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GUIDE TO THE WORLD OF ONLINE SERVICES

MAGAZINE

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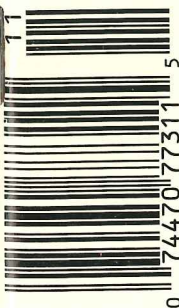
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TELECOM AND THE ENVIRONMENT

by J. Scott Christianson
and Dan Wendling

Concern for our natural environment has increased during the past several years, especially as witnessed by citizen involvement in the last two Earth Day celebrations. The simultaneous appearance of more online resources devoted to the subject of conservation has provided both the experienced online enthusiast and the conservation professional with efficient new tools for spreading and collecting environmental information. These tools include FidoNet and RelayNet echoes that can potentially reach thousands of people, Internet "lists," and BBS with "doors" that callers can use to search databases for a wide variety of technical information.

While it's still true that "all politics is local," if we're going to stick with the belief that environmentalism is centered around community action, we're going to have to change our definition of what a community is. J.C.R. Licklider was at the Massachusetts Institute of Technology in the late 60s developing ARPANET, one of the first packet-switched networks. He called his vision of what online communication would become the "virtual community;" a community made up of people who work alone or in small groups, who are geographically separated, but share the same interests. As he imagined, the peo-

ple you interact with online are selected by your goals, not your physical proximity to them.

With environmental computing there may be two communities involved, the virtual community where people gather information, and the traditional local community, where the information is used. For instance, in a discussion on the RelayNet (RIME) conference Outdoors, a person in Maryland was talking to a person in California about what to carry in a backpack during a desert outing. These interactions between members of this virtual community might seem insignificant. However, when we consider the power of the traditional community in solving environmental problems, and then look at the information available online for these solutions, the potential of a global virtual community working toward a harmonious relationship with nature is awe inspiring.

Our society will eventually become sustainable, either by a catastrophic crash as increased growth totally outstrips our natural resources or through voluntarily action before such an event occurs. If we attempt to transform our society, we must appraise the role of computers in a sustainable society. Lester Brown, President of the World Watch Institute, states "Energy constraints are likely to push societies toward more compact communities, where work and shopping are often within easy walking distance." Online communications will help ease the transition from a highly centralized society by allowing more people to use their computer and modem to work and shop at home.

Thinking globally is an idea that is not new to online users, and when armed with good information they can make a forceful impact. In Missouri, a chapter of the Izaak Walton League of America was created by several BBS buddies and the sypop of the local (now defunct) Forum-80 BBS. The callers who helped to organize the chapter ranged in profession from wildlife graduate students, business men, psychologists, and high school students. This organization later helped to establish a citizen action program called the Missouri Stream Team, which now has over 7000 participants working to clean up Missouri's waterways.

Electronic media has a unique ability to bring together conservation professionals and those who want to start doing right by mother earth. One lengthy message thread on the Environment BBS began with remarks expressing that the EPA's lawyers are a hindrance to the agency's ability to function effectively. However, the discussion ended with comments from an EPA lawyer about how the EPA is organized and how politics and the law influence the workings of such a large agency. This type of interaction can educate the new and eager environmentalist to the political and social realities of today's environmental problems.

Electronic communication in itself may play a role in reducing waste. Environmental groups and agencies now recommend using electronic mail and bulletin boards as a way to reduce paper waste. This can obviously reduce paper consumption, provided that every message isn't printed out (one weeks' worth of RelayNet's Outdoors conference can run 50 pages!). This article was submitted electronically; now many non-computer oriented magazines accept articles on disk. The National Science Foundation is experimenting with modem communication. Using a program called PC-Express, NSF is accepting grant proposals electronically. These proposals are usually 25-80 pages long and anywhere from five to thirty copies must be submitted. (Incidentally, the NSF is one of the principal funders of the existing Internet and potentially of the proposed high-speed computer network, the National Research and Education Network (NREN).)

ELECTRONIC BULLETIN BOARDS

The grassroots origins of both BBS and much of the environmental movement make nature-oriented boards very active. Besides creating active message bases, users of environmental boards are active uploaders as well. Callers use the boards as information dissemination channels and upload press releases, nature images, articles about their latest camping trip, ways to better practice the 3 R's (Reducing, Reusing, and Recycling) and many other valuable resources.

LIST OF ECOLOGY/CONSERVATION BULLETIN BOARDS

TITLE	TELEPHONE	SUBJECT
Science Resources Studies BBS	202-634-1764	National Science Foundation resources
BioTron	202-628-2427	Run by the American Foundation for Biological Science
The Helix	206-782-3365	Alternative energy; gardening
Green Connection	213-372-0987	Southern California action conferences
BIOSIS Taxonomic Reference File	215-972-6759	Bacterial genetics databases
HerpNet	215-464-3562	Reptiles and amphibians.
The Osprey's Nest	301-989-9036	For "birders, naturalists, and conservationists"
National Agricultural Library	301-344-8511	Agricultural Library Forum (ALF)
The Shore	301-476-5098	Ecotopics Conference
EPA CLU-IN (Clean Up Information)	301-589-8366	Air, ground-water and Superfund SIGs
COGSNet	301-740-9493	Earth science
AgBBS	314-882-8289	Agricultural information ..
The Ozone Hole	504-895-9049	RelayNet conferences (Ecology, Outdoors, Biology)
EarthNet	516-321-4893	12 message area related to the environ.
Environment BBS	703-524-1837	Message and files areas for enviro. information
HortLine	703-836-2418	Horticultural Science BBS
US Geo Survey	703-648-4168	Maps and mapping programs
PIES	703-506-1025	Pollution Prevention Information Exchange System
Skyland BBS	704-254-7800	Solar energy, outdoor photo. and earth conferences
Sonoma Online	707-545-0746	Several good message areas related to environ.
HMIX	708-972-3275	Hazardous Material Information Exchange
TAXACOM	716-896-7581	Plant Taxonomy; Flora Online newsletter
Florida Fishline	904-488-3773	Fresh and salt water fishing in Florida
EPA Office of Air Quality BBS	919-541-5742	See September '91 issue of Boardwatch for details

One of the most important functions of online services is reaching those who are just developing an environmental awareness. One user of the Skyland BBS states, "When I first heard about the Earth conference, I figured it was nothing but a bunch of half-crazed, de-ranked hippies looking for something to bitch about. I now see it as a source of information." Conference discussions can also help people gain a positive perspective about helping the environment. This is often hard to do when confronted with ecological tragedies that make the most experienced conservationist want to kill something. One BBS caller offered this, "I would like to do more in the line of positive alternative creation... if we could start helping each other do things like recycle, grow organic gardens, work closer to where we live, and use biodegradable products, then we could move on to building a sustainable world in keeping with our

niche as inhabitants of the planet, exploring new technologies to do things like reduce the amount of damage caused by our need for private transportation, housing, and communications, etc."

You will find that all of the six FidoNet echoes that relate to the environment (**ECOLOGY**, **ECONET**, **ENVIRO**, **ENVIRON**, **FISHING**, **HOMEPOWR** and **SUST_AG**) are usually very active and informative, as are RIME's (RelayNet's) Outdoors, Biology and Ecology conferences. A new conference being considered is an Eco-Action conference, contrasting with the Ecology conference in that it would be more geared toward activism.

Another way to use the information on these BBS is as information sources in writing an informed and up-to-date letter to your congressman on issues that

change almost daily. Writing a letter is more effective than most people think. It's true that most of the letters addressed to a congressman are not often read by her or him; opinions are tallied by aides and a form letter is sent back. However, the statistics that are compiled from these letters are weighted before they reach the congressman. For example, every letter that is written favoring one side of an issue might be said to represent the opinions of 300 people, i.e. 10 letters=3000 people of that opinion. Why? Because people who care about an issue will not always care enough to write their opinions down. Legislative alerts from such strong lobbying forces as The Sierra Club and Green Peace are easily found on most environmental boards.

Not all of the articles and press releases are concerned with citizen lobbying. Many concentrate on general ecology

INTERNET/BITNET MAILING LISTS RELATING TO CONSERVATION/ECOLOGY

List Name	Send Subscribe request to: (Internet/Bitnet)
BIOSPH-L	LISTSERV%UBVM.BITNET@VM1.NODAK.EDULISTSERV@UBVM
BIRDCNTR.....	LISTSERV%ARIZVM1.BITNET@CORNELL.CIT.CORNELL.EDULISTSERV@ARIZVM1
BIRDWEST	LISTSERV%ARIZVM1.BITNET@CORNELL.CIT.CORNELL.EDULISTSERV@ARIZVM1
BIRDEAST	LISTSERV%ARIZVM1.BITNET@CORNELL.CIT.CORNELL.EDULISTSERV@ARIZVM1
BIRDCHAT	LISTSERV%ARIZVM1.BITNET@CORNELL.CIT.CORNELL.EDULISTSERV@ARIZVM1
CONSLINK.....	none.....LISTSERV@SIVM
ETHOLOGY	LISTSERV%FINHUTC.BITNET@CUNYVM.CUNY.EDULISTSERV@FINHUTC
GREEN	LISTSERV@INDYCMS.IUPUI.EDULISTSERV@INDYCMS

and natural history. The Helix BBS is a great source of informative text files. On the Helix callers find a multitude of files with subjects like how to make good compost, Eco-Feminism, and the problems of nuclear chemicals. Scott Parks, sysop of Helix, says that most of the files he offers "are fairly new but seem to be getting used somewhat more than I expected." Scott also offers online versions of *Home Power Magazine*, complete with Macintosh graphics files!

For newspaper or newsletter editors, online press releases can be great "canned" articles, complete with contact persons and references. One press release from The Friends of the Earth contained a one page article and two pages of notes and references for editors.

The Helix BBS, and other BBS with alternative energy files and conferences, can provide you with information on how to make a very dramatic change in your life - taking your home off-the-grid (no outside power). Besides having a feeling of self-empowerment, people living off-the-grid actually get their power more economically, although the initial investment is higher. The most common way to generate one's own power is with photovoltaic cells that convert the sun's energy into electricity, which is then stored in large batteries. However, if there is not enough sunlight to generate all of your power needs, a

wind generator or hydroelectric system can be used (or a combination of the above).

One of the best BBS we encountered was **EarthNET** which has over 18 message areas (including FidoNet, Internet and Usenet conferences) related to the environment. **EarthNET** also offers many informational text files and an area for nature GIF files.

The Osprey's Nest (TON) has been offering information to bird watchers for over four years. The message areas include discussions on birding, the use of computers in birding and mineralogy; the file areas contain files on conservation, nature graphics, birding interest groups and many other subjects relating to nature and the environment.

The Ozone Hole, based in New Orleans, Louisiana, carries RelayNet's conferences and has discussion and files concerning the environment in general and that of the New Orleans area as well. Now that sysop Michael Mathews has optical character recognition capabilities (and copyright permission, of course), the board will begin featuring information from Environmental Science and Technology, a Journal of the American Chemical Society.

Several boards are tailored to a more scientifically oriented audience. **The Taxacom BBS** is run by the Buffalo

Museum of Science and offers databases and message areas to people interested in botanical systematics (naming plants). Besides a conference on the environment they offer conferences on paleontology, ornithology, phylogenetics, mycology and nomenclature. **HerpNet** is another good BBS filled with biological information about amphibians and reptiles.

On the **BIOSIS BBS** several databases on the genetics of bacteria can be searched. These BBS with a science emphasis offer free or low cost public access to the same technical information on the ecology of various organisms available from relatively pricey commercial database vendors such as **DIALOG Information Services**.

Several government-run BBS provide information and support to government employees, but will also allow restricted public access. **The Hazardous Materials Information Exchange (HMIX) BBS** is run jointly by the Federal Emergency Management Agency and the Department of Transportation. HMIX provides information on how to deal with a spill of toxic chemicals, current rules and regulations, and announcements of meetings. **The EPA CLU-IN (CLean-Up INformation)** board dispenses information about the superfund program and the disposing of hazardous waste. The EPA also runs the **Pollution Prevention Information Exchange Sys-**

tem (PIES) which provides a forum for discussing how to prevent pollution. All of these boards offer a way to check out what professionals in the field are doing and can help you understand the work behind the issues of toxic waste management.

BITNET MAILING LISTS

Mailing Lists are the Bitnet equivalent of BBS echos and are distributed by a computer called a **Listserver** (analogous to a FidoNet Hub) to subscribers of the list. Any person with access to Bitnet or Internet can contribute to, and receive a list. To subscribe to a list, you need to send the command **SUB (listname) (your full name)** to the appropriate listserver (see accompanying table). Send this command as the first line of a message from Internet or as the direct object of a tell command from Bitnet. You may have to ask your local Internet guru about the exact syntax for your particular network. After successfully sending the subscribe command, you should receive an acknowledge-

ment that will include information on requesting old copies of the lists and how to "unsubscribe" from the list.

Be forewarned. Don't just subscribe to all the lists at once; your electronic mailbox will be stuffed full. Being a global "public access channel," a list fluctuates in quality and quantity of messages. However, most lists are kept on track by a moderator.

The **BIOSPH-L** list, moderated by Dave Phillips, is concerned with "Anything relating to the biosphere, pollution, CO-2 effect, ecology, habitats, climate, etc., Basically anything that exerts an influence of some kind or another on the BioSphere." BIOSPH-L is the best list we found, averaging about four good messages a day. Its' activity reflects the enthusiasm of BIOSPH-L's subscribers. Besides an active discussion, several users upload press releases and articles.

CONSLINK is the "Bitnet Based Electronic Conference and Bulletin Board on all Topics of Biology Conservation"

supported by the Smithsonian Institution and moderated by Michael Stuewe. Besides being a discussion list, **CONSLINK** offers issues of the Biological Conservation Newsletter, edited by Jane Villa-Lobos, and a Register of Biological Fieldstations in Tropical Countries, compiled by Chris Wemmer. Both the newsletter and the register are available from the Listserver. SEND the command **INDEX CONSLINK** to the Listserver to get a detailed listing of all the files available from CONSLINK.

Bitnet also provides a great medium for bird watchers. There are three lists that correspond to different areas of the United States - **BIRDEAST**, **BIRDCNTR** and **BIRDWEST**. These lists are for distributing transcripts of birdwatching hotlines (over 14 are currently covered) and detailed information about bird sightings across the country. The list **BIRDCHAT** is for more general messages about birding. These lists form part of the National Birding Hotline Cooperative and are moderated by Charles Williamson.



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The two other lists presented in the table, **ETHOLOGY** and **GREEN**, deal with the classification of organisms and the study of the green movement, respectively. **GREEN** is only for the study of green movements, as the **GREEN** announcement states: "It is emphasized that the purpose of Green is the **study** of Green movements. Green is **not** a tool for organizing or promoting those movements."

UPDATES

Bill Thoen, the sysop of **COGSnet BBS** (303-740-9493), maintains the Earth Science BBS List. Mr. Thoen's list offers detailed information about each BBS. For a list of the more technically oriented BBS relating to conservation (HerpNet, Taxacom, American Int. of Bio. Sci.) check out **The Black Bag BBS** (302-731-1998).

The newest list of Bitnet lists, sent as several large files, is updated monthly by the BITNET Network Information Center. These files can be obtained through Bitnet by sending the command **SENDME INTEREST PACKAGE** to **LISTSERV@NDSUVM1**. Also a shorter file called **LISTSERV GROUPS** can be obtained by sending the command **SENDME LISTSERV GROUPS** to **LISTSERV@BITNIC**.

[J. Scott Christianson will graduate with a B.A. in biology from the University of Missouri in December and has worked with several conservation organizations in Missouri. Dan Wendling is a media specialist for Macro International, Inc., and works outside Washington, DC. - Editor]

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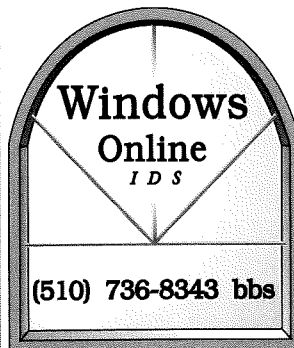
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