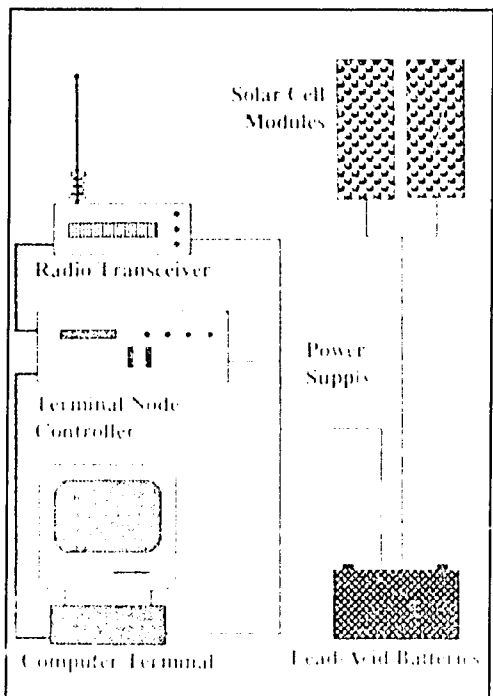
When using packet radio, the radio connections will be about as good as they are on voice radio, that is, packet transmissions will probably be acceptable if voice radio contacts are strong and intelligible. If signals are weak or interference and static are high, packet radio will not work as well.

Some radio frequencies are more suited for packet transmissions than others. These are the VHF (very high frequency) which range from approximately 30-300 megahertz (MHz) and UHF (ultra high frequency) which range from 300-3000 MHz. While "high frequencies" (HF), typically 3-30 MHz, are less ideal, distances between stations can be much longer (1-3,000 kilometers) as compared to VHF/UHF which are typically within 100-150 kilometers.

In theory, it is possible to adapt existing two-way radio stations to packet radio stations when certain characteristics are present. In most cases, new radios are preferable because later technology more easily accommodates packet communications. An analysis of the current system can determine the feasibility of using existing technology.

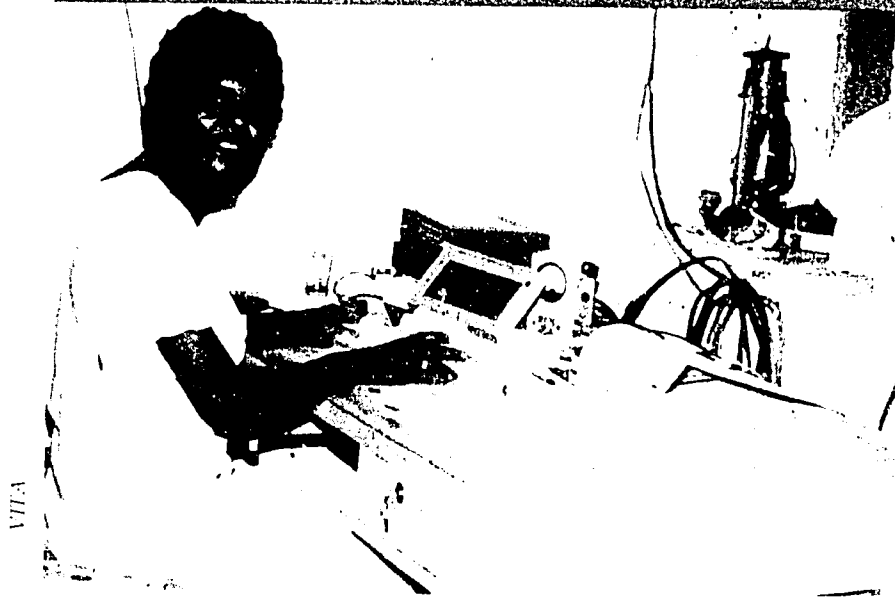
What Has It Done?

Military uses of packet radio have been widespread. Persistent rumors have claimed that users of packet radio technology have included RENAMO in Mozambique, the Eritreans in Ethiopia prior to the recent overthrow of the Mengistu regime, the contras in Nicaragua, and some marxist factions in the Philippines. Anti-drug packet radio networks have also been used throughout Latin



Packet Radio Schematic Diagram

(continued on p. 61)



Volunteer using packet radio in Ethiopia.

America.

The first known humanitarian use of packet radio was by VITA in 1986 when two VITA volunteers traveled to Ethiopia invited by CARE and the Ethiopian Relief and Rehabilitation Commission. A demonstration between CARE offices in Addis Ababa and Dire Dawa, several hundred kilometers to the north, successfully exchanged logistical information on food supplies for several weeks. Since then VITA has installed such "terrestrial" networks and trained local staff in the Sudan, Philippines, Chad and Jamaica. Additional studies and demonstrations have taken place in Nigeria, Tanzania, Mozambique, Pakistan, Afghanistan, Lesotho, and Kenya. The packet networks in Jamaica and the Philippines have extended preparedness and search and rescue information to isolated areas during and prior to disaster relief efforts.

What Else Can It Do?

Non-commercial packet experimentation in Latin America and in India has also been extensive. Most applications involve the transmission of administrative messages which either required frequent repeats or the use of multiple languages and have, therefore, been inefficiently transmitted by voice radio, if at all. In these cases, packet radio facilitates the provision of a

hard copy. Because non-text files such as spreadsheets and database result sets can also be transmitted, these administrative applications are likely to increase as computer skills beyond wordprocessing continue to expand.

Perhaps the most exciting application of packet radio technology is the adaptation to store-and-forward messaging via inexpensive satellites in low-earth orbit. When in polar orbits, such satellites traverse all points on earth at least twice a day. During these "passes" -- typically ten to fifteen minutes long -- hundreds of pages of text (or the equivalent in other kinds of files) can be uploaded or downloaded to addressees somewhere else in the world using currently available technology. VITA has been a pioneer in this application, beginning in 1983 when the "Digital Communications Experiment" developed by VITA staff and volunteers was launched on a University of Surrey (UK) spacecraft. In 1990 the "PACSAT Communications Experiment" was launched, sponsored by VITA to operate on special frequencies. Today development and relief-related demonstration groundstations are being installed by VITA and others throughout the world, with the emphasis on Africa. Space applications of packet radio currently emphasize information exchange and dissemination on topics in health, education and energy/environment as well as administrative and logistical information related to relief and development programs and projects. The launch of VITASAT-A in 1993 will mark the first low earth orbiting communications satellite in history totally dedicated to humanitarian ends.

What about Installation and Cost?

When choosing between terrestrial and space applications of packet radio, generally, within-country communication is best achieved by ground-based packet radio networks, while packet radio in space is usually preferred for between-country communications. Unusually large countries (Brazil) or dispersed nations (Kiribati) may also benefit significantly



41

from packet radio satellites.

Whether in space or terrestrial environments, experience thus far indicates that a minimum of one week per station is necessary for installation and training. Two levels of training must be provided: operator and "systems engineer." Operator training is usually accomplished within a matter of hours with anyone who has some DOS and wordprocessing computer experience. "Systems engineer" involves troubleshooting and problem-solving. This experience is generally provided over a period of some weeks through "on-the-job" practice and tasks assigned by the more experienced installers. A moderately-skilled radio or computer technician is a prime candidate for the system engineer level of responsibility.

Determining the specific variables and cost needed to install and operate packet radio requires a study of the environment. Excluding the computer, terrestrial packet radio station hardware and software can cost anywhere from \$2000 to \$10,000 each (installed), but the cost depends largely on the quality of the radio required. For example, a cheaper radio could be used in a desert environment where interference is low. Comparable "fixed" and "portable" satellite stations can range from \$1,500 to \$5,000. In both terrestrial and space environments, important variables include the quality of the antennae system, and the availability of stable electricity from mains or generators or from solar panel/battery combinations.

Commercial TNC and radio manufacturers, primarily in North America, Europe and Japan, are hotly competing for government and military contracts overseas, where per station costs can easily exceed \$20,000. To our knowledge, VITA is the only organization that has been promoting lower cost alternatives by adapting hardware and software made available through the amateur radio marketplace for relief and development applications. VITA is able to provide a series of packet radio-related services, from conducting needs analyses and feasibility studies to actual installation and training and post-project technical support.

What is the Future of Packet Radio?

The greater the links, the greater will be the utility of packet radio. Not only can terrestrial networks separated by great distances be linked through packet radio satellites, but they can also be interconnected with inexpensive "landline" (telephone) networks, such as FidoNet and BITNET or the Internet. Constant advances in technology indicate a continued dynamic and growing marketplace. Unfortunately, security concerns and regulatory issues cloud the rapid dissemination of this technology in many developing nations, even for humanitarian ends.

Packet radio is not a panacea for solving the age-old communication dilemmas from remote areas. It presupposes that computers have been introduced for reasons other than communication and that indigenous skills have reached levels where it is natural to transfer computer-generated files and programs to other locations. It also assumes that a progressive-minded government is investing in and providing its citizenry with more of the potential benefits of information technology, including those at the socioeconomic periphery. Much still needs to be learned about how these systems work best given disparate geographical and socioeconomic settings.

The use of packet radio technology is one way to ameliorate the marginalization associated with living in distant regions by providing connections to other individuals and networks, nationally and internationally. Packet radio is a "hot" personal medium, meaning that "real human callers" (popular electronic mail terminology) are present on each end. For this reason, the technology deserves the attention and scrutiny of those committed to the expansion of information delivery systems toward the evolution of person-mediated "knowledge networks".

Dr. Gary L. Garnott, is the Director of Informatics at VITA: 1815 N. Lynn Street, Suite 200, Arlington, VA 22219, USA: (703) 276-1800.

*The first
known
humanitarian
use of packet
radio was by
VITA in 1986
when two VITA
volunteers
traveled to
Ethiopia.*

Satellife, continued from p. 1

War (IPPNW). Incorporated as a non-profit organization in 1988, the SatelliLife made its public debut in July 1991 when it launched a micro-satellite called HealthSat into orbit. Over the past year, the SatelliLife has established ground stations in six African countries including Kenya, Mozambique, Tanzania, Uganda, Zambia, and Zimbabwe, and in Canada. By early 1992, the ground stations will be fully operational.

And this is only the beginning. Prospective users in Ghana, the Congo, Botswana, and across the ocean in Brazil are working to set up ground stations in their countries. The World Health Organization has expressed interest in using the system for its immunization programs and other operations in dozens of African countries. Altogether, SatelliLife expects to add about 10 more ground stations by late 1992, and 20 more the following year. To service the growing demand, the project plans to launch a second satellite into orbit in 1993 or 1994.

Why Africa?

The project has chosen to focus on Africa because, along with enduring the world's worst economic poverty, it also suffers from severe "information poverty." This already desperate situation worsened during the economic crisis that hit Africa with tidal wave force in the 1980s. Governments, under pressure to adjust economies, made severe cutbacks in health services and slashed imports that required foreign exchange. The consequences have been devastating for the health and medical community. For example, a 1989 survey by the American Association for the Advancement of Science found that, beginning in the early 1980s, medical libraries throughout the continent had canceled subscriptions to foreign medical journals and books and few had renewed subscriptions since. Only health practitioners who are able to travel abroad can review recent literature.

Reportedly, there are more telephones in Tokyo than in all of sub-Saharan Africa (excluding South Africa). Few African

health professionals can avail themselves of on-line data bases, and those who can, often personally pay high user fees and line charges. In the field, health officials have inadequate means of maintaining contact with central offices for reporting, coordination, and administration. Ultimately, what this means is that health professionals plan without facts, make decisions based on out-of-date information, and pursue research that might be irrelevant or redundant. "Health care workers' lack of access to information is one of the single most important obstacles to providing quality health care in Africa," remarks Firoze Manji, the International Development Research Center's Regional Representative, Health Sciences Division for Eastern and Southern Africa.

The Promise of Technology

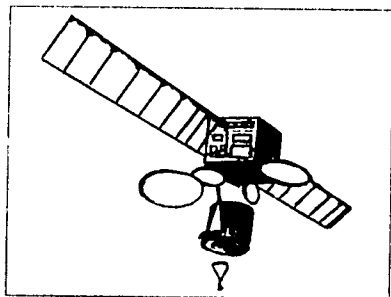
SatelliLife proposes to challenge these constraints by giving health care providers access to high-tech tools that will bring them into direct and regular contact with one another. The ability to communicate with colleagues via electronic mail with other countries in the region and in other parts of the world will permit health professionals to exchange information as well as gain access to a rich pool of research material normally available only in countries of the North. For example, nurses and doctors based in rural areas who face a medical emergency could get expert consultation or back-up support from doctors and public health officials hundreds of miles away -- or even abroad. Before embarking on a research project or formulating health policies, researchers or policymakers could consult current research from medical journals such as the *New England Journal of Medicine* or solicit opinions through a computer conference.

And, rather than travel to the capital city to find out where medicines can be obtained or how many hospital beds are available, they could simply make the inquiries via electronic mail. With the use of SatelliLife's tools, health professional can make the most of their scarce human and material resources.

Although the possibilities introduced by SatelliLife are exciting, some skeptics have raised questions about its appropriateness, given Africa's lack of basic health resources such as medicines. SatelliLife's deputy director Julia Royall remarks that, when confronted with these objections, African health professionals "...are outraged at the suggestion that they don't need to be part of the expanding global information network."

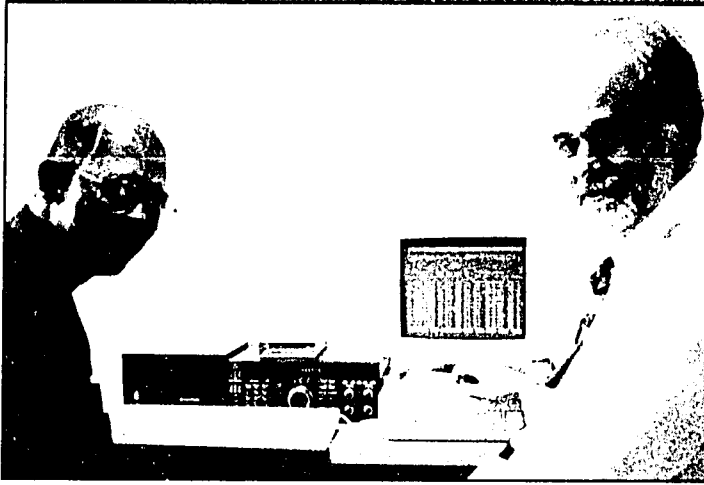
Still, even those who acknowledge the importance of health information question whether high-tech computers and satellites are really the answer to Africa's health information problems. Would it make more sense to improve conventional systems such as telephone and postal services? Royall responds that improving telecommunication infrastructure would require enormous investment and years of construction -- requirements beyond the capability or focus of a project such as SatelliLife. Meanwhile, projects like SatelliLife can begin serving immediate health needs faster, cheaper, and more efficiently.

Still others have questioned whether the project serves the needs of health care providers at the local level, those who suffer most from infor-



Principles Into Practice

mation underflow. Charlie Clements, SateLife's executive director, explains that by locating ground stations at universities, major hospitals, and national health offices, the project is first engaging



an educated elite. But, he says, this is a deliberate strategy and a first step, since these centers are likely to have the technical support necessary for maintenance and repair of the computer and radio commitment. Presently, he notes, these centers throughout the region are lacking in basic information resources and cannot effectively serve either researchers or health care field workers without such a network. Eventually, the project plans to extend the network to healthcare workers at the village level.

How It Works

The SateLife system operates with a few simple components. The satellite itself weighs only 50 kilograms (about 100 pounds) and is no larger than a beach ball. It travels north to south in low-earth orbit -- 500 miles high -- circling the globe once every 100 minutes. At this rate, it is within reach of each point on earth at least twice a day. It is capable of supporting as many as 500 ground stations, with each transmitting or receiving 100 pages of electronic mail per day.

The satellite continuously transmits a signal that can be detected via radio ground stations. On the earth, the ground station -- consisting of a personal computer attached to a radio transmitter/receiver -- responds with a recognition signal, and the satellite then sends any messages "addressed" to that destination and picks up any outgoing messages. Communication links rely on low-cost, packet radio technology developed by the US-based group Volunteers in Technical Assistance (VITA -- see p. 4 for a more complete description of packet radio and ground stations). The ground station can act as a hub for up to a dozen separate users, who can transmit and receive messages, documents, etc. through personal computers and modems. The entire communication system linking the satellite, ground stations and users is known as Healthnet.

To ensure that it is responding to actual needs, the SateLife project does not peddle its wares in a country unless there is a motivated group of users. Before setting up a ground station, a SateLife representative introduces the idea to a range of potential users, including physicians, medical researchers, medical librarians, computer science personnel, health policymakers, networks of doctors or nurses, and in-country representatives of international agencies. If interest is strong, they are encouraged to form a users council.

(continued p. 10)

The Voices Behind the Technology

Often in the glitter of high technology we forget the human element. Technology can seem so far removed from the people it serves or from the motivations of the people who conceptualized its use. But SateLife was always meant to be more than just a "high-tech" network. Its history is steeped in the effort to empower physicians and health care workers in developing world communities who could benefit from improved communication and access to information.

It was the early 1980s. U.S. President Ronald Reagan had recently unveiled the Strategic Defense Initiative otherwise known as "Star Wars", a multi-billion dollar defense program that mobilized the latest computer and space technology against the U.S.'s cold war adversaries. Physician and peace activist Bernard Lown had another vision: space could be used for peaceful purposes. It could be used to unite people across borders around a common goal of improved health. In 1985, SateLife was born.

In an effort to wage peace, satellite technology was chosen because it offered present possibilities rather than future promises. According to Bernard Lown, the founder, facilitating *communication* among people was the important element -- the mechanism was incidental. The people and the machines together created the network.

The voices behind SateLife are real. Bernard Lown is also the co-founder and co-president of the International Physicians for the Prevention of Nuclear War (IPPNW), together with Evgueni Chazov of the Soviet Union. For their work mobilizing doctors against a potentially deadly nuclear confrontation, Lown and Chazov received the Nobel Peace Prize in 1985.

The voices who are able to speak through the HealthNet telecommunications system created by SateLife are also real. On a continent not well supplied with reliable telephones, an electronic mail system which uses satellites rather than telephone infrastructure has connected even the most remote voices to each other at an affordable price. This achievement fulfills a major goal of communicators: to provide systems that really work.



Satellite, continued from p. 9

Once accepted, the council must arrange a site for the ground station, and locate persons to staff and maintain the station. They also must initiate the process of applying for a license from the national authorities. SatelLife provides them with the computer and radio technology and technical assistance in operating the system as well as guidance in gaining an operating license.

Costly? It's Relative

Two questions SatelLife staff commonly encounter are "Isn't it expensive?" and "Who is funding it?" Since SatelLife officially opened its doors in the end of 1988, the project has drummed up close to US \$2 million in support, about half of which was spent on manufacture and launch of the satellite. Considering that commercial satellites cost about \$250 million, these costs are low by comparison -- though still sizeable by the standard of development projects, especially those initiated by private, non-profit groups.

Without doubt, SatelLife reaps financial benefits from the prestige of its high-profile associates. Its founder, Bernard Lown, is a Nobel Peace Prize winner (see box), and leading Soviet, African, Latin American, Canadian, and US scientists and health experts sit on its board of directors. SatelLife has attracted one half of its funds from leading private foundations, including US media mogul Ted Turner's foundation and the Japanese semiconductor maker NEC Corporation, whose corporate philosophy of using computers to bring people in communication with one another embraced the goals of the SatelLife project.

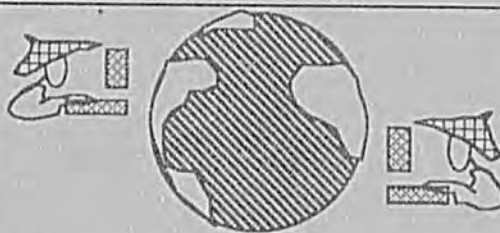
Future Hurdles

SatelLife has taken measures to anticipate and address technical difficulties. Colleagues in Africa are well trained, for example, in problems that plague local telecommunications systems. They have been able to locate on-site technical staff or users with basic computer experience who are willing to be trained in the project's operations. SatelLife also benefits from collaborating with other organizations such as VITA and people in the field. In a number of pilot countries, for example, amateur or ham radio operators in the community have been quite helpful in providing voluntary technical assistance in radio-satellite communication links.

As with other high-tech communications alternatives, gaining a license can be slow process. Authorities who closely guard access to communications technology may delay the approval. While this bureaucratic slowdown is real, so far, the project has not been denied a license in any country.

The future of SatelLife and other projects which advocate and adapt satellites for humanitarian purposes looks bright. In a human environment where the real needs of food, health care and stability overwhelm our senses, it is sometimes difficult to envision high technology solutions. But through linking people and information to each other, people build the bridges; projects like SatelLife only facilitate the process.

For further information, contact SatelLife, 126 Rogers St., Cambridge, Massachusetts 02142, USA. Telephone: (617) 868-8522. Fax: (617) 868-6647. E-Mail: PNsATELLIFE



Association for Progressive Communications Member Networks

Alternex, IBASE, Rua Vicente de Souza 29, 22251 Rio de Janeiro, Brazil. Tel: 55(21)286-0348. Fax: 55(21)286-0541. E-mail: suporte@ax.apc.org

Chasque, Miguel del Corro 1461, Montevideo 11200, Uruguay. Tel: 598(2)496192. Fax: 598(2)419222. E-mail: suporte@ax.apc.org

Econet, PeaceNet, ConflictNet, Institute for Global Communication, 18 de Boom Street, San Francisco, CA 94107, USA. Tel: (415)442-0220. Fax (415)546-1794. E-mail: support@igc.org

GreenNet, 23 Beveden Street, London N1 6BH, England. Tel: 44(71)608-3040. Fax: 44(71)253-0801. E-mail: support@gn.apc.org

Nicarao, CRIES, Apartado 3516, Iglesia Carmen, 1 Cuadra al lago, Managua, Nicaragua. Tel: 505(2)26228. Fax 505(2)26180

NordNet, Huvudskarsvagen 13 nb., S-121 54 Johanneshov, Sweden. Tel: 46(8)600-0331. Fax: 46(8)600-0443. E-mail: support@pns.apc.org

Pegasus Networks, P.O. Box 424, The Epicentre - Border St., Byron Bay 2481 NSW, Australia. Tel: 61(66)856789. Fax: 61(66)856962. E-mail: support@peg.apc.org

Web, Nirv Centre, 401 Richmond St., Suite 104, Toronto, Ontario M5V 3A8, Canada. Tel: (416)596-0212. Fax (416)974-9189. E-mail: spider@web.apc.org

GlasNet, Ulitsa Yaroslavskaya 8, Corpus 3 - Komnata 111, 129164 Moscow, Russia. Tel: 7095 217 6173 or 7095 217 6182. E-mail: avoronov@glas.apc.org or Toel@glas.apc.org

ComLink, Moorkamp 46, D "W" - 3000 Hannover 1, Germany. Tel: 49 511 350 3081. E-mail: D.loebner@link-hh.zer C.herwig@link-m.zer

ECONET: The Environmental Computer Network

Telecommunications networks and electronic mail are opening lines of communication all over the world. Telecommunications Bulletin Board systems are already being used in a number of organizations in Ethiopia, Kenya, Uganda, Tanzania, Zambia, Zimbabwe and South Africa. The NGONET Africa project, based out of the Environment Liaison Centre International in Nairobi is attempting to build networks among NGOs everywhere. MANGO or Micro-computer Assistance for NGOs has a bulletin board in Zimbabwe and plans to assist in the establishment of a third bulletin board in Ghana. ESANET (Eastern and Southern African Network) is a project to link researchers at universities in Uganda, Tanzania, Zambia, Zimbabwe and Kenya. HealthNet is operated by the SatelLife company and is spreading throughout Africa. (see SatelLife, p.1)

Now there is a network for the environment and peace called EcoNet.

What is EcoNet?

EcoNet is an international computer based communications system committed to serving organizations and individuals who are working for environmental preservation and sustainability. EcoNet is a community of persons using the network for information sharing and collaboration with the intent of enhancing the effectiveness of environmentally-oriented programs around the world.

Where did EcoNet come from?

EcoNet is affiliated with the Association for Progressive Communications (APC), a worldwide body of member networks created to provide low-cost global communications services for people and organizations working for the environment, peace, conflict resolution, health and public interest. APC attempts to empower local indigenous organizations by encouraging expertise in and technology for computer networking.

How does EcoNet work?

EcoNet, like other electronic mail systems, works by sending electronic messages through telephone lines to nodes or e-mail centers (for more information about e-mail, see DCR #67). Nodes bounce messages to each other so that a message of virtually any length can be transmitted from Tokyo and be received in Nairobi almost instantly at very low cost. Through connection to a node, your personal computer with modem can be linked to the EcoNet system--and the rest of the EcoNet users around the world. Electronic "gateways" allow you to send telex and facsimile messages and mail to users on many other e-mail systems and international e-mail networks.

Dial locally, Act globally

EcoNet offers easy to use tools for posting your events and preparing joint projects, and finding and discussing current

information on environmental topics. The resources available through the EcoNet system include the Sierra Club National News Report, action alerts and newsletters from around the world. Users include specialists on various environmental topics. These connections allow the users to be in constant communication with a wide range of internationally active environment organizations and individuals.

Public Electronic Conferences

Interactive public conferences on EcoNet let you read and participate in discussions on issues of interest to you. The public conferences focus on a wide range of environmental issues including: global warming, rainforests, water quality, energy policy, toxics and environmental education.

What is Required?

EcoNet is compatible with nearly any personal computer or terminal connected to a normal phone line through a modem. Most communications software programs are adequate. In most developing countries, public telephone companies or national post offices have public packet switching services which can be used to get on the EcoNet network and also correct for errors during transmission (it is possible to get on the network without the package switching service). A private user can open an account through the IPS facility or by contacting EcoNet directly and getting a user's number. While calling costs are generally very low, membership and connect rates vary from node to node. If you are outside a country with nodes, APC or EcoNet can help locate the public data network through which you connect.

Without the international packet switching (IPS) services, the reception will be only as good as telephone connection. However, IPS services exist in most places including 9 sub-Saharan countries, 7 Asian countries, and all but a very few Latin American countries. Electronic mail users in neighboring countries may also be able to make use of the IPS services. Presently, 92 countries are using EcoNet many remote areas and in most major cities. Known for its nominal cost to use and the promise of great communications gains, e-mail and EcoNet could be the technology of the 1990s.

For more information, contact EcoNet at the address on the opposite page.



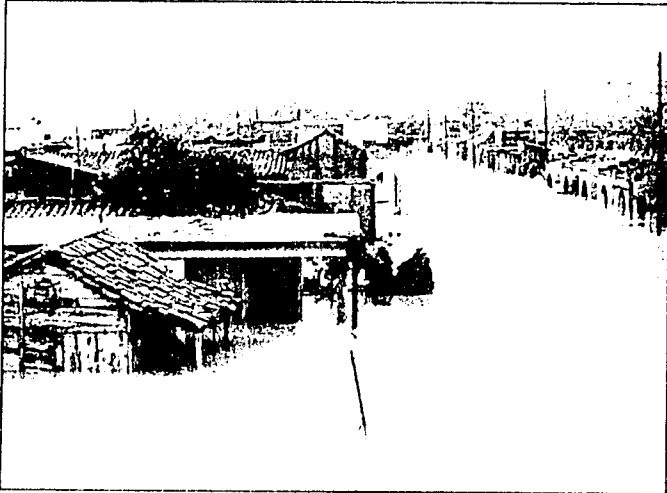
E C O N E T

When Disaster Strikes:

Communications Technology in the Sky

by Neil R. Helm

A review of global disaster statistics over the last 20 years reveals that there are approximately 50 disasters a year -- nearly one a week -- that require outside assistance, usually from international relief agencies. The majority occur in developing countries.



UNDP/ICR

Natural disasters such as earthquakes, floods, hurricanes, and fires disrupt normal patterns of living and often leave in their wake needs for food, clothing, medicine, and shelter. With growing population density, the number of casualties, the level of human suffering,

and the economic losses from natural disasters are all significantly rising. These findings are illustrated by the two greatest human disasters on record that took place over the last 22 years: a tropical cyclone-tidal wave that swept over Bangladesh, claiming nearly 500,000 lives in 1970; and an earthquake in Tangshen, China, causing an estimated loss of 700,000 lives in 1976. Economic losses also continue to climb: current figures reach more than \$10 billion per year, with floods alone accounting for approximately \$4 billion. Relief efforts during times of disaster cannot be limited to work on the ground. In order to facilitate larger and extensive relief coordination, communications systems are looking to satellites in the sky.

Post-Disaster Communications Activities

Once a natural disaster occurs there are at least three activities that require reliable communications:

- **Assessment** of the nature of the disaster, levels of destruction, social upheaval, and the relief requirements;
- **Coordination** of relief activities by local, national, and international units and agencies. This coordination involves the distribution of supplies and services to the victims;
- **Restoration** of normalcy and pre-disaster conditions.

Reliable communications equipment that can be transported easily to the disaster site must be an integral part of disaster assessment, relief response, and rehabilitation efforts.

During the assessment phase, the impact of the disaster and the needs of the victims must be ascertained as soon as possible, normally within a few hours or a few days at the most. A small number of reliable voice or data channels are required to inform national and international relief agencies of the extent of the damage and what relief response is required.

Relief coordination calls for a network of telephone and data communications from the temporary headquarters established in the disaster area, out to the national and international relief agencies, and back to the staging areas, where the needed supplies and relief personnel are arriving and waiting for direction and transportation.

The network should be expandable to include communication among the many relief agencies that have responded to the disaster.

The restoration process may take many months. It requires the continuation of temporary communication systems until they can be replaced with the communications infrastructure that existed prior to the disaster.

Limitations Before Satellites

Present disaster communications rely heavily on the local telephone or broadcasting capabilities in the affected area. These facilities are often destroyed or,



(continued p. 14)



Making Decisions on the Ground

by Dan Prewitt and Ann Stingle

Technology mismatches and communications failure occur regularly during relief operations. During large-scale famine relief in rural Sudan, refugee influxes in post-war Kuwait, earthquake relief and recovery in Armenia, and massive flooding in Bangladesh, communications systems failed. Too often, communications efforts have proven ineffective due to technology inappropriate for the setting and a lack of insight into the audience with which the communications will take place. The following paragraphs highlight common experiences of private voluntary organizations (PVOs) and outline a planning process based on the identification of primary target audiences before choosing the technology best able to reach them.

Security

While all nations have legitimate concerns about the indiscriminate use of communication technology, they are often heightened in developing countries. The commitment to use satellite technology or UHF/VHF radios may actually bring unwanted and undue scrutiny to a disaster relief operation. This reality may worsen when working in rural areas far removed from the capital or when interacting with officials who are unfamiliar with radios and other communications technology.

In 1988, for example, a medical worker in southern Sudan was held by local police in poor conditions for over a month because she had an "unlicensed" short-wave radio receiver suitable only for listening to commercial radio stations. One can only imagine the local reaction if she had been using a portable satellite system for communicating with her headquarters.

In another case, an expatriate relief worker using a licensed radio for communications from her headquarters some 500 kilometers away was arrested during a disaster situation and the equipment confiscated. Why? Because of a village rumor she was aiding anti-government rebels. She was eventually released and the equipment returned. The cost to the relief operation? Local authorities permanently stopped activities serving over 5,000 persons in the worker's region and PVO's were no longer permitted in the area.

Experience also shows that the "higher tech" the system, the more likely that it will be viewed as potentially dangerous by local officials. This is particularly true of portable satellite systems that are difficult to monitor and can be transported easily. Ministries of communications and the interior can be counted on, in most countries, to impose stringent and often impossible conditions for their use. Recently, one PVO turned down a donation of satellite equipment for its operations in a particular country for this reason. The organization concluded that the administrative and political costs outweighed the increased reliability of the communications technology.

Weather and Technology

The factors which make disaster relief particularly difficult in the third world also inhibit communications systems. During the Sahel drought of 1984-85, for example, a significant increase in the number and length of the notorious "haboobs" or day-long dust storms made radio communications impossible. The oil fires and sandstorms of Kuwait played havoc with long-range communications and refugee camps on the Kuwait/Iraq border. Power surges in city mains have consistently damaged or destroyed electronic equipment of all types during disasters in past decades. While these systems may work well under normal conditions, technology mishap in times of catastrophe is common.

(continued on p. 10)



Inter-American Development Bank

New Initiatives for Disaster Relief

Beginning in 1990, the United Nations launched an International Decade For Natural Disaster Reduction (IDNDR). A major principle of this program is that science and technology can be applied effectively to understanding natural hazards and controlling the losses associated with them. In a separate initiative, a group of experts in communications and disaster management met in May 1991 in Tampere, Finland and issued a report with recommendations known as the "Tampere Declaration on Disaster Communications." The draft Declaration was based on the major needs identified by the UN Disaster Relief Organization (UNDRO) Conference on Disasters Communications held in Geneva in March 1990. The major recommendations call upon relevant national and international agencies to:

- improve cooperation between local, regional and international entities;
- establish an inventory of equipment and resources relevant to disaster relief, and integrated into a disaster plan;
- encourage the UNDRO to maintain an international inventory of modern communications equipment;
- remove national barriers to the access and use of disaster communications equipment, for example, customs clearance, operating licenses, temporary use of appropriate radio frequencies.

While many of these recommendations have been made in past conferences, the Tampere Declaration has caught the attention of national and international decision makers and funding sources and therefore brings issues which have been traditionally handled on a case specific basis to a global forum. As a result, the prospects for an improved disaster communication system seem close. In fact, plans and proposals are now being made for a disaster network to be largely donated by national and international telecommunications organizations, integrated, demonstrated briefly, and then given to UNDRO as an operational system.

For more information about the UNDRO Conference on Disaster Communications of March 1990, see *UNDRO News*, March/April 1991. For a complete copy of the Tampere Declaration, see *UNDRO News*, July/August 1991.

...Technology in the Sky, continued from p. 12

in many developing countries, are nonexistent or overextended even during normal service.

Amateur (also known as ham) radio operators often provide the initial assessment and assist in the coordination of relief for many disasters. Although public service and emergency communications are a part of their mandate, and their personal dedication and technical skills must be applauded, they are subject to certain limitations. For example, some countries restrict the use of the amateur frequencies and in many countries there are just not enough ham radio operators to provide reliable support for relief activities. Also because most ham operators are not trained in disaster assessment, they might transmit a misleading appraisal of a disaster's impact.

Local and select military units are often called into a disaster location to provide communication and other relief support. Although their communications equipment is often powerful and sophisticated, military authorities often have difficulty communicating and coordinating with civil authorities since they usually are assigned different radio frequencies.

Perhaps the biggest limitation is the lack of priority both national governments and international agencies give to disaster relief in general and thus to disaster communications. For example, the International Telecommunications Union as well as most national governments have allocated no specific frequencies for disaster communications, although some provision is made for marine and aeronautical emergencies and public safety. This absence of priority is evident at the scene of nearly every disaster, where an ad hoc group of communications operators can be seen trying to coordinate relief activities.

Local communications are improving in some areas with the introduction of modern "hand-held" and vehicular radios, which are lighter, smaller and cheaper than the earlier generation of radios. This equipment improves initial assessment activities. However, communications links from the disaster area to national and international relief headquarters are still inadequate. As a result, it is not uncommon to see donated medicine, clothes, or tools sit for weeks at an airport or be delivered to the wrong disaster site.

Satellites to the Rescue

A solution to many limitations listed above is the use of reliable communications equipment which is specifically dedicated to disaster relief and operated by trained personnel, arranged in standby teams, who are prepared to respond at the first indication of a natural disaster. In reviewing the equipment and system requirements for a national/international disaster communications network, it is apparent that satellite communications are able to satisfy the requirements. Satellite capabilities include:

- systems established by the International Telecommunications Satellite Organization (INTELSAT) and the International Maritime Satellite Organization (INMARSAT), both consortiums that operate networks of communications satellites for commercial and maritime use, respectively;
- worldwide coverage;
- high reliability -- existing systems work more than 99 percent of the time;
- capacity for new services such as television or data communications;
- the availability of rugged, compact ground terminals. Earth terminals

often survive the impact of disasters, and smaller terminals can be carried in after a disaster.

Motivated by the series of successful experiments and demonstrations using NASA, INTELSAT, and INMARSAT satellites with small terminals, a Communication Satellite (Comsat) team designed a disaster communication system in 1977. This system had small, rugged terminals appropriate for either INTELSAT or INMARSAT service operating with larger earth or shore stations that would connect the communication to relief agency headquarters, or to any working telephone. INTELSAT even agreed to provide designated international relief agencies with some free access to its satellites. The technical and operational parts of the system were developed, tested, and were ready to be integrated into a disaster relief program. Cost studies concluded that a complete disaster terminal, including personnel, equipment, and terrestrial connections, could be supported for between \$200,000 and \$400,000 per year.

R&D Efforts Continue

During the 1980s and to date this disaster communication system has been restudied, presented, and demonstrated in actual disasters, but it has never been integrated into an international disaster operation. During the same period, larger more expensive commercial transportable terminals with the ability to transmit high quality television via integrated satellite networks are now commonplace at every major sporting or entertainment event.

INTELSAT has tested a lightweight "fly-away" or transportable C-band communications terminal that uses a 1.8-meter antenna and can provide a single voice channel suitable for disaster assessment. The entire terminal can be packed in fewer than ten sturdy containers that are easily transportable by air and land.

INMARSAT has also encouraged the development of small terminals for use with their satellites. Several companies have made commercial lightweight terminals for use with INMARSAT satellites that can be hand-carried by two persons. The US Office of Foreign Disaster Assistance has used such terminals in recent disasters, including the Armenian earthquake. Because of requests to produce a terminal that can be carried and operated by a single individual, one company recently designed a terminal that contains a 1.2-meter antenna, with a 220-watt transmitter, all contained in a single suitcase that weighs 29.5 kilograms (65 pounds). This terminal was used extensively by journalists and news media personnel during and after the recent military conflict in the Middle East. The capacities of these small terminals can be greatly increased by the addition of graphics and image transmission equipment such as desk-top computers, facsimile machines, and even slow-scan video equipment.

Natural disaster cannot be prevented, but our preparedness for it can be increased. With the development of reliable, satellite communications technology, catastrophes can be predicted and people, property and the environment can be better prepared for their onset.



Neil R. Helm is a Senior Research Scientist at the Institute For Applied Space Research, School of Engineering and Applied Science, George Washington University, Washington, D.C. 20052. Fax: (202) 994-0227.

Satellites for Advance Alert

Earth observation or remote-sensing satellites have made dramatic changes in our ability to forecast weather conditions as well as impending disasters. With improved predictions on the time and potential impact of a disaster, an advanced warning network can be established, not only for hurricanes, but for earthquakes, volcanic eruptions, seismic sea waves, and other disaster-causing activities. In addition to forecasting impending disasters, some remote-sensing satellites are able to provide reliable assessment of the results of a calamity. For example, within hours of the nuclear accident in Chernobyl, USSR, television audiences were able to view the damage through photo and infrared images taken by commercial remote-sensing satellites.



Emergency managers should be encouraged to look closely at the feasibility of communications systems in their specific situations and to proceed only after careful analysis and tailoring to fit the needs.

One alternative is military grade communication equipment. Increased engineering and fabrication "hardens" the equipment for adverse conditions and often makes the equipment more resistant to breakdown when dust, humidity, insects, extremely high or low temperatures, and inconsistent power all conspire to exceed the average manufacturer's specifications for warranted performance.

One drawback is the cost. When this equipment is available to PVOs, it costs several times as much as "off-the-shelf" equipment with similar unhardened system's characteristics.

When technical difficulties combine with a possible lack of competent technical assistance and difficult import procedures for spare parts, it is clear that relying on one high tech system may be risky. Back-up communications networks should be considered before a breakdown.

Maintenance and Cost

Predetermining the degree or type of "user friendliness" can reduce bad choices. While computers and radios continue to be relatively easier to use, work forces in many countries may not be able to install, maintain, and operate such systems without extensive outside help. Rapid advances in electronic systems design tend to far outpace the availability of technical expertise in many parts of the world. When a technology relies too heavily on outsiders to provide technical assistance or maintenance, it is probably not going to remain useful or cost effective.

Both the cost of setting up a system and the cost of using it are important. The cost of a satellite-transmitted phone call from the operations headquarters on a disaster can run approximately \$20 per minute. This applies to incoming as well as outgoing calls so that it is difficult to control the engagement of the system and the subsequent cost incurred. A facsimile message, while cheaper, costs approximately \$10 per minute. Without stringent controls on use of the system, the bill for overhead expenses on a relief operation can soar.

Planning on the Ground

Given the constraints cited above, how should a PVO approach the use of current technology in increasing the efficiency of a relief operation? Determining the communications needs involves knowing the various disaster relief audiences. For example, prior to the cyclone that struck Bangladesh, hundreds of thousands of people were able to be evacuated and their lives saved because of a basic radio network that had been established by the Cyclone Preparedness Program throughout the endangered coastal areas. The network consisted of 57 stations and substations and provided easy, low-cost, low-maintenance communication for relief workers in advance of the storm. It was further used during subsequent relief operations to communicate with headquarters and among relief workers at the substations. In this case, expanding the radio system proved to be an effective and efficient means of enhancing reliable communications.

Know Your Environment

The use of satellites, repeater radio systems, and other new developments in communication technology should not be discouraged. Instead, emergency managers should be encouraged to look closely at the feasibility of these systems in their specific situations and to proceed only after careful analysis and tailoring to fit the needs. While good communications systems can save lives, well-intentioned but poorly executed systems can hinder relief efforts and even cost lives.

Dan Prewitt is the International Delegate for American Red Cross and has been the head of delegation of the International Federation of the Red Cross and Red Crescent societies in Sudan, Kuwait, and currently, in Moscow. Ann Stingle is the International Communication Associate for the American Red Cross. For further information, contact the American Red Cross, Corporate Communications, 17th and D Streets, NW, Washington D.C. 20006, telephone: (202) 639-3395.

Choosing Communications Technology According to Your Audience

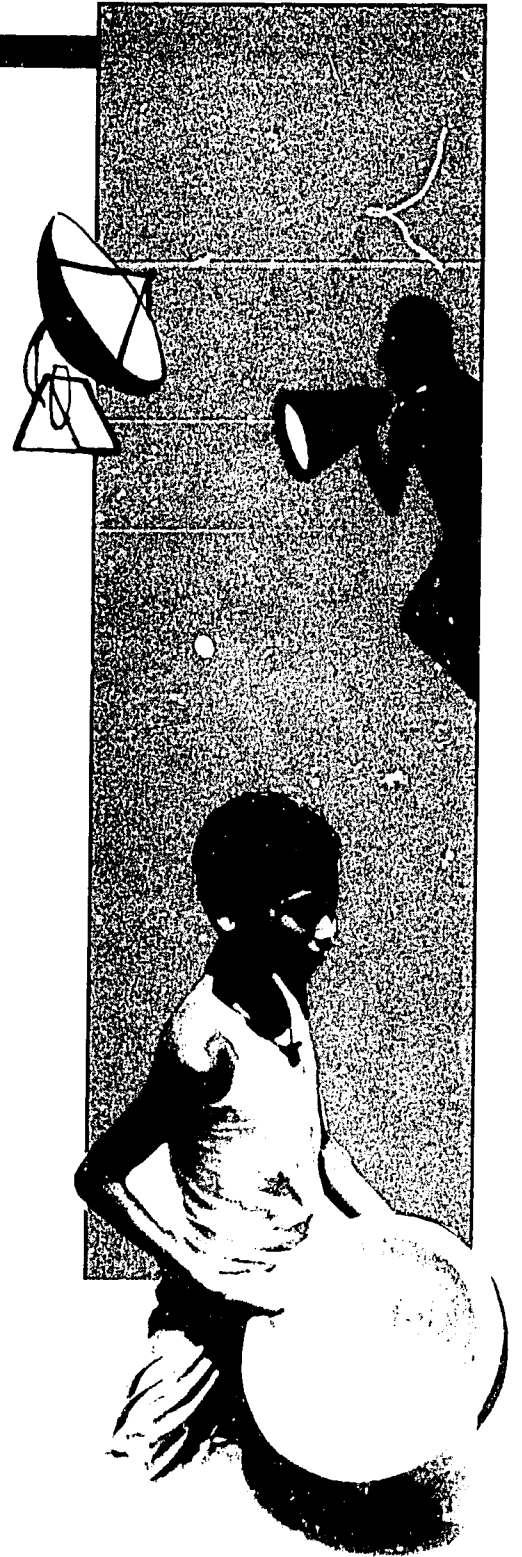
Relief staff on-site to other workers in the same or adjacent geographic area: The cost factors and environmental conditions may make any "hi-tech" approach impractical. Because the information to be transmitted is likely to be a two-way exchange or question/answer, one-way technology is not useful. Simple hand-held radios are the most efficient vehicle for rapid information delivery. However, due to variables in distance, availability of batteries and charging, developers of communication systems may need to look at ways to make short-range radio systems more efficient. In the meantime, face-to-face communications will continue to be a primary communications device.

On-site relief personnel to the operations headquarters and vice versa: Circumstances are similar to the above, except that the situation often calls for longer range equipment, such as UHF and sometimes VHF. Preparation is of utmost importance as the procedure for licensing and permits for such equipment is can be cumbersome. Similarly, relief workers must be trained to use the equipment, which can be difficult in the midst of a major calamity.

Operations headquarters to international headquarters: In this case, satellites could be extremely useful in letting those who are sending supplies know what is needed, where it is needed, and in what quantity and format. It also allows the people in charge of the operation in-country to know what shipments or personnel to expect and when.

From operations headquarters to the media: The media often have their own transmission equipment tailored to their needs. The technology needed by the relief organization for communication may be nothing more than a battery-powered personal computer or even a typewriter. On the other hand, problems may arise in some countries where the media, particularly western media, are viewed with skepticism or hostility. In such cases, designing the content of the message overshadows the means of transmission.

From relief workers to the affected population: This may well be the most critical target audience. Alert systems to evacuate an area, notice of shelter locations, warnings regarding polluted water following a disaster and other urgent health messages need to be communicated to the potential or actual victims. Technological requirements for transmission are very basic, as in the case of radio systems used in the Bangladesh Cyclone Preparedness Program. Local media can also be helpful in reaching certain target populations. Often, however, the communication tools needed are cultural and human. Accessing the people-to-people network and offering accurate information through local leaders and organizations is essential. Satellites cannot replace loudspeakers for mobilizing a population before or after a catastrophe, nor can they be as effective as community leaders or village chiefs in affecting the behavior of people at risk.



The (Solar) Power to Communicate

by Grace Belcher

Solar-powered distance education programs have proven valuable and effective in rural areas where it is particularly difficult to attract and retain high-quality teachers. In one area in Mexico, high school classes are



broadcast through solar power over a six-hour period. The estimated cost? Approximately US \$2,200-\$2,400 per school. In health, solar-powered two-way radios have been installed as part of the communications system for remote medical systems in Mexico, Ecuador, Kenya, Zimbabwe and

Guyana. In each case the radios operate efficiently over distances of more than 200 kilometers. In the Gambia, solar-powered VHF radio communication systems are being used between health centers in remote areas and the capital city for consultations and emergency medical assistance.

Developing countries the world over are discovering a reliable and low-cost source of energy for small-scale communications systems: the sun. In the Sudan where messages were previously carried by hand for long distances or by poorly transmitted telex or radio, the United Nations Development Program (UNDP) has designed a solar-powered packet radio system for communicating data from five field offices scattered throughout the country. UNDP's success has led to plans for similar systems in the Philippines, Jamaica, Ethiopia, Mozambique, Tanzania, and Lesotho.

The Solar Alternative

Energy in rural areas has been com-

monly provided through gasoline powered generators. In recent years, however, solar energy or photovoltaic systems (PV) have been successfully used in a variety of applications including electrification, water supply and as the examples show, communications. PV systems permit closer contact between rural and urban centers without the incessant noise and complicated maintenance of a generator.

Over 10,000 PV systems are being installed worldwide every year. These range from relatively large telecommunications systems operated by governments or private companies to small radio systems used in homes or in local communication. Whether the application is fiber optic cable systems for data transmission or mobile telephone, PV systems are cost effective and reliable.

What Is PV?

All solar energy technology is not the same. Rather than converting sunlight into heat to produce hot air or water, solar energy which uses photovoltaic cells is the direct conversion of sunlight into electrical energy using solid-state semi-conductor technology.

The basic unit of a PV system is a cell made of silicon. A number of cells are mounted, wired together on a rigid plate and sealed, usually with a tempered-glass cover, to form a module. Modules range in size from 0.5 to 60 watts of power output and have typical operating DC voltages ranging from 3 to 15 volts. Multiple modules can be joined into an array which provides the needed voltage and current for the application. By simply adding more modules, a PV array can easily be expanded as energy demands grow.

PV-generated energy can be stored in a battery. Equipment hooked up to the battery draws power from it. Thus, the PV array generates electrical current that charges the battery, while the battery stores energy and powers the equipment. The battery also provides back-up power at night and during poor weather.

The charge controller, another basic component, regulates the flow of power

from the modules to the battery, and from the battery to the equipment. Inverters, which convert battery (DC) power into standard household (AC) power, can also be integrated, if desired.

Why Use PV?

PV is ideally suited to the conditions of developing countries for several reasons.

PV is reliable. It works in remote sites ranging from dry scorching deserts, to hot, humid tropical regions, to arctic conditions. PV can be used anywhere the sun shines and requires significantly less maintenance than traditional engine-generators.

PV is flexible. It can provide power for a variety of equipment with either direct current (DC) or alternating current (AC) voltages. PV is modular and can be sized to meet the energy demands of one home or an entire village.

PV is durable and environmentally safe. There are no moving parts to wear out or fail. Modules last from 10 to 30 years and have proven to be more than 97% reliable in a wide range of applications. PV does not create noise, pollute the air, or produce waste materials.

PV is cost-effective. For loads requiring a few kilowatts or less, as in most developing country applications, PV has proven to be the most economical choice. PV is often the least-cost option in villages composed of less than 50-200 buildings where each building has an annual average energy demand of less than 0.5 to 2 kilowatt-hours (kWh) per day. Once a PV system is in place, it is free from the recurring fuel costs associated with conventional energy systems. PV will continue to generate power regardless of economic or political conditions that can disrupt the cost and availability of fuel supplies. Except for the cost of spares and battery replacements (once every five years, depending on the type of battery used and maintenance), PV will continue to perform long after donors have left and aid for fuel and frequent maintenance have run out.

PV provides opportunities for local participation. There is no need for outside or expatriate technicians. Properly trained, lo-

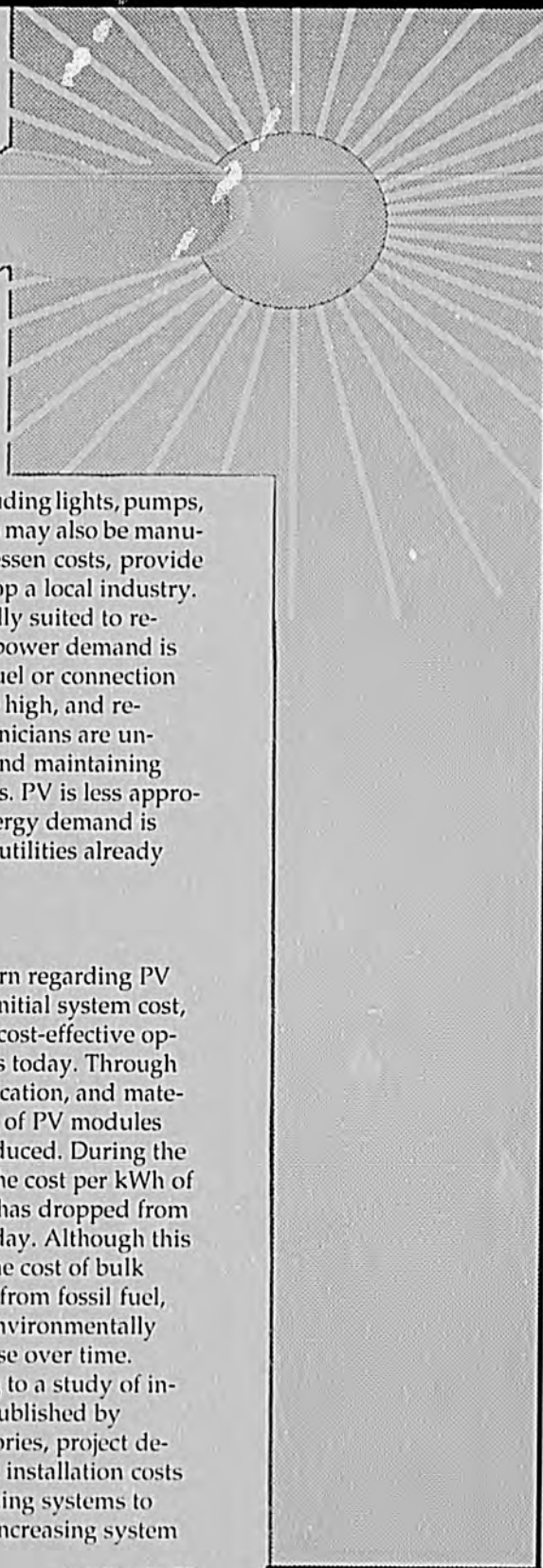
cal residents can maintain the system themselves. In fact, studies have shown that in an area where PV powers radios for entertainment and public service broadcasts, residents have been highly motivated to maintain their home PV systems to keep their radios going. Certain components of a PV system including lights, pumps, batteries, and controllers may also be manufactured in-country to lessen costs, provide employment, and develop a local industry.

In sum, PV is especially suited to remote rural areas where power demand is relatively low, costs of fuel or connection to the electricity grid are high, and resources and trained technicians are unavailable for operating and maintaining engine-generator systems. PV is less appropriate in areas where energy demand is high and reliable public utilities already exist.

The Cost Hurdle

While the main concern regarding PV continues to be its high initial system cost, PV will still be the most cost-effective option in most remote areas today. Through advances in design, fabrication, and materials technology, the cost of PV modules has been significantly reduced. During the last two decades alone, the cost per kWh of PV-generated electricity has dropped from US \$60 in 1970 to \$.30 today. Although this is still four to six times the cost of bulk utility power generation from fossil fuel, the paybacks for using environmentally clean solar energy increase over time.

Meanwhile, according to a study of international PV projects published by Sandia National Laboratories, project developers have found that installation costs can be reduced by designing systems to meet present needs and increasing system



(continued p. 20)

The (Solar) Power to Communicate, continued from p. 19

capacity only as needs and financial resources grow. Systems which are properly sized to meet the power requirements will reduce excess expense.

Requirements can be measured on a "per module" basis. A radio or transceiver PV system will typically require one module and cost approximately \$700-\$1,000, based on typical U.S. retail prices. A system to power lights and a radio or a small black-and-white TV for homes also would require one module. A one-room school using a color TV and a video recorder (or a satellite) six hours a day would need a system using two or three modules. A one-room rural health clinic using lights, a one-cubic-foot refrigerator, and a two-way radio, on the other hand, would require three to four modules and cost between \$2,100 and \$4,000.

Although initial costs are relatively high, the purchase of a PV system basically includes paying for a 20-year supply of en-

ergy, rather than facing the recurring costs of fuel supplies. PV makes economic sense for remote developing country applications when compared with the costs of grid extension, or operating and maintaining a generator over the life of the system.

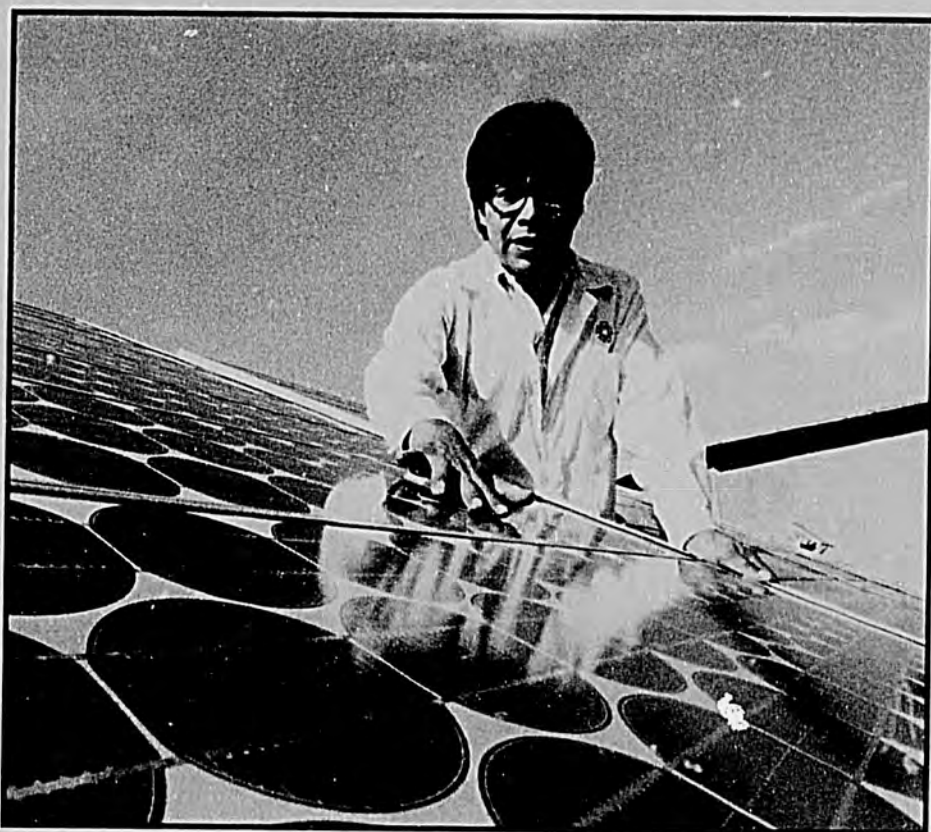
Setting Up a System

Mounting modules on devices that track the sun's movement throughout the day increase energy output and allow the reduced generation of electricity during cloudy days, although it adds to the cost and complexity of the system. Choosing the appropriate site and selecting components with care will enhance the system's utility and performance. Batteries designed to work with PV systems are easily maintained, recharge slowly, provide power over long periods of time, can withstand numerous recharge cycles, and last five or more years. Automotive batteries are not

well-suited for PV system use, but will work and operate from one to two years, depending on system use. Nickel-cadmium batteries have longer life expectancies and are able to withstand extreme weather and charge/discharge conditions, but are significantly more expensive than lead-acid batteries.

Stand-alone PV systems are adequate for generating power to run a radio; a home with lights, a radio, or a television set, and other small appliances; or a small health clinic. For critical uses where reliability needs to be close to 100%, a system using PV in combination with engine-generator, battery, or wind technologies is often recommended. The most common combination is the PV/engine-generator hybrid, where PV and a generator both charge the same battery. PV serves as the main source of power, while the generator provides back-up power for peak demand periods, or for battery recharging following periods of cloudy weather.

Installing and maintaining a stand-alone system is simple and can be done with minimal training. Systems should be checked periodically to



Mauricio Ortega, physicist, showing solar cell panels used to power a water well pump.

Reader's Page

VIA AIR MAIL

clean dust from the arrays and check battery electrolyte levels. Technicians can be trained and based in larger communities or urban centers to provide needed repairs and to service generators in hybrid systems with a few simple tools such as an electrical meter, hydrometer, plier, screw driver, and a crescent wrench.

Simplicity at Work

People don't need to grasp PV's technological complexities to understand that the sun can do more than grow crops or dry rice. It can also provide water and lighting, assist them in emergencies, help educate their children, and bring news and information about the world into their homes.

Grace Belcher is a Program Associate in the Energy and Environmental Systems Division of Oak Ridge Associated Universities, 1019 19th St., NW, Suite 700 Washington, DC 20036. Telephone: (202) 653-5505. Fax: (202) 653-5414. She was assisted by Ron Pate and Beth Richards from the Design Assistance Center at Sandia National Laboratories and Chris Rovero from Meridian Corporation.

Continue to keep us informed of your reactions. We welcome the input of our readers. In response to the article "Tips for Documenting and Transferring Local Knowledge" in DCR #74, we received this letter.

Dear Editor:

Many thanks for the Development Communication Report. I don't think documentation of indigenous knowledge requires multi-disciplinary teams. This is unnecessary advice by people who actually may not have done much work. I have never used such teams. I am not saying that teams cannot do it, but it is not such an important issue to be mentioned as the first requirement. We need demystified messages.

You have missed several important dimensions [to acquiring and preserving indigenous knowledge], for example, [discovering] practices tried but discontinued and varieties not yet cultivated.

Best wishes and don't mind the slightly angry response.
P.S. I liked the news of Minka magazine.

Anil Gupta
Centre for Management in Agriculture
Indian Institute of Management
Ahmedabad, India

Resources

The International Telecommunication Union (ITU) makes its sizable collection of films and videotapes on telecommunications and electronics available free of charge to people all over the world. Topics cover general productions made for public information, promotion of telecommunications services or products, technical research, and technical training films. Requests for films should be made one month in advance. They are sent by air mail and must also be returned by air mail within three weeks of receipt. To obtain a film catalogue, contact: ITU Film Library, Place des Nations, CH-1211 Geneva 20, Switzerland. Telephone: (41-22) 730-5248. Fax: (41-22) 733-7256. Telex: 421 000 UIT CH.

Volunteers in Technical Assistance (VITA -- see article p. 1) has initiated a public computer conference on technology in international development. The discussion forum, called DEVEL-L, will permit exchange of ideas and information on a wide range of topics, including the role of communication technology in development. To participate, you simply need a computer with a modem. To subscribe, send a message to LISTSERV@AUVM (or

LISTSERV@AUVM.BITNET), or contact: VITA, 1815 North Lynn Street, Suite 200, Arlington, VA 22209, USA. Telephone: (703) 276-1800. Fax: (703) 243-1865.

You can get an entire library about appropriate technology in a container no larger than a shoe box and weighing only 19 pounds. The compact, portable library stores books on microfiche, plastic cards containing reduced images of book pages that can withstand even humid or tropical climates. More than 1,000 volumes covering major topics about appropriate technology in development, including communication technology and nonformal education and training, are stored on the microfiche. An updated collection will be available by April 1992 for approximately US \$900. Besides the microfiche library, you simply need a desk-top microfiche reader, which can be obtained from the project for \$225-\$575, depending on the model. Contact: Appropriate Technology Project, Volunteers in Asia, P.O. Box 4543, Stanford, California 94309 USA. Telephone: (415) 326-8581 or toll-free (800) 648-8043. Fax: (415) 326-3475.

New Telecommunications Network

The International Development Computer Users Network (IDCUN) is a newly formed network of computer users and information managers both in U.S. and in the developing world.

IDCUN's objectives are to foster communications among international development organizations, explore efficient ways to integrate computer knowledge and systems into the developing world, and promote the understanding of telecommunications and resources. Membership is free for the first year. To learn more about IDCUN or workshops on telecommunications, contact Joe McKinney at Technoserve, 49 Day Street, Norwalk, CT 06584, USA. telephone: (203) 697-6222. fax: (203) 838-6717. or Ellen LeCompte at PACT, 777 United Nations Plaza, NY, NY 10017, USA. telephone: (212) 697-6222. If you have general questions about telecommunications operations or need resources in your region, contact Gary Garriott at VITA through one of his many telecommunications addresses. 1815 N. Lynn St, Suite 200, Arlington, VA 22209. Telephone: (703) 527-0186. fax: (703) 243-1865. Internet: VITA@GMUVAX.GMU.EDU. FidoNet: 1:109\165

What's New, What's Coming

Photography Contest

The United Nations Environment Program is organizing a worldwide photography competition in advance of the United Nations Conference on Environment and Development (UNCED), which will take place in Rio de Janeiro in June 1992. Both amateur and professional photographers are invited to submit photographs that document not only the earth's environmental challenges, but also the beauty of the planet. Entries must be submitted by February 29, 1992. Winners will be announced at the UNCED conference and will receive prizes, medals, cash awards and commemorative certificates. To obtain an entry form, contact the Clearinghouse for Development Communication at the address, phone and fax numbers listed on p. 2.

Conferences

The African Council on Communication Education (ACCE) invites papers for presentation at its biennial conference, scheduled to be held in Cairo, Egypt, in October 1992. Papers should relate to the conference's theme, "Communication and the Environment in Africa: Challenges for the Future." Submit abstracts by March 1992 and full papers by June 30, 1992 to: ACCE Executive Coordinator, PO Box 4795, Nairobi, Kenya.

Courses

From June 3-June 30, 1992, Cornell University will hold its twelfth annual seminar on "Communication Planning and Strategy," open to all ministry officials and project directors who use communications in their work. The course will cover planning a strategy, analyzing audiences, message design, media selection, small group communications and evaluation. Cost: \$3,575, including accommodations. In addition, it offers five graduate-level communication courses, scheduled from May through August. They include Participatory

Communication and Research (May 27-June 17), Video Communication I (May 27-June 17), Video Communication II (June 22-August 4), Participatory Video Research (June 12-14 and 19-21), and Communication for Social Change (June 22 - August 4). Tuition costs \$1,085 for most courses. Contact: Department of Communication, Cornell University, Kennedy Hall, Ithaca, New York 14853, USA. Telephone: (607) 255-6500. Fax: (607) 255-7905. Telex: 6713054.

From April 6-July 24, 1992, the International Extension College in London will hold a four-month course on "Distance Education for Development." The course is open to graduates or trained teachers with some experience in distance teaching and who are fluent in English. Cost: L 5,150, not including accommodations. To apply for scholarships from the Overseas Development Administration, contact the local British Council office. For more information, contact: University of London Institute of Education, 20 Bedford Way, London WC1H 0AL, UK. Telephone: (44-71) 612-6606.

The Centre of Adult and Higher Education (CAHE) at the University of Manchester offers post-graduate courses in Community Development in a Third World Context. These courses have been supplemented in recent years with educational studies normally found in non-educational institutions such as Rural Development and Primary Health Care and Adult Literacy and Development Communication. For further information contact: The Secretary, School of Education, University of Manchester, Oxford Road, Manchester M13 9PL England. telephone: 061 275 3463. fax: 061 275 3519

New Resources

"*Comunicámonos, Ya!*" 23-minute training video and 58-page facilitator's guide. Jointly produced by UNICEF and the Nutrition Communication Project, US Agency for International Development. In Spanish. Available for US \$10 in VHS or Betamax, PAL or NTSC format, from

UNICEF and USAID offices in Latin America and the Caribbean, or from the Academy for Educational Development, 1255 23rd St., NW, Washington, DC 20037.

In order to monitor and promote children's growth, village health workers and nurses must be able to communicate effectively with mothers. This video and companion facilitator's guide are designed to be used in half-day training sessions to strengthen field worker's interpersonal communication skills. Together, they provide a basis for discussion on how health care workers communicate with mothers about their children's growth; identify six key actions that they can use to improve communication; and demonstrate ways to build better communication into growth monitoring activities. Trainees are encouraged to draw on their own experience to identify ways to improve communication. The video and guide were planned, tested and filmed in collaboration with health staff and community workers in the Dominican Republic, Bolivia, and Guatemala.

Action for Youth: AIDS Training Manual. Geneva: League of Red Cross and Red Crescent Societies and the World Organization of the Scout Movement, 1990. 184 pp. Available for 20 Swiss francs from the Red Cross, Health Department, PO Box 372, 1211 Geneva 19, Switzerland. Tel: (41-22) 734-5580.

The manual is designed to help youth workers assist young people to develop the knowledge, attitudes and skills they need to prevent the spread of the HIV virus and to alleviate discrimination against those suffering from the virus. It contains basic facts about HIV/AIDS, a guide to planning AIDS health education programs with youth, and ideas for community activities. Many of the training exercises involve games, discussion groups, puppetry, role-play and other participatory activities. The manual's amply illustrated pages are organized in a two-ring binder for easy additions and updates. French and Spanish versions are available, and in 1992, it will also be available in Arabic.

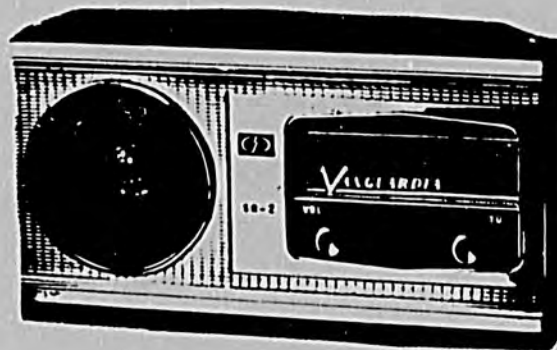
DistanceLearn '91-'92. The Institute for Distance Learning, The State University of

New York, Regents College 1450 Western Avenue, Albany, New York 12203. Tel: (518) 457-4850.

This database provides up-to-date information on nearly 5000 quality courses and credit-by-examination opportunities available at a distance. The entries are offered by U.S. regionally accredited colleges or nationally recognized testing agencies. Selected courses use technology such as video, audio or computer to enhance the learning experience. Information about external graduate degrees is available through the system. DistanceLearn runs on any IBM-compatible PC with a hard drive and MS-DOS and allows users to locate courses or exams by subject, delivery system and a variety of other criteria. No special computer knowledge is required to install or operate. It is easy to use and features on-screen help.

Vanguardia Indoor Solar Radio

Citing the shortage, expense, and environmental pollution which results from battery powered radio, Vanguard Trust has designed a solar radio which can will last longer and cost less. Produced and available in China, the SR-2 low-cost solar AM receiver features one 4-inch speaker, high-power efficiency circuit board, and 1-watt (peak sunlight) photovoltaic solar panel. They hope to make this available outside China for approximately US \$40 by summer, 1992. Six radios are estimated to be able to provide coverage to 150 students presently using Interactive Radio instruction. The Vanguard Trust is also developing indoor ambient light solar models which will maximize solar energy use in low light. For more information, contact The Vanguard Trust, HC 02 Box 14765, Arecibo, Puerto Rico 00612. telephone: (809) 880-4707. fax: (809) 878-6246.



The Information Revolution Need Not Exclude the Poor

Yes, but . . .

by Sheldon Annis

In theory, nearly everyone on the globe is now potentially connectable to everyone else. Virtually all information can be converted into digital form, stored indefinitely, accumulated infinitely, and transmitted immediately. With each passing day, the physical web of interlinked communications networks grows thicker and more powerfully integrated. The result is that millions of minds, not just machines, are newly joined. Indeed, we are on the verge of a kind of wired, collective intelligence that neurobiologists can describe by analogy as a single, multi-circuited global brain. Issues such as the environment and the world economy can now be conceptualized and analyzed at global meetings of the mind.

But that is theory -- or at best, partial reality. In practice, we know that everyone is not connected. Even in the United States, one out of four children lives in poverty. In developing countries, 40% of the adult population is still not literate, much less sending e-mail to each other. Powerful scientific computer networks strengthen connections within and between regions that are already well connected, reinforcing the disparities between the technological *haves* and *have nots*.

In light of poverty, illiteracy, and technological inequality, how are we to think about our connectivity? Where and how deeply is new technology really making a difference -- and to whom? People from developing and post-communist countries often believe that technology holds the key to how to become rich. From fisherman to government bureaucrat, people everywhere are aware of and want the power of new technology. But wealth and power are elusive. While the recent technological gains made by the poor are real, those already privileged are also getting richer in information and technology. Money, information, and power beget more money, information, and power. Overall, gaps are widening. Communications miracles, it seems, are as inequitably distributed as is everything else.

If global communications for development is so attractive, and it is, what can be done to extend these miracles to the poor? How do we fight for *equity* within the Information Revolution? Concretely, I believe, we need to focus new energy at five levels of support:

First, back to basics: developing countries must continue to devote their highest priority to eliminating illiteracy. At its core, the communications revolution is driven not by glitzy high tech, but by knowing how to read and write. To the extent that adult literacy in developing countries rose from 43% in 1970, to 60% in 1985, the trend is moving in the right direction. But the going will get harder. Increasingly, policy makers will have to confront painful choices between high technology investment programs and technical education that is demanded by the middle class, and basic education for the rural poor. Universal literacy must remain the priority.

Second, development institutions should immediately focus their attention on new programs that directly assist the poor to enter the information age. They can do this through their lending and investment for telecommunications infrastructure and information technology, and their openness with information. Their policy advice should encourage privatization of state-owned telecommunication services, technology transfer, and support for new technology in education. Information and communications is not

only an economic opportunity, but more importantly, a social opportunity.

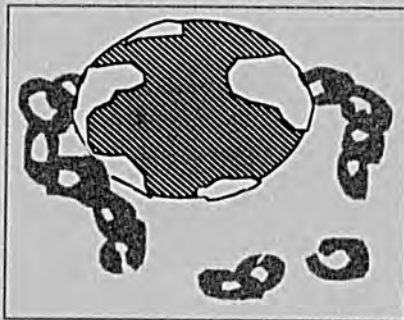
Third, governmental bodies, foundations, and international organizations must learn to make themselves more accessible to the poor. They must work to bring grassroots organizations into the same informational and communications networks that they themselves occupy. That means efforts to dramatically extend access to computer hardware, support for training in the use of new tools, and developing direct working relationships within expanding networks of organizations.

Fourth, grassroots organizations need to stop thinking of themselves as individual organizations, but instead as webs, networks and movements. They need to build electronic, human and organizational connections among themselves. This work can be assisted through communications clearinghouses and the creation of poverty oriented training programs in the use of new technology.

Finally, individuals need to be convinced that they can act globally; and through accelerating technological and organizational networking, they can. "Widening social participa-

tion" refers not just to the incorporation of poor people who have traditionally been excluded from decision making. It also implies person-to-person, cross border engagement with scientists, educators, and activists. New kinds of alliances and political equations are in the making. The rules for the future are not yet written. The Information Revolution need not exclude the poor. ■

Sheldon Annis is an Associate Professor of Geography and Environmental Studies at Boston University. His most recent book is Poverty, Natural Resources and Public Policy in Central America, ed. (Transaction Books, 1992). He works closely with the Telecommunications Cooperative Network and the Center for Strategic Communications in New York. For more information, contact Department of Geography, 675 Commonwealth Avenue, Boston MA 02215, telephone: (617) 353-5742, fax: (617) 353-5986.



65

APPENDIX B: Letter to Missions and replies received to date



**Clearinghouse on
Development
Communication**

Institute for International Research
1815 North Fort Myer Drive
Arlington, VA 22209 USA
Telephone: (703) 527-5546
Fax: (703) 527-4661

Sponsored by the U.S. Agency for International Development, Bureau for Science & Technology, Office of Education

February 28, 1992

1~
2~
3~
4~

Dear 5~:

This letter has two purposes.

First, I would like to remind you of the services of the Clearinghouse on Development Communication. The Clearinghouse has been funded by AID for almost 20 years, through the Office of Education in the newly-named Bureau for Research and Development (formerly the S&T Bureau). It is a resource available to AID field employees as well as to host country nationals who are involved in development communication.

Second, we would like to know if there are organizations or individuals in the country in which you are working (including key local and other AID employees there), that you believe would benefit from the services offered by the Clearinghouse. They should be aware that Clearinghouse services are free to practitioners from developing countries. This includes our quarterly **Development Communication Report (DCR)**, which averages 24 pages per issue and was first published (as the **Instructional Technology Report**) in June, 1972.

Certain staff members in each AID field office worldwide already receive the DCR. However, because of the continuing movement of AID officers between field posts and to and from the U.S., you may be unaware of the Clearinghouse and the services we offer.

In addition to publishing the DCR, other services provided by the Clearinghouse include the following:

- responding to information requests from developing country professionals on topics related to development communication, often with both documentation from the Clearinghouse library and lists of other relevant resources;
- maintaining a library of over 15,000 publications on many development communication-related subjects including educational technology, communication technology, health and nutrition education, agricultural extension, environmental education, community development, and distance education;
- maintaining an electronic bulletin board system, CDCNET, which is accessible to anyone with a computer and a modem.

Next time you are in Washington, please feel free to visit the Clearinghouse and its library, conveniently located near many AID offices at 1816 N. Moore Street, 6th floor, in Rosslyn, Virginia. We're just a few steps from the Rosslyn Metro Station, on the same side of the street. The building also has an entrance at 1815 North Fort Myer Drive, the street directly behind the Metrorail Station. Phone: (703) 527-5546. Fax: (703) 527-4661.

Enclosed are a Clearinghouse brochure and the most recent issue of the DCR for your information. Please let me know if the Clearinghouse can be of further assistance to you in your development communication activities.

Sincerely,



Michael Laflin
Director

P.S. We know how busy AID field officers can be. Therefore we have enclosed a short form that you can fax back to us with the names and addresses of up to 10 key in-country individuals or organizations that you would like us to add to the DCR mailing list. Thank you.

6

TO: Mike Laflin
Clearinghouse on Development Communication
[Fax: (703) 527-4661]

FROM: _____

DATE:

ADDITIONS TO THE DCR MAILING LIST

NAME/TITLE	INSTITUTION	ADDRESS	TEL/FAX #
1.			
2.			
3.			
4.			
5.			
6.			
7.			
8.			
9.			
10.			

Michael Laflin
Clearinghouse on Development Communication
1815 Fort Myer Drive
Suite 600
Arlington, VA 22209

March 20, 1992

Dear Mike:

As soon as I got back from Abidjan I found No. 75 of DCR. So now I am in your list. Thanks.

It was good to meet you and I hope we will keep in touch in the future. I will try to send you some information on our projects, though it has become very difficult for me to spare some time to write on what we are doing.

As I promised you, these are some of the friends most active in communication projects in Latin America. Most of them are oriented both towards theory and practice.

Fernando Reyes Matta ILET Apartado 16-637 - Correo 9 Santiago - CHILE	Juan Diaz Bordenave Av. Alexandre Ferreira #318 22470 Rio de Janeiro BRASIL
Daniel Prieto Castillo Radio Netherland Train. Centre Apartado 51-2200 - Coronado San Jose - COSTA RICA Fax: 506.231113 / 506.310743 Phone: (506) 32.46.64 (home)	Dennis Garcia CEDECO Obispo Diaz de la Madrid #150 Quito - ECUADOR Phone: (593-1) 23.31.54 of
Rosa Maria Alfaro Caland' a Morales Alpaca 193 Pueblo Libre Lima 18 - PERU Phone: (51-14) 62.00.07	Fatima Fernandez Christlieb Apartado 70-480 04510 Mexico D.F. - MEXICO Phone: (52-5) 595.86.14
Raul Leis CEASPA Apartado 6-133 El Dorado Panama - PANAMA Phone: (507) 26.66.02	Rafael Roncagliolo IPAL Apartado 270031 Avenida Juan de Aliaga #204 Lima 17 - PERU Fax: (5114) 617949
Pierre de Zutter Tarapaca #149 A - Barranco Lima 4 - PERU	Mario Kaplun calle Juan Ortiz #3181 Montevideo - URUGUAY



I am sure you've got most of these names in your mailing list but you could further develop your contacts. These are very good and creative people, all of them involved with development communication, most of them have published a number of books on communication issues. They all have both practical experience and a solid background in communication theory.

Keep in touch, saludos

A handwritten signature in black ink, appearing to read 'A. H. S. O.' with a long horizontal line extending to the right.

Alfonso Gumucio-Dagron

11

TO: Mike Laflin
Clearinghouse on Development Communication
[Fax: (703) 527-4661]scott

FROM: Ray Baum
Project Development Officer
USAID/Botswana

DATE: March 25, 1992

ADDITIONS TO THE DCR MAILING LIST

NAME/TITLE	INSTITUTION	ADDRESS	TEL/FAX #
1. Director	Botswana Telecommunications Corporation	P.O. Box 700, Gaborone, Botswana	358000/313355
2. Director	Botswana Technology Centre	Private Bag 0082, Gaborone, Botswana	314161/374677
3. Director	Agricultural Field Services	Private Bag 003, Gaborone, Botswana	350598/356027
4. Director	Geological Surveys Department	Private Bag 14, Lobatse, Botswana	330428/ -
5. Director	Metereological Services Department	P.O. Box 10100, Gaborone, Botswana	356281/313303
6. Community Health Services Division Head	Princess Marina Hospital	Private Bag 00269, Gaborone, Botswana	374351/2959BD
7. Director	Government Computer Bureau	Private Bag 0050, Gaborone, Botswana	371681/ -
8. Director	Information and Broadcasting Department	Private Bag 0060, Gaborone, Botswana	352541/2409BD
9. Director	Civil Aviation Department	P.O. Box 250 Gaborone, Botswana	371397/313303
10. Director	National Health Institute	P.O. Box 985 Gaborone, Botswana	353033/2959BD

11

TO: Mike Laflin
 Clearinghouse on Development Communication
 [Fax: (703) 527-4661]

FROM: DEBORAH A. STEPHENSON

DATE: 26 March 1992

ADDITIONS TO THE DCR MAILING LIST

NAME/TITLE	INSTITUTION	ADDRESS	TEL/FAX #
1. Deborah Stephenson Information Officer	USAID	San Salvador Department of State Washington, D.C. 20521 - 3450	T. (503) 98-1666 F. (503) 98-0885
2. Melvin Chatman Deputy Director Office of Education	USAID	"	"
3. Richard Thornton Director Office of Health	USAID	"	"
4. Christine Adamczyk Health Officer	USAID	"	"
5. Michael Wise Project Manager	USAID	"	"
6. Thomas McKee Director Program Office	USAID	"	"
7. Deborah Kennedy de Iraheta Director Office of Democratic Initiatives	USAID	"	"
8. Peter Gore Environmental & Nat. Resources Advisor	USAID	"	"
9.			
10.			

TO: Mike Laflin
 Clearinghouse on Development Communication
 [Fax: (703) 527-4661]

FROM: Lynn Gorton DATE: 03/30/92

3713740
 3/92

Agency for International Development
1a. Calle 7-66, Zona 9
01009 Guatemala, City

ADDITIONS TO THE DCR MAILING LIST

NAME/TITLE	INSTITUTION	ADDRESS	TEL/FAX #
1. Susan de Calderón	PAMI	15 Calle "A" 14-40, Zona 10	680383
2. Sara de Molina	APROFAM	9a. Calle 0-57, Zona 1	514017
3. Juan Robles	Componente Educativo	Complejo Regional de Salud 08001 Totonicapán	0661-334
4.			
5.			
6.			
7.			
8.			
9.			
10.			

Attachment to FAX to M. Laflin

Name/Title	Institution	Address	Tel/Fax#
Dr. Yayah Koswara Director of Research and Community Services	Directorate General of Higher Education Dept. of Education & Culture	Jl. Pintu I, Senayan, Jakarta	
Prof. Dr. Yuhara Sukra Director of Private Universities	same as above	same as above	Tel: 581987 Fax: 5700054
Prof. Moegiadi Secretary Office of Educational & Cultural Research & Development	Dept. of Education & Culture	Jl. Jenderal Sudirman Jakarta	Tel: 583129 Fax: 586366

TO: Mike Laffin
 Clearinghouse on Development Communication
 [Fax: (703) 527-4661]

FROM: M. Schulman
HR/O (RED/80/WCA)
Fax: (225) 41-45-28

DATE: 3/24/92

ADDITIONS TO THE DCR MAILING LIST

NAME/TITLE	INSTITUTION	ADDRESS	TEL/ FAX #
1. CERCOM	University	BP V34 Abidjan 01 (Ivory Coast)	(225) 43-90-00
2. Mr Fofana Bouaké	ENS	08 BP 10 Abidjan 02 (Ivory Coast)	(225) 43-03-52
3.			
Prof Toure Siaka	IREN/University	BP V36 Abidjan	
4. Mr ASALE	CIRES	08 BP 12 95 Abidjan 02	(225) 44-43-63
5. Mr Saha T. Kouadio	IPES	01 BP 3742 Abidjan 01	Tel (225): 37-65-52
6. Ms Abone Yvonne	CI-TELCOM	Bonoua / Côte d'Ivoire	(225) 35-06-00
7.			
8.			
9.			
10.			

TO: Mike Laflin
 Clearinghouse on Development Communication
 [Fax: (703) 527-4661]

FROM: MAGDALENA CANLÚ
PROGRAM ASSISTANT
A.I.D./MEXICO

DATE: MARCH 30, 1992

ADDITIONS TO THE DCR MAILING LIST

NAME/TITLE	INSTITUTION	ADDRESS	TEL/FAX #
1. Lic. Mario Bravo	CONAVA	Fco. de P. Miranda 177 Col. Merced-Gomez 01600 Mexico, D.F.	(525) 683-9313
2. Dr. Carlos Del Rio	CONASIDA	Administración y Comercio Col. Copileo - Universidad Mexico, D.F.	(525) 554-4996
3. Dr. MANUEL Urbina Secretario GENERAL	CONAPO	Angel Varaz N° 1137 Col. del Valle, 03100 Mexico, D.F.	554-4202 (FAX) 559-6379
4. DR. GUSTAVO CABRERA	El Colegio de Mexico	CAMINO del AJUSCO N° 30 01000 Mexico, D.F.	FAX 559-6121 645-5955 FAX 645-0467
5. DR. ENRIQUE SUAREZ Director Ejecutivo	FEMAP	PLUTARCO ELIAS CALLES 744 Nte., 32310 Cd. Juarez, Chih.	(16) 76-0833 (16) 76-1396
6. Lic. Alfonso Lopez Juarez Director	MEXFAM	JUAREZ No. 208 Lte. Mexico, D.F.	573-7100 573-7070 FAX: 573-2318
7. DR. MARIOS VELASCO Coordinador Asuntos Internacionales	CORA	TENAYUCA N° 55 03600 Mexico, D.F.	605-1370 FAX: 605-8841

TO: Mike Laflin
 Clearinghouse on Development Communication
 [Fax: (703) 527-4661]

FROM: DAVID SPRAGUE
CHIEF, HRD
USAID/ISLAMABAD

DATE: 3.30.92

ADDITIONS TO THE DCR MAILING LIST

NAME/TITLE	INSTITUTION	ADDRESS	TEL/FAX #
1.			
Musabbih Ahmad	Min. of Education Planning Wing	14th Floor, Room 1, China Chowk Islamabad	Tel 821358
2.			
Abdul Aziz Khan	Min. of Education Primary & NEC Wing	16-D, West, Shmaila Awan Plaza Blue Area	Tel 822606
3.			
Laeq Ahmed Khan	Min. of Education AEPAM	G-8/1, Sarya Chowk, Islamabad	Tel 853259
4.			
Haroon Jatoi	Min. of Education AEPAM	G-8/1, Sarya Chowk, Islamabad	Tel 852531
J.			
M. H. Abbasi	Min. of Education Curriculum Wing	Curriculum Wing, Sector H-8 Islamabad	Tel 853680
6.			
Shah Jehan Khan	NWFP, Peshawar, Dir of Primary Edu.	Directorate of Elementary Edu. Phase 5, Hyatabad Township, Pesh.	Tel 812072
Malik Ejaz	Balochistan, Dir. Primary Education	Additional Director, Primary Edu. Dev. Program., C-11, Railway Housing, Quetta	Tel. 42677
8.			
Mazhar ul Haq - Siddiqui	Secretary of Education, Federal	Ministry of Education Block D, Islamabad	Tel 820230
9.			
Fakhri Imam	Fed. Min. for Edu.	Min. of Education, Block D Islamabad	Tel 822020
10.			
Ghulam Farid	Planning Commission Education Chief	Planning Division, Hajvery Plaza Islamabad	Tel 824643

TO: Mike Laflin
 Clearinghouse on Development Communication
 [Fax: (703) 527-4661]

FROM: MR. LOUIS H. KUHN
ASSISTANT DIRECTOR
USAID/RDO/SP/PNG

DATE: MARCH 23, 1992

PORT MORESBY, PAPUA NEW GUINEA
 ADDITIONS TO THE DCR MAILING LIST

NAME/TITLE	INSTITUTION	ADDRESS	TEL/FAX #
1. Dr. Wari Lamo	National Research	P.O.Box 5854	FAX:(675) 260213
	Institute	BOROKO, PAPUA NEW GUINEA	TELP.(675) 260443
2. Mr. Jerry Tetega	Department of	Free Mail Bag, BOROKO,	FAX: (675) 254648
Secretary	Education	PAPUA NEW GUINEA	TELP: (675) 272340
3. Dr. Levi Sialis	Department of	P.O.Box 3991, BOROKO	FAX: (675) 213821
Secretary	Health	PAPUA NEW GUINEA	TELP: (675) 248606
4.			
5.			
6.			
7.			
8.			
9.			
10.			



AGENCY FOR INTERNATIONAL DEVELOPMENT

**UNITED STATES AID MISSION TO PERU
C/O AMERICAN EMBASSY**

LIMA, 1 PERU

TELEPHONE 333200
TELEX 20335 PE USAIDPR
FAX 337034

**UNCLASSIFIED
FAX MESSAGE COVER SHEET**

**To: Mike Laflin
Clearinghouse on Development
Communication**

Date: March 26, 1992

FAX No.: 703-527-4661

City/Country: Rosslyn, VA

FROM: Alonzo Wind, HPN

CHARGE TO: Contract

**OFFICE CHIEF APPROVAL:
Heather W. Goldman, A\HR**

**SUBJECT: Additions to the DCR Mailing List
REF: Mailing to Missions 28 February 1992**

No. of Pages: 2 (including cover sheet)

As per your referenced letter, please delete Mr. Charles Mantione and Ms. Barbara Kennedy from your list for USAID\Lima, and note the following addresses:

**Heather W. Goldman
USAID\Lima
Unit 3760
APO AA 34031
Tel. 5114-333200 Fax 5114-337034**

**Dr. Salvador Salmon, Director General
UDES Lima Este
Av. La Atarjea s/n
El Agustino, Lima Peru
Tel. 5114-733453**

**Edgar Necochea, M.D.
USAID\Lima\HPN
Department of State
Washington, DC 20521-3230**

**Dr. Luis Pro Delgado, Director
UDES Lima Norte
Pasaje San German 270
Villacampa, Rimac, Lima Peru
Tel. 5114-828757**

**Alonzo Wind
USAID\Lima
Unit 3760
APO AA 34031**

**Dr. Avelina Rivas Solis, Director
UDES Lima Sur
Jr. Martinez de Pinillos 124
Barranco, Lima Peru
Tel. 5114-773077**

**Marla Angelica Burnack
Population Advisor
USAID\Lima
State Department
Washington DC 20521-3230**

**Dr. Oscar Miranda, Director
UDES Callao
Calle Collins 875
Bellavista, Callao Peru**

Jude Panaini
SHIP Coordinator - CARE
Av. General Santa Cruz 659
Lima 11 Peru
Tel. 5114-317430

Lic. Duaný Puertas
Chief of Communications and Public Relations
Ministerio de Salud
Av. Salaverry cuadra 8 s/n
Lima Peru
Tel. 5114-323925 Fax 5114-313671

Lic. Ruth Perez Ponce
Oficina de Comunicaciones
Ministerio de Salud
Av. Salaverry cuadra 8 s/n
Lima Peru

Dr. Jorge Miano Trelles, Director General
UDES-Lima, Ministerio Salud
Jr. Raymondi 220, Piso 2
La Victoria, Lima Peru
Tel. 5114-232352

MAR 23 '92 09:32 USAID/MANILA 632 5215241

P.2/2

TO: Mike Laflin
Clearinghouse on Development Communication
[Fax (703) 527-4661]

FROM: Emmanuel Voulgaropoulos, M.D. **DATE: March 20, 1992**
Chief, Office of Population, Health & Nutrition
AID/Manila, APO AP 96440

ADDITIONS TO THE DCR MAILING LIST

NAME/TITLE	INSTITUTION	ADDRESS	TEL/FAX #
1. Dr. Rafael Esmundo	TS/PFPP Department of Health	San Lazaro Hospital Compound Sta. Cruz, Manila, Philippines	711-6720 (tel.) 711-6085 (fax)
2. Dr. Jovencia B. Quintong	Family Planning Service Dept. of Health	San Lazaro Hospital Compound Sta. Cruz, Manila, Philippines	711-9845 (tel/fax)
3. Ms. Emily Maramba	TS/PFPP Dept. of Health	San Lazaro Hospital Compound Sta. Cruz, Manila, Philippines	711-6720 (tel.) 711-6085 (fax)
4. Ms. Marissa Reyes	Phil. Center for Population & Development, Inc.	South Superhighway Makati, Metro Manila, Phils.	817-5997 (tel.)
5. Mr. Alfonso D. Merca	Philippine NGO Council	36-1 Main Ave. cor. 8th St. Cubao, Quezon City, Philippines	794-513 (tel.)
6. Dr. Florentino Solon Executive Director	Nutrition Center of the Philippines	NCP Bldg., South Superhighway Makati, Metro Manila, Phils.	818-7397 (tel.)
7. Mr. Mario M. Taguiwalo	IPECON	U.P. School of Economics Diliman, Quezon City, Philip- pines	989-686 (tel.)
8. Dr. Ma. Luz Casimiro	PIHES Dept. of Health	San Lazaro Hospital Compound Sta. Cruz, Manila, Philippines	711-6245 (tel.)
9. Ms. Ma. Lourdes Vega	National Nutrition Council	NCP BLDG., South Superhighway Makati, Metro Manila, Phils.	818-7398 (tel.)
10. Dr. Catherine Quimpo	Food and Nutrition Research Institute	Pedro Gil corner Taft Ave. Malate, Manila, Philippines	594-998 (tel.)
11. Mr. Kenneth LuePhang	OCP AID/Manila	APO AP 96440	521-8933 (tel.)

96

TO: Mike Laflin
Clearinghouse on Development Communication
[Fax (703) 527-4661]

FROM: Gregory T. Delawie
American Embassy Ankara
PSC 93, Box 5000
APO AE 09823

DATE: March 26, 1992

ADDITIONS TO THE DCR MAILING LIST

NAME/TITLE	INSTITUTION	ADDRESS	TEL/FAX #
1. Timur Sayrac Hd. Research Dpt.	Supreme Board of Radio and TV	Ataturk Bulvarı 169/2 06680 Ankara	Tel: 904-117-0547
2. Yucel Kuru Head of Frequency Management	General Directorate of Telecommunication	91 Sok. Bakanlık Sitesi 06510 - Emek, Ankara	Tel: 904-212-3014 FAX: 904-221-3226
3. Huseyin Guler Deputy Dir. Gen. (Technical)	Ministry of Transportation Gen. Directorate of Radiocommunications		Tel: 904-212-3811 FAX: 904-221-3226
4. Cengiz Anik Head of Int'l. Relations Dept.	PTT General Directorate	06101 Ankara	Tel: 904-3091112 FAX: 904-310-7686
5.			
6.			
7.			
8.			
9.			
10.			

TO: Mike Laffin
Clearinghouse on Development Communication
[Fax: (703) 527-4661]

FROM: Lecwina Dhlwayo
USAID/Zimbabwe
Fax No. 263-4-722418

DATE: March 26, 1992

ADDITIONS TO THE DCR MAILING LIST

NAME/TITLE	INSTITUTION	ADDRESS	TEL/FAX #
1. Lecwina Dhlwayo	USAID	1 Pascoe Avenue, P.O. Box	Tel. 726739
Protect Agmt.	Zimbabwe	5988, Harare, Zimbabwe	Fax 722418
2. The Secretary	Media for Dev	135 Union Avenue, P.O. BOX	Tel 734804
	Trust	5755, Harare, Zimbabwe.	Fax 729066
3. The Executive	Zimbabwe National	P.O. Box ST 220, Southerton	Tel 67656
Director	Family Planning Cnl	Harare, Zimbabwe	
4. The chief	University of Zim	Mazowe St. Harare	Tel 791631
Librarian	Medical School	Zimbabwe	
5. The Librarian	Blair Research	Mazowe St, Box 8079	Tel 794411
	Laboratory	Causeway, Harare	
6. The Secretary	National Association	P.O. Box 8465, Causeway	Tel 791251
	of Non-Gov. Org.	Harare, Zimbabwe	Fax 794973
7. The Librarian	Zimbabwe Institute	Century Hse. Rgtt, Baker Ave.	Tel 721341
	of Dev. Studies	Box 880, Harare, Zimbabwe	
8. Ms. Zinanga	Zimbabwe Women's	P.O. Box 2192, Harare	-
Director	Resource Centre	Zimbabwe	-
9. Ms Chikwavaire	Zimbabwe women	43 Hillside Road,	Tel 734295
President	Bureau	Cranborne, Harare, Zimbabwe	
10. Ms Tavaziva	Black Enterprise	46 Central Avenue	Tel 723163
The Editor		P.O. Box 3331, Harare	

APPENDIX C: The UNICEF Conference

for
Shelley
2011/2

UNICEF ABIDJAN ACCRA BAMAKO BANGUI BANJUL BISSAU BRAZZAVILLE
CONAKRY COTONU DAKAR FREETOWN KINSHASA LAGOS LOME MALABO MONROVIA
NIAMEY NDJAMENA NOUAKCHOTT OUAGADOUGOU PRAIA YAOUNDE NEW YORK

FOR
SENE ___ SHOMARI/TWENEBOA ___ EVEREST/KANAKOMO ___ SARR/KPONTON ___ CRIVE
LLI(OIC) ___ COLOANE ___ MWILAMBWE/LAULAJAINEN ___
GRANDCOURT/BENJAMIN ___ MENDOZA/GONCALVES ___ SOBHY/ALAVO ___
OMAWALE/JALLOH ___ DIAMANTI/DUSSAULT ___ TULUHUNGWA/OYODELE ___
NJIE/EKUE ___ CAMERATI/DE LA ROSA ___ TINSTMAN ___ BENDOW/BOYER
___ COURT/PURVES ___ SORO/OUID ELY ___ STANDAERDT (OIC) /ILBOUDO
___ PETERS
___ AGUIRRE ___ KHAN/KOO/NYINYI/HEWETT/REID/DIALLO/FREIBERG
FROM BOUHABA

RE: INFO/COMMUNICATION OFFICERS MEETING ABIDJAN 9 TO 13 MARCH

ATTACHED PLEASE FIND PROPOSED AGENDA FOR FULL WEEK MEETING.
PLEASE NOTE THAT OPENING OF WORKSHOP WILL TAKE PLACE SUNDAY
EVENING AND THAT PARTICIPANTS ARE EXPECTED TO REMAIN UNTIL
FRIDAY PM.

DURING WORKSHOP YOU WILL BE ASKED TO PRESENT SUCCINCTLY
OVERVIEW OF PRIORITIES FOR YOUR COUNTRY DURING SESSION ON
FIRST DAY. IN ADDITION WE WILL CIRCULATE A QUESTIONNAIRE
DESIGNED TO INVENTORY THE COMMUNICATION RESOURCES IN THE
REGION. RESULTS OF QUESTIONNAIRE WILL BE USED LATER IN THE
WEEK TO HELP ASSESS TRAINING NEEDS.

IF NOT ALREADY DONE PLEASE COMMUNICATE SOONEST INFORMATION
ON WHO WILL BE PARTICIPATING FROM YOUR OFFICE WITH ETA.
INFORMATION SHOULD BE ADDRESSED DIRECTLY TO RAMANA WHO
COORDINATING LOGISTICS FOR MEETING.

MANY THANKS

ADOTEVI

26

APPENDIX D: Electronic dissemination activities



**Clearinghouse on
Development
Communication**

Institute for International Research
1815 North Fort Myer Drive
Arlington, VA 22209 USA
Telephone: (703) 527-5546
Fax: (703) 527-4661

Sponsored by the U.S. Agency for International Development, Bureau for Science & Technology, Office of Education

MEMORANDUM

To: Paul Howard
MicroDis Technical Support Group
LTS Corp.
1500 Wilson Blvd.,
Suite 1000, Arlington VA 22209

From: Earl F. McLetchie
CDC Librarian

Date: January 29, 1992

Re: CDC MicroDis Library Collection on CD-ROM

As per our conversation last Autumn 1991, the Clearinghouse on Development Communication (CDC) accepts the offer and hereby gives permission to the LTS Corporation and Paul Howard to add the CDC library collection on to CD-ROM disk.

It is our understanding that the CD-ROM disk will be available to AID Missions.

The CDC will provide new acquisitions listings of the library collection on floppy disks on a periodic basis as requested by LTS Corp in order to keep the information current.

cc: James Hoxeng
Project Officer, CDC
AID/R&D/ED

March 17, 1992

Valeri:

Here is a subset of the callers who have called the BBS and answered the questionnaire. For brevity, I have not included the countless people who declined to fill out the questionnaire, or who called for reasons besides USAID (e.g., Internet access thru my system). The questionnaire is presented only on their first call. Those who decline to answer it remain strangers unless they introduce themselves another way.

The most popular items on CDC-Net are, in order of popularity:

- o Announcements of future events
- o International message conferences on development, via Internet.
(Not much interest in CDC message conference, since Internet conferences are much more lively & stimulating at present.)
- o DCR articles
- o All else

The FIRST time that each person logs in, they are asked a few quick questions. I keep a record of their answers, and that is what is below.

(The following list includes people who called my system prior to the beginning of our formal agreement last August. I had a skeletal "demo" CDC-Net up before the contract began. Somehow, a few people got the phone number before it was publicized.)

(The following list does NOT include people who request CDC library items by means other than the BBS. I have an automated mailer set up, and I've noticed some people picking up CDC files, but those logs are much too long to go thru to pick out the users.)

If you have any other questions, feel free to call me anytime.

- Mark

=====

CB

- *** Paul Collins completed questionnaire at 13:19 on 17-May-91 ***
Heard of us from : FROM A FRIEND
Purpose1 : INTERESTED IN AID RELATED ITEMS.
Purpose2 :
- *** Dan Elswit completed questionnaire at 10:29 on 21-May-91 ***
Heard of us from : Another BBS
Purpose1 : I'm calling from a non-profit international health group called P
Purpose2 : (oops..) PATH. We work with AID on several of our projects.
- *** Adam Frampton completed questionnaire at 20:26 on 24-Jun-91 ***
Heard of us from :
Purpose1 : Checking out your library. USAID
Purpose2 :
- *** Frank Brock completed questionnaire at 09:16 on 25-Jun-91 ***
Purpose1 : I'm a grad student at GWU, majoring in Science, Tech and Public
Purpose2 : Policy, and I'm interested in telecommunications and USAID
- *** Ed Kowalski completed questionnaire at 14:17 on 03-Jul-91 ***
Heard of us from : BBS LIST
Purpose1 : AM EMPLOYEE OF USAID AT PRESENT
Purpose2 :
- *** Kris Davidson completed questionnaire at 21:45 on 07-Jul-91 ***
Heard of us from : Friendly Forum
Purpose1 : Information and International issues
Purpose2 :
- *** Gary Harris completed questionnaire at 17:48 on 15-Jul-91 ***
Heard of us from : focke list
Purpose1 : I'm interested in AID and 3rd world countries
Purpose2 :
- *** Vijay Suri completed questionnaire at 11:43 on 17-Jul-91 ***
Heard of us from : ON THE CAPUG LIST
Purpose1 : INTERESTED IN WHAT USAID DOES ALL OVER THE WORLD.
INTERESTED IN
Purpose2 : INTERNATIONAL TRAVEL AND WORK..
- *** Valerie Lamont completed questionnaire at 12:57 on 18-Jul-91 ***
Heard of us from : iir
Purpose1 : First time to use CDC-net. Needed for work.
Purpose2 :
- *** Carl Young completed questionnaire at 22:17 on 24-Jul-91 ***

Heard of us from : list

Purpose1 : Interested in how computers are used in underdeveloped countries.

Purpose2 :

*** Dan Winfield completed questionnaire at 13:11 on 06-Aug-91 ***

Heard of us from : focke listing

Purpose1 : General interest in society today and the future of it's people.

Purpose2 :

*** Sheree Jenkins completed questionnaire at 02:47 on 11-Aug-91 ***

Heard of us from : Focke's list

Purpose1 : I work for DoD and am interested in what types of boards other

Purpose2 : Federal agencies have set up.

*** Micael Olsson completed questionnaire at 20:44 on 13-Aug-91 ***

Heard of us from : Clearinghouse on Development Communication

Purpose1 : I did an evaluation of the CDC clearinghouse earlier in the year

Purpose2 : and recommended that they move toward electronic transfer and

*** Andrew Rosauer completed questionnaire at 00:38 on 15-Aug-91 ***

Heard of us from : from Fockes List

Purpose1 : I am an RPCV with a recent degree in Economic/Social Devp. I am

Purpose2 : currently unemployed (but looking). This bbs is right up my alley

*** Susan Wade completed questionnaire at 10:58 on 15-Aug-91 ***

Heard of us from : Micael Olsson

Purpose1 : interested in how equitable sharing of information works

Purpose2 :

*** Mike Brooker completed questionnaire at 21:34 on 15-Aug-91 ***

Heard of us from : Focke's List

Purpose1 : I'm with the Canadian embassy.

Purpose2 :

*** Randy Dow completed questionnaire at 16:02 on 18-Aug-91 ***

Heard of us from : Focke's

Purpose1 : I am a consultant who has worked and works for USAID and recently

Purpose2 : bought a modem and got Focke's BBS listing.

*** Gene Niewoehner completed questionnaire at 12:40 on 21-Aug-91 ***

Heard of us from : From the Focke's DC BBS list.

Purpose1 : I previously worked with USAID and am very interested in automati

Purpose2 : on as it relates to AID and the overseas environs.

*** Eric Rosenberg completed questionnaire at 16:34 on 22-Aug-91 ***

Heard of us from : VITA

Purpose1 : Seeing what the REAL Mark Prado is up to!

Purpose2 :

*** John Eppler completed questionnaire at 12:26 on 25-Aug-91 ***

Heard of us from : Focke's DC Area BBS Listing

Purpose1 : My wife works for the American Wind Energy Association and has

Purpose2 : Connections to USAID.

*** Doug Kennedy completed questionnaire at 20:42 on 25-Aug-91 ***

Heard of us from : Nodelist

Purpose1 : Got number from Nodelist. Many of the areas offered are

Purpose2 : interesting to me.

*** Dave Coddington completed questionnaire at 23:00 on 02-Sep-91 ***

Heard of us from : Focke's

Purpose1 :

Purpose2 : I am an International Development masters student at AU and ex-PC

*** Andy Miller completed questionnaire at 17:02 on 04-Sep-91 ***

Heard of us from : SYSOP109

Purpose1 : Respect for your spiritually oriented messages about technology

Purpose2 :

*** Tom Cavanaugh completed questionnaire at 23:09 on 05-Sep-91 ***

Heard of us from : Focke's List

Purpose1 : I deal with organizations involved with aiding underdeveloped

Purpose2 : countries.

*** Robert Barbour completed questionnaire at 13:17 on 20-Sep-91 ***

Heard of us from : focke list

Purpose1 : calling out of curiosity, i used to work for USAID

Purpose2 :

*** Raad Alhamdan completed questionnaire at 01:54 on 22-Sep-91 ***

Heard of us from : Focke list 0991

Purpose1 : International education.

Purpose2 :

*** Bernard Dehmelt completed questionnaire at 17:20 on 22-Sep-91 ***

Heard of us from : FOCKE'S SEPTEMBER LIST, AS LISTED BY ALIX II (FEDLINC LIBRARI

Purpose1 :

Purpose2 : I RESPONDED TO THE KEYWORDS LISTED IN FOCKE'S: HYPERTEXT, NETWORK

*** Lili Vivanco completed questionnaire at 09:07 on 25-Sep-91 ***

Heard of us from : from a list I downloaded from Mike Focke's zip file in the CI
Purpose1 :
Purpose2 : I would like to know all the bbs that are international in scope

*** John Butsch completed questionnaire at 13:14 on 26-Sep-91 ***
Heard of us from : From a colleague, Lili Vivanco.
Purpose1 :
Purpose2 :

*** Dex Hinckley completed questionnaire at 20:49 on 27-Sep-91 ***
Heard of us from : Focke's
Purpose1 : I am interested in communicating with developing countries on
Purpose2 : sustainable development, conservation of forests and biodiversity

*** Steven Glazerman completed questionnaire at 00:47 on 30-Sep-91 ***
Heard of us from : DCBB0791 list, Focke
Purpose1 : I have an academic & professional interest in development, and
Purpose2 : North-South relations

*** Jeff Marzilli completed questionnaire at 22:14 on 05-Oct-91 ***
Heard of us from : DCBBxx.zip
Purpose1 : I am an AID contractor researching telecommunications opportuniti
Purpose2 : for my project (Famine Early Warning Systems).

*** Sam Rosenfeld completed questionnaire at 16:43 on 09-Oct-91 ***
Heard of us from : colleagues
Purpose1 : I have been an adviser to various governmental agencies in other
Purpose2 : countries, which makes my interest fairly clear.

*** David Scassa completed questionnaire at 22:03 on 15-Oct-91 ***
Heard of us from : Focke's
Purpose1 :
Purpose2 : Well, my father is currently posted overseas and I have worked wi

*** Robert Wilhite completed questionnaire at 06:46 on 16-Oct-91 ***
Heard of us from : Joe Salemi (PC Magazine columnist) & Nodelist
Purpose1 :
Purpose2 :

*** Tom Allen completed questionnaire at 17:50 on 22-Oct-91 ***
Heard of us from : Focke's List
Purpose1 : I am a retired Fed Trainer, current counselor to CMI's, writer,
Purpose2 : photographer with wide interests.

*** Leo Cunha completed questionnaire at 09:25 on 24-Oct-91 ***
Heard of us from : focke's list

Purpose1 :

Purpose2 : Prior knowledge of USAID from sister

*** Bill Harris completed questionnaire at 17:10 on 26-Oct-91 ***

Heard of us from : Institute of biological Sciences

Purpose1 : I am looking for a discussion of development issues.

Purpose2 :

*** Joshua Lee completed questionnaire at 20:57 on 28-Oct-91 ***

Heard of us from : The Nodelist

Purpose1 : I'm interested in intellectual discussions, and am very interested

Purpose2 : in communications. I think this BBS will be very interesting...

*** Dan Carpenter completed questionnaire at 22:32 on 28-Oct-91 ***

Heard of us from : Focke's BBS List

Purpose1 : I have been a student of development and have lived in undevelop-

Purpose2 : ed countries. I also have a longer msg about how I called.

*** Charles Smith completed questionnaire at 22:50 on 28-Oct-91 ***

Heard of us from : From Mark Prado himself. I called several weeks ago about a

Purpose1 : I called mainly out of curiosity. However, the conferences that

Purpose2 : are listed seem very interesting. As for files, I have enough.

*** Mike McCormick completed questionnaire at 00:28 on 30-Oct-91 ***

Heard of us from : Focke's list

Purpose1 : Your listing on Focke's list looked like one of the

Purpose2 : most interesting...

*** Paul Gagne completed questionnaire at 13:43 on 31-Oct-91 ***

Heard of us from : EPA International Update pub.

Purpose1 : I am interested in international environmental issues.

Purpose2 :

*** Scot Kight completed questionnaire at 08:12 on 02-Nov-91 ***

Heard of us from : Fockes List

Purpose1 : Well I wanted to be able to access Internet mainly but now that i

Purpose2 : see everything else I am BLOWN away!!

*** Allyn Brosz completed questionnaire at 12:01 on 02-Nov-91 ***

Heard of us from : focke's list

Purpose1 : i'm a freelance writer with int'l interests, and colleagues on B

Purpose2 :

*** Cecil Hornbaker completed questionnaire at 15:04 on 04-Nov-91 ***

Heard of us from : Fockes BBS listing

Purpose1 : Searching for network and communications software.

Purpose2 :

*** Chris Hays completed questionnaire at 09:31 on 05-Nov-91 ***

Heard of us from : EPA Activities Update

Purpose1 : To find information concerning eco issues

Purpose2 :

*** Ragnar Danneskjold completed questionnaire at 16:49 on 08-Nov-91 ***

Heard of us from : U.S. EPA International newsletter

Purpose1 : I am interested in issues relating to economic development and

Purpose2 : environmental protection and regulation.

*** Claudio Braga completed questionnaire at 20:55 on 08-Nov-91 ***

Heard of us from : focke's list

Purpose1 : Just curios about what we're doing in this planet, and since

Purpose2 : there's a bunch of things related to that, I assume I'll finde

*** Dennis Delrow completed questionnaire at 13:39 on 09-Nov-91 ***

Heard of us from : SuperBBS Echo

Purpose1 : Heard this BBS on the SuperBBS Echo on Fido net. Sounded

Purpose2 : interesting.

*** Steve Galbraith completed questionnaire at 01:50 on 10-Nov-91 ***

Heard of us from : USBBS.LST(DARWIN BBS)

Purpose1 : I would like to explore the areas I have selected to see if I can

Purpose2 : gain from, and contribute to, their info./message base.

*** John Nitis completed questionnaire at 23:14 on 10-Nov-91 ***

Heard of us from : A freind - namely Scot Kight

Purpose1 : Hmmm..I was reccommended by a friend to take a look at the whole

Purpose2 : fidonet ordeal..

*** John Deferrari completed questionnaire at 09:41 on 11-Nov-91 ***

Heard of us from : Focke's BBS Listing

Purpose1 : Through friends and associates, I have an interest in AID type

Purpose2 : stuff. That's the main reason.

*** Kit Schrichte completed questionnaire at 11:42 on 13-Nov-91 ***

Heard of us from : Earl McLetchie

Purpose1 :

Purpose2 : I am currently seeking resources on rechargeable batteries for a

*** John Wolford completed questionnaire at 22:01 on 17-Nov-91 ***

Heard of us from : FOCKES

Purpose1 : I am allways interested in exchanging ideas with people and now

Purpose2 : that I know what kind of bbs you are I'm glad I called.

*** David Green completed questionnaire at 20:43 on 22-Nov-91 ***

Heard of us from : bbs

Purpose1 : I spent some time in USAID. Last post was USAID/Liberia (Monrovi

Purpose2 :

*** Dkm Chang completed questionnaire at 22:20 on 23-Nov-91 ***

Heard of us from : DCBB listing of bbses

Purpose1 : Poking around to see what other agencies are doing with their BBS

Purpose2 : Like some of the sections - will explore.

*** Eric Chinag completed questionnaire at 22:27 on 27-Nov-91 ***

Heard of us from : FRIEND

Purpose1 : EDUCATION AND OF INTEREST THATGETS THE BETTER END OF M.

Purpose2 :

*** Bill Hezlep completed questionnaire at 12:39 on 29-Nov-91 ***

Heard of us from : Dpt. of State

Purpose1 : New PC Technology within DOS and AID

Purpose2 :

*** Nancy Hazleton completed questionnaire at 20:57 on 30-Nov-91 ***

Heard of us from : telepolicy

Purpose1 :

Purpose2 :

*** Joe Hairston completed questionnaire at 19:11 on 01-Dec-91 ***

Heard of us from : FILELIST

Purpose1 : I AM AN EDUCATOR AND I HAVE A DESIRE TO LEARN ALL THAT IS POSSIBL

Purpose2 : TO LEARN WITHIN MY CAPACIT / I HAVE A PARTICULAR INTEREST IN THE

*** Margaret Bartel completed questionnaire at 00:21 on 03-Dec-91 ***

Heard of us from : capital cpu users group mix

Purpose1 :

Purpose2 : interested in international development and globalization

*** Burton Bostwick completed questionnaire at 21:46 on 03-Dec-91 ***

Heard of us from : CPCUG List

Purpose1 :

Purpose2 : I work for OPIC, a spin-off of A.I.D. (circa 1971) and am very in

*** Jim Sheehan completed questionnaire at 12:24 on 05-Dec-91 ***

Heard of us from : epa activities update

Purpose1 : I am interested in efforts to assist Eastern Europe's environment

Purpose2 :

*** Richard Gadol completed questionnaire at 07:01 on 07-Dec-91 ***

Heard of us from : From Mark Prado

Purpose1 : Interested in computer hardware and software, but also interested

Purpose2 : in international topics as a former AID program officer

*** Michael Totten completed questionnaire at 14:57 on 07-Dec-91 ***

Heard of us from : CAP PCUP

Purpose1 : DEVELOPING HYPERMEDIA PROJECT ON ENERGY & TRANSPORTATION SERVICES

Purpose2 : FOR DEVELOPING COUNTRIES TO HELP SAVE MONEY, PREVENT POLLUTION,

*** William Naughton completed questionnaire at 17:19 on 07-Dec-91 ***

Heard of us from : FOCKE'S LIST

Purpose1 :

Purpose2 : I was delighted to see a "USAID" BBS, since AID work, particul-

*** Charles Bennett completed questionnaire at 16:55 on 09-Dec-91 ***

Heard of us from : EPA Activities Update

Purpose1 : To find out what information about the environment is available.

Purpose2 : I work in petroleum industry, recently returned from People to Pe

*** Jim Childress completed questionnaire at 09:32 on 10-Dec-91 ***

Heard of us from : EPA Activities Update

Purpose1 : Interest in international environmental developments

Purpose2 : Interest in alternative fuels technologies and developing nations

*** Harvey Olem completed questionnaire at 12:28 on 11-Dec-91 ***

Heard of us from : EPA

Purpose1 : I work for a nonprofit environmental research and education organ

Purpose2 : ization and we are interested in international environmental

*** David Ashton completed questionnaire at 09:39 on 12-Dec-91 ***

Heard of us from : EPA Activities Update

Purpose1 :

Purpose2 : I am looking into setting up a bulletin board myself...I'm always

*** John Dillinger completed questionnaire at 12:01 on 16-Dec-91 ***

Heard of us from : BBS LISTING

Purpose1 : I have been assigned task of recommending the best BBS software

Purpose2 : for our specific use.

*** Owen Hendrickson completed questionnaire at 15:43 on 17-Dec-91 ***

Heard of us from : EPA ACTIVITIES BULLETIN

Purpose1 : INTEREST IN ENVIRONMENTAL CONCERNS, REGULATIONS, INDUSTRY DEVELO

Purpose2 : MENTS ETC. FOR ENVIRONMENTAL COMPLIANCE AND IMPROVEMENTS.

*** Tomer Miron completed questionnaire at 06:49 on 18-Dec-91 ***

Heard of us from : I saw it on a "FOCKE" list in USA

Purpose1 : I'm connecting via an X.25 link from Israel

Purpose2 :

*** John Wilkinson completed questionnaire at 18:59 on 18-Dec-91 ***

Heard of us from : EPA Publication

Purpose1 : Since my office is managing AID's procurement bb on Commerce's

Purpose2 : EBB, I was wondering what you were about.

*** Tej Phool completed questionnaire at 15:30 on 19-Dec-91 ***

Heard of us from : EPA ACTIVITIES UPDATE

Purpose1 : I AM TREASURER OF SOCIETY FOR INTERNATIONAL DEVELOPMENT AND

Purpose2 : GENERALLY INTERESTED IN INTERNATIONAL DEVELOPMENT RELATED STUFF

*** Caesar Gonzmart completed questionnaire at 15:38 on 23-Dec-91 ***

Heard of us from : via fax

Purpose1 :

Purpose2 : Information for OSDBU/AID

*** Christopher Lowe completed questionnaire at 17:08 on 23-Dec-91 ***

Heard of us from : co-worker

Purpose1 : Interested in your focus on USAID

Purpose2 :

*** Greg Garrett completed questionnaire at 09:57 on 02-Jan-92 ***

Heard of us from : fockes

Purpose1 : I am a graduate student in international studies and I was intere

Purpose2 : sed

*** Kevin Mccarty completed questionnaire at 14:50 on 02-Jan-92 ***

Heard of us from : focke's

Purpose1 : I'm an analyst at NOAA, looking for interesting gov't boards

Purpose2 :

*** Val Patterson completed questionnaire at 08:10 on 03-Jan-92 ***

Heard of us from : TOSHIBA 9600 NATIONAL LIST

Purpose1 : Investigating international networks.

Purpose2 :

*** Jeff Burchell completed questionnaire at 22:49 on 04-Jan-92 ***

Heard of us from : Internet Listing

Phones : 703-683-3115 After 6pm

Purpose1 : Well, Ive been interested in hooking up with the Internet for a

Purpose2 : while, and I heard (apparently correctly) that this is the place

*** Edward Stern completed questionnaire at 11:50 on 06-Jan-92 ***

Heard of us from : EPA ACTIVITIES UPDATE 10/22/91

Phones : 202-523-7283 9 TO 5:30

Purpose1 : I WANTED TO SEE THE KIND OF INFORMATION YOU WERE MAKING

Purpose2 : AVAILABLE TO THE PUBLIC, I AM AT USDOL-OSHA.

*** Jon Landenburger completed questionnaire at 13:54 on 06-Jan-92 ***

Heard of us from : Focke's

Phones : 2023073031 7-430

Purpose1 : checking out BBSs. Since I worked at AID this caught my eye\

Purpose2 :

*** Frank Stearns completed questionnaire at 11:01 on 09-Jan-92 ***

Heard of us from : EPA flyer

Phones : 202-208-7564 8am-4pm

Purpose1 : To check out a sister BBS. DOI/OEA is starting a new BBS on 202-

Purpose2 : 208-7119. Not much there yet, however.

*** Bill Rau completed questionnaire at 16:26 on 09-Jan-92 ***

Heard of us from : Foché

Phones : (301) 588-7562 9am-12 noon

Purpose1 : As listed on the Foché listing, the BB was called AID. I'm invol

Purpose2 : in international dev--ag, health, NGOs, training. Thought I'd tr

*** Paul Lemieux completed questionnaire at 10:34 on 10-Jan-92 ***

Heard of us from : Press Release

Phones : 919-541-0962

Purpose1 : I work for the EPA and it was suggested that I call to check out

Purpose2 : what your system has available.

*** Paul Dolan completed questionnaire at 22:16 on 11-Jan-92 ***

Heard of us from : Mike Focke's BBS list

Phones : 301 731 8480 day

Purpose1 : I have been looking for a local BBS that has access to the

Purpose2 : Internet so that I can keep in touch with friends overseas.

*** Ananth Kupanna completed questionnaire at 11:07 on 13-Jan-92 ***

Heard of us from : Info-Nets SIG on the Internet

Phones : 301/251-7838 (9-5)

Purpose1 : Looking for dial up access to NetNews feed

Purpose2 :

*** Tim Mechem completed questionnaire at 14:50 on 13-Jan-92 ***

Heard of us from : Focke BBS Listing

Phones : 202-364-2632 5:00pm to 11:00pm weekdays, anytime wkends.

Purpose1 : Primary: Curiosity. Cause of Curiosity: BSBA in International Bu

Purpose2 : siness & Finance, and I was born and grew up in Africa. An activ

*** Nick Bisher completed questionnaire at 09:15 on 14-Jan-92 ***

Heard of us from : focke's monthly

Phones : 202-433-2762 6am - 2pm

Purpose1 : your bbs was listed as USAID which have had dealings with

Purpose2 : in past @ Rosslyn Offices....

*** Richard O'brien completed questionnaire at 23:26 on 14-Jan-92 ***

Heard of us from : from a friend

Phones : 703 3524365 anytime

Purpose1 : intrested in joining conferences on development/political topics

Purpose2 :

*** Matthew Hoffman completed questionnaire at 12:18 on 15-Jan-92 ***

3 month deleted : N

Phones : 202 547-1010

Purpose1 : heard about you at office

Purpose2 :

*** Robert Doncaster completed questionnaire at 13:54 on 15-Jan-92 ***

Heard of us from : PEACENET

Phones : 312-604-4434

Purpose1 :

Purpose2 :

*** Martin Hickingbotham completed questionnaire at 13:24 on 20-Jan-92 ***

Heard of us from : Peacenet

Phones :

Purpose1 : Just seeing what the newly world famous Mark Prado is doing.

Purpose2 : I'm former Peace Corps and now USAID contractor like you.

*** Patrick Toole completed questionnaire at 13:47 on 26-Jan-92 ***

Heard of us from :

Phones :

Purpose1 : RESEARCH

Purpose2 :

*** Brenda Shockey completed questionnaire at 11:42 on 28-Jan-92 ***

Heard of us from : EPA Activities Update

Phones :

Purpose1 :

Purpose2 : I am a computer engineer testing this for a client at our company

*** Xin Zhang completed questionnaire at 14:46 on 30-Jan-92 ***

Heard of us from : newsletter

Phones :

Purpose1 : interests in international economic problems/issues

Purpose2 :

*** Matt Macphail completed questionnaire at 18:26 on 31-Jan-92 ***

Heard of us from : Focke's BBS List

Phones : 202-298-6178, evenings after 6, lv. msg. other times

Purpose1 : I have a friend in Japan studying abroad who is on a BITNET

Purpose2 : system, and I am trying to establish a link w/ her.

*** Michael Miller completed questionnaire at 00:29 on 03-Feb-92 ***

Heard of us from : from one of the alt. newsgroups

Phones : (408)2949760 m-f 6pm to 10pm pst. weekends anytime.

Purpose1 : I got the number from a posting (I think on alt.conspiracy)

Purpose2 : and it seemed interesting so I called it. I have an

*** Lisa Curtis completed questionnaire at 11:04 on 03-Feb-92 ***

Heard of us from : epa

Phones : 5

Purpose1 : Saw article in EPA Activities Update--interested in seeing

Purpose2 : what is available on this service. My work requires me to

*** Albert Printz completed questionnaire at 00:43 on 04-Feb-92 ***

Heard of us from : COMMERCE DEPT. NOTICE

Phones : 202 463 8877 OR 703 8363280 0800- 1700

Purpose1 : I AM RETIRED AID EMPLOYEE INTERESTED IN NEW PROJECTS AND WHAT AID

Purpose2 : IS DOING WITH CAPITAL DEVELOP, PROJECTS WORLDWIDE

*** Albert Doub completed questionnaire at 16:49 on 04-Feb-92 ***

Heard of us from : focke

Phones :

Purpose1 : work on aid contracts

Purpose2 :

*** Tom Mitchell completed questionnaire at 16:11 on 04-Feb-92 ***

Heard of us from : focke

Phones : 202-786-6628 9:00 am to 5:30 pm 301-718-9314 otherwise

Purpose1 : wondering if email to aid personnel could be sent via this bbs

Purpose2 :

*** William Stringer completed questionnaire at 15:27 on 06-Feb-92 ***

Heard of us from : USAID

Phones : 202-667-8536 9:00 am until 8:00 pm EST.

Purpose1 : Have done work for USAID-RHUDO in Kenya--interested in USAID work

Purpose2 : and progress--in Kenya and elsewhere.

*** Ellen Nayeri completed questionnaire at 16:34 on 10-Feb-92 ***

Heard of us from : cdc library

Phones : 703/527-6500, 8:30 a.m. - 5:30 p.m.

Purpose1 : share information on health issues in international health

Purpose2 : specifically regarding tropical diseases & related issues

*** Rafe Ronkin completed questionnaire at 20:56 on 10-Feb-92 ***

Heard of us from : DCR

Phones : 202/244-7023, 0800 to 2130 most days.

Purpose1 : Explore articles from DCR available for downloading

Purpose2 : discover any

*** Todd Wallace completed questionnaire at 17:21 on 14-Feb-92 ***

Heard of us from : Xin Zhang

Phones : 703 524 1888

Purpose1 : I was interested in the net access you offer

Purpose2 :

*** Val Tepordei completed questionnaire at 12:43 on 15-Feb-92 ***

Heard of us from : FOCKE'S LIST

Phones : 202/501-9392 Day time

Purpose1 : Preparing a listing of local BBSs for Computer Digest.

Purpose2 :

*** Tierno Bah completed questionnaire at 12:30 on 25-Feb-92 ***

3 month deleted : N

Phones : 202-863-9573

Purpose1 : I am interested in wide range of topics running from desktop

Purpose2 : publishing to radio broadcasting, multimedia, digital techno

*** Thomas Wells completed questionnaire at 21:04 on 26-Feb-92 ***

Heard of us from : Focke's list

Phones : 703-734-4371(W)/202-546-3409(H)

Purpose1 : I'm the sysop of PIES, a BBS my company runs for the EPA at

Purpose2 : 703-506-1025. I'm interested in Front Door.

*** Chris Dean completed questionnaire at 21:55 on 27-Feb-92 ***

Heard of us from : from Todd Wallace

Phones : 202 682 4200 9-5

Purpose1 : I am interested in Internet access.

Purpose2 :

*** Doug Carlson completed questionnaire at 18:57 on 28-Feb-92 ***
Heard of us from : Development Communications Report
Phones : 719-594-9900, 9-5M-F
Purpose1 : I am the electronic communications person in a development
Purpose2 : organization, interested in what you offer via internet

*** Casey Curtis completed questionnaire at 18:19 on 29-Feb-92 ***
Heard of us from : other bbs
Phones : 3012706312 eves
Purpose1 : international perspective
Purpose2 :

*** Barbara Sulanowski completed questionnaire at 20:32 on 29-Feb-92 ***
Heard of us from : Development Communication Report
Phones : 608-257-7816, 8:00am-10:00am
Purpose1 : I'm studying development communication. I thought this system
Purpose2 : might be a good resource.

*** Lisa Boynton completed questionnaire at 08:42 on 02-Mar-92 ***
Heard of us from : Clu-in BBS/ EPA
Phones : w202/260/2307 h: 703/271/0443 w:7-4:30 h: anytime
Purpose1 : 1) Interested in job opportunities with AID in environmental and
Purpose2 : 2) trying to find a viable way to communicate with relative in Ro

*** Clif Sevachko completed questionnaire at 19:42 on 02-Mar-92 ***
Heard of us from : From an Focke BBS Listing
Phones : 703-875-1631 8am - 3:45pm or 703-569-5420 anytime
Purpose1 : I work, as a contractor, for FA/IRM/SDM. I'm just browsing &
Purpose2 : naturally curious

*** Megan Oemke completed questionnaire at 14:10 on 03-Mar-92 ***
Heard of us from : From the OSWER BBS
Phones : (313)986-8237
Purpose1 : You were listed as an int'l BBS relating to the environment.
Purpose2 : I am now interested in seeing what else you have!

*** Marshall Culbreth completed questionnaire at 22:24 on 03-Mar-92 ***
Heard of us from : cpcug bbs
Phones : 301/718-8261
Purpose1 : I work for a contractor to USAID.
Purpose2 :

*** Miriam Bertsch completed questionnaire at 23:25 on 08-Mar-92 ***
Heard of us from : Friend
Phones :
Purpose1 : info from USAID

Purpose2 :

*** Roger Malone completed questionnaire at 23:37 on 08-Mar-92 ***

Heard of us from : bbs list

Phones : 202-265-9487 anytime reasonable time .. .have answering machine

Purpose1 : General interest in USAID

Purpose2 :

*** Gerald Bennett completed questionnaire at 11:57 on 09-Mar-92 ***

Heard of us from : Christian Info BBS (Garden Grove, CA (714) 971-1564

Phones : (714) 997-7188 8:00-11:00 Pac time.

Purpose1 : I'm looking for a communications package and/or system that

Purpose2 : I can use to communicate with the international marketplace.

*** Anne Phillips completed questionnaire at 13:16 on 10-Mar-92 ***

Heard of us from : Focke's List

Phones : 301-496-8378 Mon-Wed-Fri am

Purpose1 : I am a health librarian for the Feds. We will be doing

Purpose2 : international vaccine trials soon. Thought this would have info.

*** Yanek Korff completed questionnaire at 18:00 on 10-Mar-92 ***

Heard of us from : Friend

Phones :

Purpose1 :

Purpose2 :

*** Aaron Peterson completed questionnaire at 19:31 on 10-Mar-92 ***

Heard of us from : Internet

Phones : 301-864-1893 After 10 pm

Purpose1 : Internet access

Purpose2 :

*** Tom Robertson completed questionnaire at 22:45 on 10-Mar-92 ***

Heard of us from : I Really do not know.

Phones : 202 797 7073

Purpose1 : I work internationally, wanted an internet address, and was surpr

Purpose2 : ised to find same here.

*** Bill Horst completed questionnaire at 22:48 on 10-Mar-92 ***

Heard of us from : INterconnect

Phones : 703-860-1756 anytime

Purpose1 : I am interested in international trade and any opportunities

Purpose2 : for US assistance for projects in Russia

*** Paul Ward completed questionnaire at 02:41 on 14-Mar-92 ***

Heard of us from : Ocean Beach BBS, San Diego CA

Phones : 202 462 1210 9-5

Purpose1 : I have a DC-based company with a good number of customers on FIDO

Purpose2 : These folks can be served (questions answered) easiest on FIDO.

*** Frank Omusale completed questionnaire at 13:08 on 14-Mar-92 ***

Heard of us from : bbslst

Phones : 301-434-1520 after 7:00pm

Purpose1 : usaid

Purpose2 :

*** Alexander Bland completed questionnaire at 18:54 on 16-Mar-92 ***

Heard of us from : Focke's List

Phones : wK. 202-433-2558 0900 - 1600 HRS.

Purpose1 : I am interested in the topics that maybe carried by this BBS,

Purpose2 : also I have a friend (Gail Spence) who is part of USAID.

102

APPENDIX E: Information request log

CDC INFORMATION REQUEST LOG

From September 1, 1991 to February 29, 1992

LOG	NAME & ADDRESS	ORGANIZATION	SERVICE RENDERED
SEPTEMBER			
1	Robert V. Bishop Cheldellel A Urreor-NG- Klungjole! Belau P.O. Box 3000, Koror Republic of Palau	Palau Comm. Action Agency	Address and contact persons for different organizations
2	Dick de Jong Public Information Officer IRC P.O. Box 93190, 2509 AD The Hague, Netherlands	Int'l Water & Sanitat. Ctr.	DCR Hypertext software; back issues; Biblio. of DistEd; Directory of Training & Study in Dv't. Comm.
3	Dr. A. Santha Madurai Kamaraj Univ. Madurai 625 021 India		DCR back issues; Directory of Training & Study in Dv't. Comm.
4	Evelyn Foi 3575 Boulevard St., Laurent Room 602 Montreal, Quebec H2X 2T7 Canada	AMARC	Spanish DCRs
5	Bibliocentre 80 Cowdray Court Scarborough, Ontario Canada M1S 4N1	Cent. College of Arts & Tech.	Biblio. of DistEd; Directory of Training & Study in Dv't. Comm.
6	Gillian Nyambura African Assoc. for Literacy P.O. Box 50768 Nairobi, Kenya		16 Documents from Resource Centre
7	Lungten Royal Institute of Health Post Box 298 Thimphu Buthan	Buthan Royal Institute of Health	DCR back issues; Directory of Training & Study in Dv't. Comm.
8	Mark Holthaus 24, Rue Violet 75015 Paris France		Project Profiles, complete set; DCR back issues

LOG	NAME & ADDRESS	ORGANIZATION	SERVICE RENDERED
9	David Malameh-Thomas COMTHEAD 8, Hull Street Freetown Sierra Leone	Sierra Leone Community Theatre	DCR back issues; AIDS material;
10	Mat Roni Abdul Rahman University Sains Malaysia Minden 11800 USM Penang Malaysia	University Sains Malaysia	Materials on Family Planning and maternal & child health
11	Jorge Wuest Colegio Felipe Neri Apartado 105 Riobamba Ecuador	Felipe Neri School	Spanish DCRs; DCR back issues; Biblio. of DistEd; Directory of Training & Study in Dv't. Comm.
12	Phuang Siew Kuang Resource Library NPB Building 2 Bukit Merah Central, Singapore 0315	National Productivity Board	Distance Education Material
13	Musa Y. Tilde P.O. Box 3286 JOS - Plateau State Nigeria		DCR back issues; Biblio. of DistEd; Directory of Training & Study in Dv't. Comm.; Women issues material
14	B.P. Naresh No. 220, S.B.M. Colony Banashankari 1st Stage III Block, Bangalore 560 050 Karnataka, India		DCR #63, Dist. Ed.
15	Sri V.P. Pulla Reddy D.I.E.T. Karveti Nagar 517 582 Chittoor (Dt.) A.P. India	Inst. Education & Training	DCR #73, Women
16	L.C. Olicke No. 43 Zile Avenue P.O. Box 2427 Uwani, Enugu Nigeria		DCR back issues; Biblio. of DistEd; Directory of Training & Study in Dv't. Comm.; Aids, Child & Maternal care & Women
17	SEAMEO Regional Language Center RELC Building 30 Orange Grove Rd. Singapore	Regional Language Center	DCR backissues

LOG	NAME & ADDRESS	ORGANIZATION	SERVICE RENDERED
18	Premshil Prasad Health Education Officer G.P.O. Box 176, Suva Fiji Islands		DCR back issues; Biblio. of DistEd; Directory of Training & Study in Dv't. Comm.
19	Friday Odah Adayi Maternal & Child Health Public Health Division P.M.B. 9 Ogoja, C.R.S. Nigeria	Public Health Division	Material on Radio & develop.; Catalog on Audio Visual publications
20	Tigape Asres Ayele Training Services Educational Media Agency P.O. Box 3025 Addis Ababa, Ethiopia	Educational Media Agency	Int'l Directory of Develop. Comm.
21	Centro Mari de Educacao Indigena Depto. de Antropologia - USP Cx Postal 8.105 Cidade Universitaria, S. Paulo SP 05632, Brasil	Centro Mari	DCR back issues; Biblio. of DistEd; Directory of Training & Study in Dv't. Comm.; Spanish DCRs
22	Joanne Y. Yamada Communication Specialist University of Hawaii at Manoa 226 N. Kuakini St., Rm 233 Honolulu, Hawaii 96817	Univesity of Hawaii	DCR #71
23	Moira Powell 1460 Pennsylvania Ave. (17E) Brooklyn, NY 11239		Audiovisual Health Material
24	R. Erpicum, s.j. Directeur du CEPAS B.P. 5717 Kinshasa Gombe Zaire		French DCR on Radio
25	Alexis Matute Communication Manager FHIA, Ap. Postal 2067 San Pedro Sula Honduras	Fundacion Investigacion Agricola	Spanish DCRs; DCR back issues; Biblio. of DistEd; Directory of Training & Study in Dv't. Comm.; Educational Technology collection
26	Daniel Kayode Adeyemo Innovator Clearinghouse P.O. Box 311 Ejigbo, Oyo State Nigeria	Innovator Clearinghouse	DCR back issues; Biblio. of DistEd; Directory of Training & Study in Dv't. Comm.

109

LOG	NAME & ADDRESS	ORGANIZATION	SERVICE RENDERED
27	Vicky Pinilis St. Mary's High School 237 S. Broad Street Elizabeth, NJ 07202		Environmental materials
28	Ma. Nuria E. Castells BIDANI University of Philippines Iloilo City, 5000 Philippines	College of Arts & Sciences	Health & Nutrition Profiles
29	T.R. Seetharam Chief Coordinator CART National Institute of Engineer. Mysore 570 008 India	Centre Rural Technology	CDC Catalog
30	Juan Polo Huacacolqui Ramón Castilla # 216 Huamachuco Sanchez Carrión, La Libertad Peru		CDC Catalog; Spanish DCR
31	Population Services Pilipinas, Inc. 276-B Gil Puyat Ave.m Pasay City, Metro Manila Philippines	Family Clinic	Project Profiles
32	Kavaljit Singh 142, Maitri Apartments, Plot 28 Indraprastha Extension, Delhi 110 092 India	Public Interest Research Group	DCR back issues
OCTOBER			
33	Susan Gaztananga Population Services 527 St. Paul Place Baltimore, MD 21202	Johns Hopkins University	Directory of Development Communication Studies
34	Ron Grosz 3725A NS Washington, DC 20523-0041	R&D/WID AID	Recent issues of DCR, brochure
35	Richard Burke Bloomington, IN 47405	Indiana University Telecommunications Dept.	LRCN Package
36	Philip Van Zijl PO Box 12363 Jacobs 4026 South Africa	Technikon Mangosuthu	DCRs, brochure & catalog

110

LOG	NAME & ADDRESS	ORGANIZATION	SERVICE RENDERED
37	Raj Ghura Solterino No. 1 Vacoa Mauritius		Material on Adult Literacy
38	Robert Brunwin de Jong Radio Nedeerland Training Centre P.O. Box 222 Hilversum The Netherlands	Radio Nederland	DCR back issues
39	Sucheta Nair 5/2172A Kiliyanad School Rd. Kozhikode - 673 001 India	Calicut University	Int'l Directory of Develop. Comm. Studies
40	Lisa B. Hayes Chitedze Agricultural Res. Library P.O. Box 158 Lilongwe Malawi	Peace Corps - Malawi	Int'l Directory of Develop. Comm. Studies
41	Galo Pozo Almeida C.C.F. del Ecuador El Batan No. 350 Casilla 8567 - Quito Ecuador	Christian Children's Fund, Ecuador	Spanish version of Radio's Role in Development
42	Patrick O'Brien Open Sea Foundation P.O. Box 40482 San Diego, CA 92164	Open Sea Foundation	CDC Catalog
43	Nitin Paranjape Media for Development P.O. Box #6 College Road, Nashik 422-005 India		Int'l Directory of Develop. Comm. Studies
44	Martin Schneiderfritz B.P. 11056 Niamey Niger		Two French DCRs on local radio
45	Julio Bejarano Apartado 1171-1002 San Jose Costa Rica		DCR back issues; Spanish DCR on health
46	Daniel Kayode P.O. Box 311 Ejigbo - Oyo State Nigeria		Health Project Profiles; PAL video tapes on: Comm. for change, Masagana 99, A Global Solution and this is LRCN

LOG	NAME & ADDRESS	ORGANIZATION	SERVICE RENDERED
47	K. Ramadas Village Development Society 3/33-A Middle Street Tholudur 606 303 India	Village Development	Int'l Directory of Develop. Comm. Studies
48	Latevi Lawson Anani-bo ATOP B.P. 383 Kpalime Togo	Agence Togolaise de Presse	French DCRs
49	S.B.R. Nikahetiya Christian Children's Fund 9, Bambalapitiya Dr. Colombo 4 Sri Lanka	Christian Children's Fund - Sri Lanka	Radio's Role in Development package
50	L.A. Santana National Youth Org. P.O. Box 165 Sefwi, Wiawso W/R Ghana	Ghana Youth Commision	DCR #73
51	Reymlani P. Sullera DXMU, CMU Musuan Bukidon Philippines 8710		DCR back issues
52	Evelyn E. Tacderan National Tobacco Administration Department of Agriculture Bata, Ilocos Norte Philippines	National Tobacco Administration	DCR back issues
53	Zainab bt. Tambi Medical Services Dept. Jin. Tun Abj. Hj. Openg 93590, Kuching Sarawak, Malaysia		CDC Catalog
54	Sandra Bertoli INSTRAW - United Nations Apartado Postal 21747 Santo Domingo Republica Dominicana	INSTRAW - United Nations	DCR #70 on Women
55	B.S. Panda Jayanti Pathagar Nuvapada (Ganjam) 761 011 India	Rural Organization, India	Int'l Directory of Develop. Comm. Studies

112

LOG	NAME & ADDRESS	ORGANIZATION	SERVICE RENDERED
56	P. Saminathan Centre for Rural Health A-11 Ashok Nagar Tirupattur 635 601 India	Rural Health Soc.	Int'l Directory of Develop. Comm. Studies
57	Denish Joshi Himalayan Study Circle G.I.C. Road, Pithoragarh Pin 262 501 India		Int'l Directory of Develop. Comm. Studies
58	Dr. R.T. Rajan Solai Program Christianpet Village (Via) Vellore 532 059 India	Rural Dev. of Women	Int'l Directory of Develop. Comm. Studies
59	V.P. Jayabalan Women's Dev. Assoc. 77, Uppilipalayam Main Road Varadharajapuram, Coimbatore Tamil Nadu, India	Women's Dev. Assoc.	Int'l Directory of Develop. Comm. Studies
60	Librarian Laubach Literacy International 1320 Jamesville Ave., Box 131 Syracuse, NY 13210	Laubach Literacy Int'l	CDC New Acquisitions List
61	D. Sagar CPC Kenya Ltd. P.O. Box 41045 Nairobi Kenya	CPC Kenya Limited	Material on Radio's Role in Development
62	Pawan K. Guota Soc. for Integrated Dev. of Himalayas Hazelwood Cottage, Landour Cantt. Mussoorie, 248179, India	Soc. for Integrated Dev. of Himalayas	Int'l Directory of Develop. Comm. Studies
63	Steve Murray Action 282 Herbert Chitepo Ave. P.O. Box 4696 Harare, Zimbabwe	Environmental Health Magazine	CDC Catalog
64	Rotacio S. Gravoso VICARP, Visca Baybay, Leyte 6521-A Philippines	VICARP	DCR Back issues; Int'l Directory of Develop. Comm. Studies

113

LOG	NAME & ADDRESS	ORGANIZATION	SERVICE RENDERED
65	Nteba Bakumba Association Elimu Siege: B.P. 125 UVIRA Sud-KIVU Zaire	Adult Education Org.	French Report on local radios in Third World
66	Swarnalata Devi Janamangal Mahila Samiti At/Post -Dimirisena Via Basudevpur 752 013 Dist. Puri, India		Int'l Directory of Develop. Comm. Studies
67	P.R. Ramesh Lok Kalyan Mandal P.O. Theog 171 201 Dist. Shimia H.P. India	Lok Kalyan Mandal	Int'l Directory of Develop. Comm. Studies
68	Nmasonlawo T.A. Mohammend c/o Alhaji T. Adamu Lavun, Local Gov't. Kutigi Niger/S Nigeria		DCR back issues; Material on Local Radio; Dist. Ed.; Health Comm; & Educ. Technology
69	Rekha Singh Nehru Nagar P.O. Box 357 Bhopal 462 003 India	Indian Inst. of Forest Mgmt.	Int'l Directory of Develop. Comm. Studies
70	Poiren Nayak READ Bidharpur Dhenkanal 759 016 Orissa, India	READ	Bibliography on Distance Educ.; Int'l Directory of Develop. Comm. Studies
71	Ninfa Britto 8, Gr. Fl., 33L Mugbhat Cross Lane Bombay 400 004 India	Youth for Unity & Volunt. Action	Int'l Directory of Develop. Comm. Studies
72	Jyoti Prakash Biswal Grama Vikash Sangha Nagapur P.O. Balikuda Cuttack 754 108 India	Grama Vikash Sangha	Int'l Directory of Develop. Comm. Studies
73	R. Rounder CRADO Community Relief/Dev. Org. Mahamani District Hq. Chandel 795 127 India	Community Relief/Dev. Org.	Int'l Directory of Develop. Comm. Studies

114

LOG	NAME & ADDRESS	ORGANIZATION	SERVICE RENDERED
74	Uthaya Sooriyan Earth Society U. Pudukkottai Uthappanaickanur, Usilampatti Madurai 626 537, India	Earth Society	Int'l Directory of Develop. Comm. Studies
75	Prem. Sushil Pradash Suva City Council P.O. Box 176 Suva, Fiji	City Council	CDC Catalog
76	Anand Shukla Mirani Compound Champa D.B. 495 671 Madhya Pradesh India		Int'l Directory of Develop. Comm. Studies
77	Ifeanyi Emma Iwundu P.O. Box 319 Nsukka - Enugu State Nigeria		Adult Educ. Material; DCR back issues
78	K. Sanyasayya East Coast Rural Dev. Soc. Paturu 531 161, Vepada Mandal Lakavarapukota Vizianagaram, India	East Coast Rural D/ Soc.	Int'l Directory of Develop. Comm. Studies
79	Alan Hancock Director, Comm. Dev. UNESCO 1, Rue Miollis 75015 Paris, France	UNESCO	Int'l Directory of Develop. Comm. Studies
80	Milagrosa Erta Philippine Info. Agency Region VI, Iloilo City San Jose, Antique Philippines	Infocenter Manager	Videos on health, family planning & environment
81	Dr. M. Fazeel-uz-zaman Alvi Mufti Clinic, Rural Medical Res. Khalabat Township Hazara, N.W.F.P. Pakistan	Mufti Clinic, Pakistan	DCR back issues
82	COTA Rue de la Sablonniere, 18-B 1000 Bruxelles Belgium	COTA	DCR #s 66, 67, 69 and French issueon Local Radio

LOG	NAME & ADDRESS	ORGANIZATION	SERVICE RENDERED
83	Janice Harper Women in Int'l Development Michigan State University 202 International Center East Lansing, MI 48824	Michigan State University	DCR #70 on Women
84	C.R. Namponya Saclar, P/Bag 00108 Gaborone Botswana		DCR back issues; Bibliography on DistEd; Directory of Training & Study Programs
85	Eduardo Contreras-Budge Apartado 17-07-8926 Quito Ecuador		DCR back issues; Spanish DCRs; Bibliography on DistEd; Directory of Training & Study Programs
86	Odile Hélier DITEC Apartado Aereo 5923 Bogota Colombia	DITEC	DCR back issues; Spanish DCRs; French DCR on Women; Bibliography on DistEd; Directory of Training & Study Programs
87	Purmanand Doolooa Mission Cross Road Lallmatie Mauritius		French DCR back issues; Bibliography on DistEd; Directory of Training & Study Programs
88	M. Nyuiadzi K. Afelete Association Villages Entreprises A.V.E. Kpalime B.P. 23 Togo	Assoc. Villages	DCR Back issues
89	Coffi Houandossi Assoc. Toussaint Louverture B.P. 2081 Cotonou Benin	Assoc. Toussaint Louverture	French DCR's
90	Mrs. Margareth P. Makoye Ministry of Agriculture P.O. Box 83 Geita, Mwanza Tanzania	Ministry of Agriculture	Material on nutrition information
91	T.C. Subhash Sarada Nivas M.O. Ward Alappuzha, Kerala 688 001 India		International Directory of Dev. Comm.

LOG	NAME & ADDRESS	ORGANIZATION	SERVICE RENDERED
92	Fr. Cedric Prakash, s.j. Director, CORD P.O. Box 4088 Navrangpura, Ahmedabad 380 009 Gujarat, India	Ctr. for Orientation Research	Distance Ed. in Asia & Pacific; Personnel Training, Student Support w. Dist. Ed.
93	Sumanta Mishra AT/PO Shymal Kutir; Deulsahi Tulsipur Dist., Cuttack 753 008 Orissa India		International Directory on Dev. Comm.
94	Kallyani Shah Democratic Women's Assoc. P.O. Box 46 Kathmandu Nepal	Women's Association	Women in Communication Technology material
95	Maggie Keenan 415 Second Street Ithaca, NY 14850		Articles on Media Education and Development
96	Sipho T. B. Masilela 810 West Benton # 305 Iowa City, Iowa 52246		Int'l Directory on Development Comm.
97	Lilian Burke Librarian, IHS Weena 718 - P.O. Box 1935 3000 BX Rotterdam The Netherlands	Institute for Housing & Urban Development Studies	CDC Catalog, DCR back issues
98	Carmen de Llosa Gonzales Olachea #321 San Isidro Lima Peru		DCR back issues
99	Maruja Peirano Ramon Zavala 378 Lima 18 Peru		DCR back issues
100	Roberto Bulacio Revista, Medios Educ. & Com. cc 137 Sucursal 2 1402 Buenos Aires Argentina	Medio Educacion Comunicacion	Int'l Directory of Develop. Comm.; DCR #71; Spanish editions on DistEd, Local Radio and Environmental Communic.; Bibliography on DistEd;
101	Graciela Evia CLAES CC 13000 11700 Montevideo Uruguay	Latin American Network of Social Ecology	Spanish DCR on Environment

LOG	NAME & ADDRESS	ORGANIZATION	SERVICE RENDERED
102	Rameswor Shrestha Radio Education P.O. Box 2145 Kathmandu, Nepal		DCR back issues #63, #66; bibliography on DistEd.;
NOVEMBER			
103	Debbie Johnson 1197 Noel Drive Menlo Park, CA 94025	Stanford University	AIDS education campaigns for teens
104	James Brochhausen		2 DCRs and 7 Project Profiles related to the use of video for local grassroots training & development.
105	Stuart Lee (212) 966-7595 (fax)	Academy for International Development	Fax of cover sheets for RLAP Scope of Work
106	Christina Verlosa 4901 Seminary Road Alexandria, VA 22311		Directory; DCR #74
107	Judy A. Neuhauser Watershed Education Project Coordinator Cooperative Extension - UCal 2156 Sierra Way, Suite C San Luis Obispo CA 93401	University of California	Watershed education information; Environment
108	Lic. Lourdes Romero A. Supervisor Library Services CIMMYT, Int. Ap. Postal 6-641, 06600 Mexico D.F., Mexico	Ctr. Intl. Maiz y Trigo	DCR back issues
109	Dr. A. Nimbark Sociology Dept. Dowling College Oakdale, NY 11769	Dowling College	Material on Media and Society
110	Mr. Ime Oleposin General Hospital Iquita, Oron Alewa Ibom State Nigeria	Iquita General Hospital	CDC brochure/catalog
111	Virgilio L. Pernito Population Services Pilipinas 276-B Gil Puyat Ave. Pasay City, Metro Manila Philippines		Int'l Directory of Develop. Comm.

116

LOG	NAME & ADDRESS	ORGANIZATION	SERVICE RENDERED
112	Marco Florez-Arestegui Comunicacion Andina Casilla Postal 700 Mariscal Gamarra 13B Cuzco, Peru	Andean Communication	Radio & Video Rural Communication Information
113	Nancy Cosway c/o Ghana Water & Sewerage Corporation Box 39, WA Upper West Region Ghana	Ghana Water Corp	CDC Catalog
114	Randy J. Hinrichs Systems Plus 2216 Lantana Oxnard, CA 93030	Systems Plus Services	Software Learning materiala for internatinal sales training
115	Obioma A. Ugoh St. Agnes Youth Organization P.O. Box 4486 Oshodi Lagos, Nigeria	Youth Organization	TV, Video & Film material on Health
116	Patrick H.G. Ngust P.O. Box 12737 Nairobi, Kenya	Kenya Ntl. Council for Population	DCR back issues; Family Planning and Dev. Materiala; Directory of Training & Study in Dv't. Comm.
117	Ana María Ocampo 5480 Wisconsin Ave., 709 Chevy Chase, MD 20815		DCR back issues
118	Rahab Gatura ACCE Documentalist African Council for Communication Educ. P.O. Box 47495 Nairobi, Kenya		All material from CDC acquisition list 9/90 1/91
119	Sampath Kumar E.S. Door No. 28-489-7 Tarakanath Nagar Nanatapur 515 001 AP India	Developentors	Int'l Directory of Develop. Comm.
120	Patricia A. Jackson WEDC Loughborough University of Technology Leicestershire LE11 3TU, England	Water, Eng. Centre	DCR back issues

LOG	NAME & ADDRESS	ORGANIZATION	SERVICE RENDERED
121	Dr. Oon Chong Hau Health Maintenance Centre Singapore General Hospital Outram Road 0316 Singapore	Singapore General Hospital	Satellite Health Educational Material
122	Richard Labelle International Institute for Sustainable Development 212 McDermot Avenue Winnipeg, Manitoba Canada R3B 0S3	International Institute for Sustainable Development	CDC Catalog; Brochure; DCR #73
123	Sara Kaye The Coolidge Center 1675 Massachusetts Ave. Cambridge, MA 02138-1836	The Coolidge Center	CDC Catalog; Brochure
124	Fr. Cedric Prakasj s.j. CORD P.O. Box 4088, Navrangpura Ahmedabad, 380 009 Gujarat India	Ctr. Orientation Research & Doc.	Bibliography on distance education
125	Julie Scribner Laura King & Co. 1100 Union Street San Francisco, CA 94109	Laura King & Co.	DCR Editorial Calendar
126	Jean-Marie Vianney Higiroy c/o Orinfor B.P. 83 Kigali Rwanda		Communication & Development Material
127	M.C. Gupta National Institute of Health New Mehrauli Rd. Munirka, New Dehli 110 067 India	National Institute of Health	Learning Technologies Computerized Digest
128	Sanjeeta Singh Negi RVMS, c/o NDDDB Anand 388 001 Gujarat, India		Int'l Directory of Develop. Comm.
129	Biranchi Upadhyaya 424 (1st floor) Sahidnagar Bubaneswar, 751 007 Orissa, India		DCR back issues; Biblio. of DistEd; Directory of Training & Study in Dv't. Comm.

LOG	NAME & ADDRESS	ORGANIZATION	SERVICE RENDERED
130	Bajarang P. Patil Kolhapur Zilla Sahakari Dudh B-1 MIDC Gokulshirgaon Tarabai Park, Kolhapur 416 003 Maharashtra, India	Kolhapur Milk Union	DCR back issues; Biblio. of DistEd; Directory of Training & Study in Dv't. Comm.
131	V.P. Pulla Reddy Inst. of Education and Training Karvetinagar Chittoor, Andhra Pradesh India	Department of Education	In-service teacher training material on environmental issues
132	Ms. Yael H. Flushberg Congressional Hispanic Caucus 504 C Street, NE Washington, DC 20002	Congressional Hispanic Caucus	CDC Brochure; Catalog; Int'l Directory of Develop. Comm.
133	P.J. Chacko Lutheran World Service G.P.O. Box 2313 84 Dr. Suresh Sarkar Rd. Calcutta 700 014, India	Lutheran World Federation	Int'l Directory of Develop. Comm.
134	Dominique Dressler Allgemeine Unfallversicherungsanstalt Adalbert Stifter Str. 65 1200 Wien Austria	AUVA	CDC Catalog
135	Simon Effiong Uweh 29 Adadiaha Street Ikot Ekpene Akwa Ibom State Nigeria		DCR back issues; Biblio. of DistEd; Directory of Training & Study in Dv't. Comm.
136	Blanca Cayo Av. Brasil 1875 Jesus Maria Lima, Peru		DCR back issues
137	Eseme Ibanga P.O. Box 13 Ukanafun L.G.A. Akwa Ibom State Nigeria		Bibliography on Distance Education
138	Eric Dudley 100 Sturton Street Cambridge CB1 2QA England		CDC Catalogo

LOG	NAME & ADDRESS	ORGANIZATION	SERVICE RENDERED
139	A.M. Ityobo P.O. Box 103 Katsina-Ala Benue State Nigeria		Materials on Adult Literacy
140	Efren E. Freire Agri. Engineer I.N.I.A.P. Experimental Station Boliche P.O. Box 7069 Guayaquil, Ecuador	Experimental Station Boliche	DCR back issues; Spanish DCR's; Biblio. of DistEd; Directory of Training & Study in Dv't. Comm.
141	Syed Aftab Ahmed Jafri Journalist Resource Centre 1, Bath Island Rd. Karachi 75530 Pakistan	Journalist Resource Centre	DCR#1989/4
142	Ing. Hugo Navia C.E.D.I.C.A. Casilla 3915 Santa Cruz Bolivia	Peasant Development Center	Material on Communication
143	Carmenza Cruz Perdomo Alcaldía Santiago de Cali Calle 4B #36-00 San Fernando, Cali Colombia	Cali's Major Office	CDC Brochure
144	Janet Cashman Pastoral de Salud Apartado 192 Piura, Peru	Peru's Health Program	Radio's Role in Development
145	Aida Fleischan Hillard 515 South Flower Street Los Angeles, CA 90017		Media kit material
146	Barbara Hutchinson Arid Lands Info Center 845 N Park Ave. Tucson, AZ 85719	Arid Lands Info Center	CDC Brochure; DCR #73
147	V.A. Yadav RWD & CWF P.O. Renavi, Pin 415 311 District Sangli, Maharastra India	Rural Women Industrial Dev. & Child Welfare Foundation	Information of Fund raising programs

122

LOG	NAME & ADDRESS	ORGANIZATION	SERVICE RENDERED
148	A.S. Shabuddin ROPHE No. 44 New Muslim St., Polur Rd. Tiruvannamalai 606 601, T.N. India		CDC Brochure
149	Rajendra Pratap P.O. Box 124 Lautoka City Council Lautoka Fiji Islands	Lautoka City Council	Health Materials
150	Dolores I. Nabiynja Uganda Women Foundation P.O. Box 4531 Kampala Uganda	Uganda Women Foundation	Aids package material
151	Dr. Pemananda Bharati Indian Statistical Inst. 208 Barrackpore Trunk Rd Calcutta 700 035 India	Indian Statistical Inst.	DCR back issues
152	KODIS Wartstrasse 6, CH-8400 Winterthur Switzerland	KODIS	DCR's #63, 66, & 69; Biblio. of DistEd; Directory of Training & Study in Dv't. Comm.
153	Peter Kooy Calaveras Video Project 9561 Mountain Ranch Rd. Mountain Ranch, CA 95246	Calaveras Community TV Group	Video programming information for rural communities
154	K. Jayakar Babu Community Service Centre 17, Balfour Rd. Kilpauk, Madras 600 010 India	India Community Service	CDC brochure
155	Robert M. West VIACOM-Cable Vision 660 Mainstream Drive P.O. Box 80570 Nashville, TN 37208-7462	VIACOM-Cable Vision	Information on Low-cost programming
156	Pierre Mumbu Centre Radiophonique D'Animation Rurale B.P. 522 Bukavu Republique du Zaire	Zaire Centre Radiophonique	French issue on Radio in Developing Countries

LOG	NAME & ADDRESS	ORGANIZATION	SERVICE RENDERED
157	F. Mugweni ENDA - Zimbabwe P.O. Box 3492 Harare, Zimbabwe	Zimbabwe Environm. & Devel. Activities	Publications on Development Communication
158	Taye Tadesse Addis Ababa University P.O. Box 33642 Addis Ababa Ethiopia	Addis Ababa University	Two volumes on Project Profiles
159	Rev. Vima Amalan Sathangai Resource Centre Sathangai, Koodal Nagar Madurai 625 018 India		Articles from list of Television for Development package
160	Jyothi Koteswara Rao DARE Chaitanya Kshetram Koduru 521 328, Krishna Dt. India	Dynamic Action for Rural Elevation	Int'l Directory of Develop. Comm.
161	Philip A. Angbaje Health Education Unit J.M.D.B. P.O. Box 2023 Jos, Nigeria	Nigeria Public Health Dept.	DCR back issues
162	M.J.R. David 109/5 George E. De Silva Mawatha, Kandy Sri Lanka		DCR back issues; Biblio. of DistEd;
163	Keyan Tomaselli University of Natal King George V Avenue Durban 4001 South Africa	Natal Centre for Cultural & Media Studies	CDC New Acquisitions List
164	Jane Doherty Univ of Witwatersrand 7 York Road Parktown 2193 South Africa	Univ. of the Witwatersrand	Radio health education articles
165	Al Karaki Open Learning Systems Educ. Trust P.O. Box 785777 Sandton 2146 South Africa	Open Learning Systems Educ. Trust	LRCN information packet

124

LOG	NAME & ADDRESS	ORGANIZATION	SERVICE RENDERED
166	Edgar T. Bahala Extension Training Center P.O. Box 295, Davao City Bago, Oshiro Philippines	Coconut Development Center	DCR back issues; Biblio. of DistEd; Directory of Training & Study in Dv't. Comm.; Radio and Health packages
167	Kinos M. Abbay 4823 West Braddock Rd. #101 Alexandria, VA 22311		CDC brochure
168	Simon K. Tuladhar P.O. Box 542 North Amherst, MA 01059		DCR back issues on media for grassroots level education
169	Michael O. Ogundale P.O. Box 69 Agege Lagos Nigeria		Int'l Directory of Develop. Comm.
170	Rose Arnasson South Pacific Commission B.P. D5 Noumea Cedex New Caledonia	South Pacific Commision	DCR #70, Women & Devel.
171	Dr. A. Alashkar Population Center Aleppo University Aleppo Syria	Syria Aleppo University	CDC Catalog; Radio's Role in Development
172	Govinda Joshi Research Personnel Centre for Research Team 14/123 Yetkha Tole Kathmandu, Nepal	Centre for Research Team	Int'l Directory of Develop. Comm.
173	Carol Coonrod The Hunger Project One Madison Ave. New York, NY 10010	The Hunger Project	DCR #70, Women & Develop.
174	Vicente B. Jurlano Agricultural Extension Unit University of Sydney N.S.W. 2006 Australia	The University of Sydney	Agricultural research community material
175	Bart van der Mark van Muylwykstraat 100 6828 BT Arnheim Netherlands		CDC Brochure

LOG	NAME & ADDRESS	ORGANIZATION	SERVICE RENDERED
176	Dr. Ashok Dhabekar 25, Ayodhyanagar New Subhedar Lay-out Rd. Nagpur 440 024 India	Inst. of Integrated Development	Int'l Directory of Develop. Comm.
177	Ahmed Sttuaibu Nigeria Science Second. School P.M.B. 1002 Uba Adamawa State Nigeria	Nigeria Science Second. School	Radio package
178	Mohammad Riza Khan Health Services Division Complex K.D.A. Township Kohat, N.W.F.P. Pakistan	Health Education Division	Health education package
179	Ade Adedoja FADU P.O. Box 70 Erunmu, Ibadan Nigeria	Farmers Develop. Union	DCR #72
180	Gregory J. Rake MAP International Casilla 17-08-8184 Quito Ecuador	MAP International	Spanish DCR's
181	Edna Luisa Argañosa Farming Systems College of Agriculture College, Laguna 4030 Philippines	College of Agriculture	Int'l Directory of Develop. Comm.
182	Dr. Nazan Bilgel Uludag Univ. Tip Facult. Halk Sagligi Anabilim Dali 16059 Gorukle BURSA Turkey	Uludag Universitesi	Health education information
183	Sk. Sazedur Rahman Health for All 4, Green Square, Green Rd. Dhaka 1205 Bangladesh	Health for All	DCR back issues; Directory of Training & Study in Dv't. Comm.; Comm., Health & Educ. packages
DECEMBER			
184	Christine Verlosa 4901 Seminary Road #1414 Alexandria, VA 22311		bibliographic search on communication & diffusion; adoption of innovation.

126

LOG	NAME & ADDRESS	ORGANIZATION	SERVICE RENDERED
185	Mary Anne Sennett 1404 Callaghan Dr. Rogers, AK 72756		Directory of Development Communication
186	Mary Mulrennen Healthcom 1255 23rd St., NW Washington, DC	Academy for International Development	2 copies each of all French & Spanish DCRs
187	Mitch Kirby 55 Chapel St. Newton, MA 02160	Educational Development Center	RLAP audio Dubs, La Familia de los Numeros, Nicaragua math cassette dubs; photocopying of scripts.
188	Mr. A. B. Toure Office D'Amenagement de Boke B.P. 25 Kamsar Guinea	Hopital De Boke	French DCR's
189	A. Nanayakkara Population Services Lanka 40 1/1 Stratford Ave Kirillapone, Colombo 6 Sri Lanka	Population Services Lanka	Radio's Role in Development documents
190	Carolyn Bargman Comision Fullbright P.O. Box 1703826 Quito Ecuador	Fullbright	DCR back issues
191	Edmond Philippe Bafwanga Assoc. Zairoise pour le Bien Hopital General de Kinkanda B.P. 308 - Matadi, Bas Zaire	Hopital General de Kinkanda	Equipment & family planning material
192	Imran Iqbal 78 Hashmi Colony S.I.T.E. Hyderabad, 71900 Pakistan	S.I.T.E.	DCR back issues; Radio Math in Nicaragua; Biblio. of DistEd; Directory of Training & Study in Dv't. Comm.
193	Bruno Roelants B.A.M. China correspondent Beijing Zhongyi Xueyuan 100029 Beijing China	Brothers to All Men	DCR's 71 & 74
194	Bosede Oyeteju Amoo Educational Technology Center Lagos State University Lagos Nigeria	Lagos State University	DCR back issues; Biblio. of DistEd; Directory of Training & Study in Dv't. Comm.

121

LOG	NAME & ADDRESS	ORGANIZATION	SERVICE RENDERED
195	A.I.Z. Nkunika Malawi National Family Welfare Private Bag 330 Lilongwe 3 Malawi	Malawi National Family Welfare	AV Catalog; Radio's Role Material
196	Minkailou Mohamedine Maiga Director Ecole Fondamentale de Berrah Arrondissement Central de Gao Republique du Mali	Director Ecole Fondamentale de Berrah	French DCR's
197	Matthew A. Schaffer UCSD Extension 0176 9500 Gilman Drive La Jolla, CA 92093 0176	Univ. of California, San Diego	UCSD Extension
198	Gail Johnsen 7607 Whittier Blvd. Bethesda, MD 20817		DCR #74; CDC Brochure
199	Direction Generale de l'Education Extra-Scolaire-DGEX Ministere de l'Education Siege A Praia Republique du Cap Vert	Cape Vert Ministry of Education	Distance Education material
200	Omoyaajowo Johnson Toyin P.O. Box 926, Ilesa Osun State Nigeria		Family planning material; CDC brochure
201	Dr. Jamil Ahmed Arain A-9 Hali Nagar Hali Road, Hyderabad 71000 Pakistan	Pakistan Al-Fatah Clinic	Health material
202	Dr. Gonzalo Montero CESAP Casilla 17-15 91B Quito Ecuador	CESAP	DCR back issues
JANUARY			
203	Ana Lockwood 55 Chapel Street Newton, MA 02160	EDC International	Environmental Education Information Package
204	Yahne Sangaray Liberian Journalist 1434 E. Baltimore St. Baltimore, MD 21231		DCRs, photocopies of Clearinghouse materials
205	Receiving Unit UN Population Fund	WID information Package (6 copies)	

128

LOG	NAME & ADDRESS	ORGANIZATION	SERVICE RENDERED
206	Ana Lockwood 55 Chapel St. Newton, MA 02160	EDC International	Photocopies of environmental education information
207	Lynda Edwards 629 S. Fairfax St. Alexandria, VA 22314		DCR, subscription form, catalog, brochure
208	Roger Simmons USAID/Nairobi 20521-8900 AID	USAID/Nairobi	Back issues of the DCR
209	Christina Verloza 4901 Seminary Road #1414 Alexandria, VA 22311		DCRs #44, 58, 68, 69, 70
210	Dan Southerland 6534 Wiscasset Rd. Bethesda, MD 20816	Asia Foundation	DCRs #64, 65, 70, 74
211	Anette Laakso P.O. Box 30 Bukene Tabora Tanzania		DCR back issues; Biblio. of DistEd; Directory of Training & Study in Dv't. Comm.
212	Firoozeh Derakhshani #12 Amir Parviz Vanak Square Tehran 19699 Iran	Iran Telecommunications Journalists	CDC Catalog and information
213	Gorlov Sergey Alexandrovich a/s 1767 443051 Samara, Kuybyshev Russia, (ex-USSR)		DCR health back issues
214	Timothy J. DeLamatre Conseiller du Directeur CНИЕCS B.P. 1218 Bamako Mali	CНИЕCS	French version of DCRs
215	Mr. Ferdinard M. Chuwa Manager for Iringa Community Centre Box 1636 Iringa, Tanzania	Iringa Comm. Center	Video and film information on health, women and youth
216	Ms. C.O. Igwilo Box 110 Okposi Ottoazara LGA Abia State	Nigeria	

LOG	NAME & ADDRESS	ORGANIZATION	SERVICE RENDERED
217	D.V. Jayasinghe 81, Hamangoda Katugastota Sri Lanka		DCR back issues
218	S.T. Patil Assist. Professor. Walmi 20, Malaprabha Lodge Saptapur, Dharwad 580 001, India		Int'l Directory of Develop. Comm.
219	Miss Nozyndaba Malunga Private Bag Z0017 Maseru West Post Office Maseru 103 Lesotho		CDC Brochure; financial assistance
220	Julius O. Maduka Edom Development Group Ibenabor Village, Oraukwu P.O. Box 5136, Onitsha Ananbra St., Nigeria	Edom Development Group	DCR #72 on evaluation
221	Dick de Jong Uichoorn Straat 33 1078 St., Amsterdam Netherlands	Int'l Water & Sanitation Ctr.	DCR #73
222	P.K. Pattanaik Orissa State Volunteers & Social Workers Assoc. Udayapur, Nuagaon 752 083 Orissa, India	Orissa State Volunteers	Int'l Directory of Develop. Comm.
223	R. Rappaport 31 Lodge Lane London N12 8JG England		DCR back issues
224	Sara Abernethy Personnel Consultant on HIV/AIDS UNDP 304 E. 45th street, 11th floor New York, NY 10017	UNDP	Materials on AIDS education
225	Penelope Maglaque Librarian INTRAH The University of North Carolina 208 North Columbia St, CB #8100 Chapel Hill, NC 27514	Chapel Hill, NC, School of Medicine	DCR back issues; Biblio. of DistEd; Directory of Training & Study in Dv't. Comm. and list of Free Materials in FP/MCH
226	Ramonito D. Pongos Cabulihan, Ormoc City Leyte, 6511 Philippines		DCR back issues; Biblio. of DistEd; Directory of Training & Study in Dv't. Comm.

LOG	NAME & ADDRESS	ORGANIZATION	SERVICE RENDERED
227	Gordon Ramsay 40 Dundas Street West Box 12, Suite 227B Toronto, Ontario Canada M5G 2C2	Dev. Countries Farm Radio	French DCR on Radio
228	Rizza O. Cea Distribution Dir. Martha Stuart Communications, Inc. 147 West 22 Street New York, NY 10011	Martha Stuart Communications, Inc.	Free specimen DCR #74
229	Patricia Hinds Cont. Education Programme Trinidad and Tobago Assoc. P.O. Box 1105 Port of Spain, Trinidad	Trinidad Social Workers Assoc.	DCR back issues; Biblio. of DistEd; Directory of Training & Study in Dv't. Comm.
230	Teresa H. Stuart, PhD College of Agriculture 4031 College, Laguna Philippines	Institute of Development Communication	DCR back issues
231	Rev. D.M. Lubansa Librarian/Documentalist Pan African Institute for Development B.P. 133, Buea, SW Province Cameroon	Pan African Institute for Development	Radio's Role in Development publication
232	R. Marimira, FICB (S.A.) MZIPS Superintendent Harare Central Prison P.O. Box 8035, Causeway Zimbabwe	Harare Central Prison	DCR back issues
233	Elise McLaughlin Tonga Comm. Dev. Trust P.O. Box 519 Nuku'alofa Tonga, South Pacific	Tonga Comm. Dev. Trust	CDC Catalog
FEBRUARY			
234	Donald P. Ely Associate Director ERIC 030 Huntington Hall Syracuse, NY 13244-2340	ERIC	25 copies of each DCR 72, 73, 74 and 75
235	Emmanuel S.A. Ayee AGRICOR P/Bag X2137 Mmbatho Bophuthatswana	AGRICOR Bophuthatswana	DCRs 73, 74 and 75

10/1

LOG	NAME & ADDRESS	ORGANIZATION	SERVICE RENDERED
236	Elizabeth Sobo 3320 New Hampshire Ave., NW Washington, DC 20010		Information on population communication project
237	Emmanuel Mariampillai Operation Health 32, College Road Nungambakkam, Madras 600 006, India	Operation Health	Community Participation Materials Information
238	Dr. P. Patchaimal Kamatchipuram (S.O.) Theni (Via) Madurai (Dt) Tamil Nadu 626 520 India	CENDECT	Int'l Directory of Develop. Comm.
239	Mr. Z.K. Bwambale P.O. Box 2 Lake Katwe Uganda	Kasenyi Salt Industry	Development Communication Materials
240	Uthaya Sooriyan Earth Society U.Pudukkottai, Uthappanaickanur Usilampatti, Madurai 626 537, India	Earth Society	Int'l Directory of Develop. Comm.
241	Bonny O. Ezeh, Berc Box 595 Nsukka Enugu State Nigeria		DCR back issues; Biblio. of DistEd; Directory of Training & Study in Dv't. Comm., Radio instructional materials; project profiles and video tapes on agric., educ., nutrition and population
242	Liz J. Foster Acquisitions Librarian National AIDS Clearinghouse P.O. Box 6003 Rockville, MD 20849-6003	National AIDS Clearinghouse	DCR back issues; AIDS information materials
243	Paul Attaochu FACU PMB 5517 Ibadan, Nigeria		Statisticaal Summary Survey results
244	Zulkarimein Nasution Block C-7/No.1 Kompleks PELNI Bakti Jaya, Depok 16418 Indonesia		DCR back issues; Evaluation study of LRCN
245	Dan Mullins CARE in Swaziland P.O. Box 2266 Manzini, Swaziland	Care International, Swaziland	DCR back issues

LOG	NAME & ADDRESS	ORGANIZATION	SERVICE RENDERED
246	Victor Appeah GBC-TV Programmes P.O. Box 1633 Accra, Ghana	GBC-TV Programmes	DCR #74
247	Peter J. Foley Family Planning Int'l Asst. P.O. Box 5-1047 Silom Post Office Bangkok 10504, Thailand	Family Planning Int'l Asst.	CDC Catalog; Population and AIDS Material
248	Bruce Bailey 19 Hazel St. Ottawa, Ontario K1S 0E7 Canada		Evaluation material; DCR #72
249	Dr. K. Devasahayam YES Co-operative Colony Proddatur, 516 361 India	Young Evangelist Soc.	120 Project Profiles; Int'l Directory of Develop. Comm.
250	Robert A. Bruce Iglesia Evangelica Metodista Casilla 356 La Paz, Bolivia	Iglesia Evangelica, Bolivia	CDC Catalog; Agric. material
251	Elise McLaughlin Tonga Community Development Trust P.O. Box 519 Nuku'alofa TONGA	Tonga Community Development Trust	CDC Catalog; Curriculum Development and Teacher training material
252	Dr. Hugo Salas Russo IPDRE Casilla 305 Trinidad, Beni Bolivia	IPDRE	Material on Population
253	Delia Ortega CIRD Casilla 3147 Asuncion, Paraguay	Centro Informacion Desarrollo	Spanish DCRs; information on substance abuse
254	Preston D. Hardison Dept. of Psychology NI-25 University of Washington Seattle, WA 98195	University of Washington	Info. on funding sources; Project Profiles on jungle development
255	Bendley Melville Cornwall County Health Adm. Cornwall Regional Hospital P.O. Box 472, Montego Bay Jamaica	Cornwall Regional Hospital	CDC catalog; radio in development material

110

LOG	NAME & ADDRESS	ORGANIZATION	SERVICE RENDERED
256	Mwape Sichilong Wildlife Conservation Soc. P.O. Box 30255 Lusaka, Zambia	Wildlife Conservation Soc. of Zambia	Info. on Education (materials and literacy) and Environment (Ecotourism)
257	Judith D.C. Osuala Dept. of Adult Education University of Nigeria Nsukka, Nigeria	University of Nigeria	DCR back issues; Biblio. of DistEd; Directory of Training & Study in Dv't. Comm.; 21 Project Profiles; book on interactive radio instruction
258	Mrs. Bosede Oyeteju Amoo Educ. Technology Ctr. Lagos State University Ojo, Lagos State Nigeria	Lagos State University	Material on Educational Technology
259	Chris Busch The Coolidge Center 1675 Massachusetts Ave. Cambridge, MA 02138-1836	The Coolidge Center	CDC Catalog
260	Mr. Graham Tilbury Univesity of Natal King George V Ave. Durba South Africa	Univesity of Natal	Educational technology material for TV reception in rural areas
261	Eduardo Gil Mora Zaguan del Cielo L-9 Cusco, Peru	University of Cusco/World Vision	Radio in development; DCR back issues
262	Christine Allen DAWSON Cannon House Folkestone Kent CT19 5EE England	Subscription services	Free DCR specimen for Cambridge University
263	Carleton Corrales 1255 23rd St., NW Washington, DC 20037	Academy for Educational Development	audio dubs, 50 tapes "La Familia de los Numeros"
264	Kris Martin 13118 Conductor Way Silver Spring, MD 20904		AIDS education and teens information, resources
264	Maggie Murray Lee UNICEF NY 3 United Nations Plaza New York, NY 10017	UNICEF Liberia	LRCN evaluation and final report