



The Gigaphone

December 2002
Vol. 4, No. 2

The Shouting Ground Newsletter

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From the Cubicle of the President ... State of the ISP

Welcome to another edition of the Gigaphone! We have a number of exciting announcements, so I won't waste any time talking about the weather, Bears football, or how much I love Microsoft products.

New Mail Server!

The new mail-server ("Concert," for those of you playing at home) went in quite smoothly. With the exception of a couple clients using external ISPs, hardly anyone noticed the switchover. Now that it is in place, we are on the verge of introducing some new features that should go over well.

- *Web-Mail* – Soon we will offer Web-Mail access to your E-mail accounts. This means that customers can check and send their E-mail through a standard web-browser from anywhere on the Internet. The benefits are clear: many businesses and/or Internet cafés have web-browsers available, but setting up an E-mail client can be frustrating or not even possible depending on how the workstation is configured. Web-Mail will allow you to avoid having to do all this.
- *Message Tagging* – Our new mail-server is powerful enough to allow us to begin tagging messages that might be spam (the operative word there being "might.") Spam-filtering is not a solved problem, which is why we haven't done any server-wide filtering in the past. We've never believed that it is within our rights to filter out a piece of mail based on our criteria. The procedure is subjective at best. Furthermore, we are reluctant to filter based on the concern that we could filter something that was in fact legitimate. What we will do is begin tagging messages as potentially being spam. Our customers can then look for these special tags and funnel them into a "Spam" mailbox. Customers can then decide for themselves as to what's objectionable and what's not.
- *Virus Detection* – Lastly, our new mail-server will give us more ability to filter out incoming viruses. This shouldn't preclude customers from protecting their workstations with virus software! (There are many other ways to get a virus - not just through E-mail.) However, it will make it a little easier and your mailbox a little more "sanitary."

IP Address Switchover

In other news, Shouting Ground has secured our own set of IP address-space from ARIN, the organization responsible for handing out IP address space in North America. Typically, ISPs get address space from their upstream provider, until you're big enough to secure your own. The real benefit from all this is that we can use our address space with multiple upstream providers.

Because of this, Shouting Ground is now multi-homed with both UUNet and Level3, giving us even further redundancy. If UUNet has a routing problem, we can reroute traffic through Level3, and vice versa. Pretty darn cool, if you ask me! More details will be coming in a mailing flyer that we plan on sending out in the next few days. Please look out for it! It's not junk mail! (Insert emoticon, here.) As always, thanks for choosing Shouting Ground for your Internet connectivity needs. We appreciate your business!

Bryan Holloway,
President



Wireless Networks - Back to the Future

One of the very first packet switched networks was created to link the Hawaiian Islands together. AlohaNet used high-frequency shortwave radios to create a reliable wireless computer network. The CSMA/CD (Carrier-Sense Multiple Access/Collision Detect) protocol worked similarly to the coaxial ethernet networks of the time.

The half-duplex transmissions were relayed by several radios, and so network traffic was slower than if a wired system had been used. But it demonstrated the feasibility of wireless packet transmission, setting the stage for current developments. When we hear about wireless networks, we usually think of the one-to-many paradigm, where a central radio links many users to the network. This may be on a local scale, like a home or office wireless network, or on a metropolitan scale, such as a Wireless

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Maintaining Your E-mail

Some of the common problems encountered with E-mail accounts are spam, running out of disk space, and problems sending or receiving mail. Here are a few ways to fix or avoid these problems.

Spam

Unfortunately there are several ways you can inadvertently get your E-mail address on one of the mailing lists that spammers use. Posting to news groups is an almost sure way to get on a list. Web pages that require you to use your E-mail address as a username to log in can sell the addresses they collect. Also, if you go to any FTP sites and log in "anonymously," unless you have changed it, the most common setup for your browser is to use your E-mail address as the username, thus adding you to another list. If you received Spam and responded to the "To remove your name from our list...." you have just told them that they have found a "live one" and your name gets moved to the top of the list. Even if you are careful not to give out your E-mail

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Wireless, *continued from front*

Internet Service Provider. Wireless is also used for point-to-point communications, such as bridging the networks in two different buildings together where the cost of fiber or copper would be prohibitive.

As the costs of wireless networking decline, it becomes a more attractive alternative to running wires. But there are some limitations to consider:

- *Security* – be sure that all data streams are encrypted to prevent eavesdropping. It is nearly impossible to ensure that your radio signal stays within private areas.
- *Interference* – Most home/small office wireless access points operate in the 2.4 MHz band, as do cordless phones, wireless burglar and fire alarms, and many other devices. These devices may cause interference with each other.
- *Obstacles* – 2.4 MHz is essentially line-of-sight transmission, and doesn't penetrate buildings very well. You will probably need multiple access points to cover a multistory building.

For point-to-point wireless, you can enhance your security by using very directional antennas. Calculating antenna height is tricky because you need more than line-of-sight; you have to leave room for the Fresnel aperture of the transmitted signal above any obstructions. Another alternative for point-to-point applications is a laser based system, like the Canobeam. Because of the very tight signal path, it is very difficult to eavesdrop on the signal, but it can be interrupted by relatively small objects.

Prices have dropped significantly. For home use, a wireless access point/router may be purchased for under \$200. A commercial quality access point for up to 8 computers is around \$800. The equipment for a reliable point-to-point link is around \$4000 (plus antenna tower or mast if needed). Increased reliability and security make wireless a good choice when your other options are limited.

*Mike Berger,
Director of Engineering*



Maintaining, *continued from front*

address you might end up on a list. These spammers flood the mail with any combination of letters that they think might hit a real mailbox. They know that many people use either their first or last name, or a combination of their name with their initials. They even use programs to generate these lists for them. The best way to fight spam is to use the built in filtering on your E-mail program to block each address as you get them. If they do not get a returned E-mail, address unknown, from that address they will naturally leave that name on their list. Spam is an annoying fact of life these days and most of this spam originates in places where Internet regulations are poorly enforced.

E-mail Quota Problem

If you have your E-mail program set up to act as a POP3 client, when you check your mail it is deleted from our mail server unless you have told it to "save mail on the server." If you are set up as an IMAP client, the mail stays on the server until you delete it. So with an IMAP account, or a POP3 with mail saved on the server, you can easily exceed your mail quota of 20 MB (Extra disk space is inexpensive, \$2/10MB/Month). To correct this with IMAP you need to be diligent about deleting the mail on the server and save any mail that you want to keep in folders on your local computer. With POP3 change the setting in your E-mail program so that it will not save the mail on the server.

The next time that you check your mail it will all be downloaded to your machine, and removed from the server.

Problems Sending or Receiving Mail

Going over quota can prevent you from successfully sending or receiving mail. Solving the quota problem will also solve this E-mail problem.

Quite often we receive calls about problems people are having downloading mail and find that the culprit was a large file attachment to an E-mail. E-mail programs were never designed for file transfer. With an analog dialup account, any attachment much over 1MB will be stressing your mail program. Even with a high speed connection there is a 10MB limit on any one E-mail. So be kind to others and don't send large attachments via E-mail. The best solution is to use an FTP Program, or to post the pictures on your webpage. If you must send someone those pictures, use a compression utility such as WinZip to reduce their size, or split them up between several E-mails so that they can easily download them.

Steve Dyson,

Technical Support Associate



The Program That Came In From The Cold

Allow me to introduce you to the somewhat annoying but harmless creature called adware. This is a functional piece of software that you can download and use for free, provided you are willing to put up with whatever ads the distributor is being paid to display in their program. Two obvious examples of this are Eudora in Sponsored mode, and the unregistered version of Opera. If you wish to no longer see the ads in either of these programs (or any other adware you may have downloaded) you can register the product with the manufacturer for a small fee, usually in the \$15 to \$50 price range, and away go the ads. Kind of like watching a movie on network television versus a DVD.

Now, let's meet the malicious cousin of adware, the despicable spyware. Spyware masquerades as adware, or even freeware, but it's far from that. The installer you download will install not only the program you wish to use, but also another program that runs without your knowledge that tracks things like what web pages you visit, how long you spent there, what software is installed on your machine, etc. Basically, whatever data the spyware is written to gather. In short, not very cool at all. Ok, so you just uninstall the program and no more spyware right? Nope. The program will be gone, but the spyware is usually left on your machine.

So, what can you do about it? Well, luckily some nice folks got really irate about this practice and wrote some software to identify and remove these malicious programs from your machine. The two leading shareware utilities are:

- *AdAware* by Lavasoft
(<http://www.lavasoftusa.com/aaw.html>)
- *Spyware / Adware Remover* by BulletProofSoft
(<http://www.bulletproofsoft.com/spyware-remover.html>)

These are both moderately priced (\$15 and \$29 respectively), and have easy to understand user interfaces. They also can be set up to monitor your machine and alert you of any spyware activity. So go and get one, and make the advertisers get their demographics some other way!

Jim Creason,

Director of Support Services