Wired to the World — *by Ralph Lee Scott*

In this issue of "Wired to the World" you will be introduced to the world of Internet electronic mail. Electronic mail is one of the major uses of the Internet (the others being: FTP [File Transfer Protocol]; Telnet [remote access]; Gopher/WAIS [file/subject] searching; Usenet [or net] news [discussion groups on various topics]; and Internet Relay Chat [a sort of real time online "chat" with anyone on the Internet]). Some 15 to 30 million individual accounts exist on the Internet. More than one person, however, may read mail through a given account, so no one exactly knows how many people are reachable through the Internet. Some estimates are that new accounts are established at the rate of a million persons per month. That's 12 million people added each year, and the rate is expected to grow. Sending mail on the Internet is a lot like sending regular postal mail (referred to by netters as snail or in the United States as USnail mail — a not-so-veiled reference to the fast speed of regular surface mail).

Just like snail mail, if you have the address incomplete, wrong, or the other person has moved, your mail comes back to you (referred to by netters as "bounced mail"). Netters can, when they move internally within a corporation or organization, usually forward their mail to another location (called a site). However, if you change employers, move out of the country, or are unemployed, your mail more than likely will "bounce" back to the sender. For example, I doubt that the Ford Motor Company forwards Lee Iaccocca's e-mail to him at Chrysler. Similarly, I doubt that President Clinton sends ex-President Bush's e-mail to him on a regular basis. The point is that you have to get the address right! Clearly, if you move, you are at the mercy of your old mail site, just like with the United States Postal Service.

So, what is a good e-mail address? Just like regular snail mail, you need the correct name, street address, city, state, and in some cases the country. If you forget one of the elements of the address, the mail will come back. Internet addresses in the United States can come in up to five parts. For instance, an individual at an educational institution would have an address like the following: ralsco@joyner.lib.ecu.edu. The first part is the computer name to whom you are sending the mail. The second and third parts are the local "street address" of that person's host computer. The fourth part is the name of the university or institution, and the fifth part is called the domain. Addresses on the Internet are grouped in cyberspace (computer net space) in areas called domains. There are six main domains:

1) **.com** This is the commercial/institution domain and is abbreviated **com**.
   Examples:

AT&T	att.com
Cray computer	cray.com
Hewlett Packard Corp.	hp.com
SAS Institute	sas.com
Convex Computer	convex.com
Specialix Inc	specialix.com
Duke Power Co.	dukepower.com
MCI mail	mcimail.com
Bear, Stearns & Co.	bear.com

2) **.edu** This is the educational domain and is abbreviated **edu**.
   Examples:

University of California at Davis	ucdavis.edu
University of Mississippi	olemiss.edu
University of Minnesota	umn.edu
University of Colorado	colorado.edu
University of Wollongong, Australia	uow.edu.au
Ohio State University	ohio-state.edu
New Jersey Institute of Technology	njit.edu
University of North Carolina - CH	unc.edu
North Carolina State University	ncsu.edu
Arizona State University	asuacad.bitnet

Note that the last university is not listed as **.edu** but as **.bitnet**. Some universities are located on an earlier network called BITNET (Because It's Time NETwork). BITNET is connected to the Internet through a number of crossover computers called transfer sites. Most BITNET sites are being transfered over to the Internet system. More about this later.

3) **.gov** This is a government site. It can be state, local, or federal and is abbreviated **gov**.
   Examples:

National Aeronautics and Space Administration	nasa.gov
Lawrence Livermore National Laboratory	s1.gov
National Institutes of Health	nih.gov
Environmental Protection Agency	epa.gov

4) **.mil** This is part of the military communications network and is abbreviated **mil**.
   Examples:

United States Navy	navy.mil
United States Army	army.mil
United States Air Force	af.mil

5) **.net** This is part of a communications net gateway to another e-mail system and is abbreviated **net**.
   Examples:

Vnet Internet Access, Inc.	vnet.net
MCNC Center for Communications	concert.net

   Note that Freenets usually come into the Internet under the feed (or connection) of a university and, hence, are in the .edu domain. For example, the Cleveland Freenet is sponsored by Case Western Reserve University.

6) **.org** This is reserved for organizations that do not fit under any of the other headings. They are abbreviated **org**.
   Examples:

APANA	apana.org
MITRE Corporation	mitre.org
Aero Corporation	aero.org
MCNC Center for Microelectronics	mcnc.org
Colorado SuperNet, Inc.	csn.org

   Most of the sites mentioned above are in the United States. This is because most of the computers we use are connected to Internet sites in the United States. If you want to go to another country or connect to the United States from abroad, you have to follow the up-to-five-part address with a country code. This is a two-letter mnemonic standing for the country where the computer you want to reach is located. For example, Israel is **il**, Australia is **au**, Canada is **ca**, and the United Kingdom is **uk**. For example, to reach Mr. Katsutoshi Ike at KDD R&D Labs. in Saitama, Japan, one would use the e-mail address: **katsu@ast.kddlabs.co.jp**. Using the country code creates an address line that is up to six segments long.

   Examples:

Tel Aviv University	tau.ac.il
University of Karlsruhe, FRG	uka.de
Decision Power Support, ICL (UK)	dsbc.icl.co.uk
Leiden University	LeidenUniv.nl
CERN(European Lab. for Particle Physics)	cern.ch
Chinese University of Hong Kong	cuhk.hk
Simon Fraser University, B.C.	sfu.ca
University of Mainz, FRG	uni-mainz.de
University of Wollongong, Australia	uow.edu.au
Lincoln (University?), New Zealand	lincoln.ac.nz
Acadia University	acadiau.ca
University of Lund, Sweden	lu.se
Cambridge University	ca.uk
Northern Telecom Europe Ltd., UK	nnsgs56
University of Southampton, UK	soton.ac.uk
KDD R&D Labs., Saitama, Japan	kddlabs.co.jp
Erasmus Universiteit Rotterdam	eur.nl
APANA (organization in Australia)	apana.org.au

   As you can see, most of these addresses follow a pattern. Some like Northern Telecom Europe Ltd. do not. If your mail bounces because of the address, you might try adding the country code (in this case .uk) to the address and resending the mail.

   I mentioned earlier the special problems with BITNET addresses in the United States. The BITNET network is connected to the international Internet through a number of bridge computer sites. These form links for mail to transfer between the two systems. As already mentioned, most BITNET

sites are changing over to Internet sites. (This involves more fees and computer equipment.) Bridge sites are available at the City University of New York, Kent State University, and Princeton University to name some of the major east coast sites. Mail can be sent through these gateway sites from one system to another. As you can see, BITNET is not actually connected to the Internet except through these gateway sites. You may have discovered this when you sent mail to a BITNET site or if you are on BITNET yourself. To correct the problem if you are sending mail to a BITNET site, send your mail out again with the following mail address:

> name%hostmachine.bitnet@kentvm.kent.edu

For example:

> lbscott%ecuvm1.bitnet@cunyvm.cuny.edu or
> lbscott%ecuvm1.bitnet@pucc.princeton.edu

To send mail from a BITNET site, type the following address: name%internet address@kentvm.kent.edu
For example:

> ralsco%joyner.lib.ecu.edu@kentvm.bitnet or
> ralsco%joyner.lib.ecu.edu@cunyvm.bitnet or
> ralsco%joyner.lib.ecu.edu@pucc.bitnet

Be aware that other gateways exist besides these BITNET gateways. They serve as bridges between systems. Other gateways usually are listed with **.net** or **.uucp** as the last element in the address.

The writer hopes that this issue of "Wired to the World" will help you use e-mail more efficiently. Here's hoping that your mail will not bounce!