



The Gigaphone

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The Shouting Ground Newsletter

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From the Cubicle of the President up North

Greetings from Chicago! The last three months have been quite the rollercoaster ride as I adjust to full-time life in the big city. Prior to my latitudinal shift, I would come to Chicago and check up on Shouting Ground equipment downtown, catch a bit of Old Town, and head back to the tranquility of good ol' C-U. No longer; now it's "El" rides, throngs of people flooding to their places of profession, tall buildings, a river, a rather large lake ...

One eye-opener, which I must admit entertains me in a morbid sort of way, has been spotting all the flotsam and jetsam left over from the dot-com bust. Shouting Ground colocates at The River Center, which is the same building where Level3 (www.level3.com) maintains its Chicago Point of Presence (POP) and its Metro fiber ring. Fifty-five carriers and ISPs all share space there, paradoxically competing and at the same time peering with each other.

During the Internet boom, companies were building networks everywhere they could using the doomed "if we build it, they will come" business model. Remember Teligent? Allegiance Telecom? Rhythms? All gone or sold on the auction block, but you can still see their ashes in the form of closets that haven't been reclaimed, or the occasional rack cabinet that shows up on the loading dock – free for the taking.

Another source of amusement is seeing all the various telecom manholes strewn about the Loop. In C-U you see SBC, Illinois Power, but walk around downtown Chicago and you'll also see manholes labelled Level 3 or Looking Glass. What's in all these manholes? Conduit, but conduit filled with fiber – the subject of my next article. Until then, send me some tap water. This stuff sucks eggs.

*Bryan Holloway,
President*



Cold and Flu Season

As cold weather approaches, we all need to stock up on Thera-Flu and Motrin. But what about the viruses that affect your computer? Since pouring Thera-Flu into the floppy drive isn't so good for the computer, we have a somewhat 'less messy' solution. No matter how careful you are, everyone is susceptible to the rampant viruses out there. If you find your computer is running slowly, or not at all, you may have inadvertently been struck with a virus or malware. For a low flat fee, \$65.00, we can rid your machine, (PC or Mac) of these infections and any spyware, and help keep your system clean, healthy and secure with the latest updates.

Another thing to remember: to help prevent infection, never open any attachments that you weren't expecting, even if they come from someone you know. If Shouting Ground Technologies sends you any email, it will either come from admin@shout.net or billing@shout.net, and we never send attachments unless we contact you first. As that cold weather approaches, remember, starve a fever, feed a cold (or is it the other way around?).

*Laura White,
Products Mgr*



Window Shopping

Most of the time I write about computer networking, but I have an affinity for high tech gadgetry of all kinds. Here are some of the things that I'd love to have if I could afford them. Every one of them would also be a welcome gift.

***VersaLaser Printer** Universal Laser Systems, Inc. www.versalaser.com The VersaLaser printer doesn't use ink or toner, and it doesn't use a laser to expose a photosensitive drum like a conventional laser printer. It has a powerful laser as the printhead. You can use it to cut, mark, or engrave a wide variety of materials, including wood, metal, fabrics, stone, ceramic, paper, rubber, and glass. Design your images on the computer, and transform the materials according to your drawings. It's under \$10,000. Don't use it to engrave disposable lighters or propane tanks!

***NEC VT47 Computer Display Video Projector** Nec Solutions Inc. www.necvisualsystems.com Remember when 19" monitors cost thousands of dollars? Now you can have a 300" image for a fraction of the price, if your wall is big enough. Early computer display projectors were expensive, required lots of adjustments, and didn't have very bright images. The NEC VT47 lists for \$995. With a 1200 lumen intensity display, an image magnification feature, and automatic keystone control to square up the picture when the projector is tilted upward or downward, this projector may be more attractive than a large screen TV. With the standard NTSC video input, you can use it to project your DVDs too.

***Canon SLR Digital Camera** Canon USA www.usa.canon.com Canon isn't the only manufacturer of digital cameras, but I think they rate the highest consideration. Companies like Fuji and Kodak make fine mass market products, but only Canon has all the features that serious amateur photographers want.

At the low and medium ends, the PowerShot A and S series cameras have high quality lenses, and many of the features of the

Continued on back

Window Shopping, continued from front

popular Canon Elph film cameras. The S series is especially rugged, and can fit in a tight pocket. Canon even offers an underwater housing designed for the PowerShot series, so you can take the camera diving. The EOS Digital Rebel is affordable at a street price of \$900, and is very similar to operation and feel of the Rebel film camera series. It has interchangeable lenses, and uses standard Canon autofocus lenses. If you already have a Canon film camera, you can buy just the body. And if a six megapixel SLR is still not adequate, the Canon EOS-1DS rounds out the top of the line. While other cameras have LCDs with more than the EOS-1DS's 11.1 megapixels, the EOS camera performs more like a real 35mm SLR. Canon's 11.1 megapixel LCD is the same size as a 35mm film frame, so your lenses will work as they do on your 35mm camera. Virtually every other camera on the market, including the Kodak 13.5 megapixel camera (manufactured by Nikon), uses a smaller LCD, so your lenses will act as if they have a shorter focal length as compared to a 35mm frame. Canon also uses their unique zoned focusing system, which focuses the lens on the part of the frame that your eye indicates. Although the feature works adequately out of the box, training it for a particular user makes it almost infallible.

***Belkin WFS-1 WiFi Sniffer** Belkin www.belkin.com You don't need to carry your laptop with you if you're wardriving for open WiFi nodes. The pocket-size WiFi Sniffer will tell you if there's an 802.11 signal within range and it's relative strength. You can use it to identify interference with your own WiFi node. Press the button and you'll know instantly if wireless is available in a coffee shop. Under \$25.00.

***PlantracoDesktopRover** Plantraco.com http://www.plantraco.com/product_dtr.html Not a virtual desktop toy, but a real radio-controlled tracked vehicle that is run by your computer via USB or serial interface. You can control the tracks independently so you can spin and maneuver in tight spaces. It has lots of torque so it can climb over anything on your desk. Four frequencies are available so you can play laser tag with the built in infrared LED's and detectors against your friends. It's miniature reality, not virtual reality, and more satisfying than a video game. \$59.95.



Mike Berger,
Director of Engineering

Sucker Punch 2

It seems almost traditional that in the years following the release of any of Microsoft's operating systems, security holes in their code are either discovered or exploited by the likes of security professionals and hackers. The usual response from the software giant has been to release patch after patch through the Windows Update website. To simplify distribution, these patches are then combined into a cumulative archive of updates known as a service pack. Windows 2000 is up to SP4, a current Windows NT4.0 install contains six service packs, and now Microsoft has just released their second Windows XP Service Pack, known as XP SP2.

If you haven't heard about this latest set of security patches and features for Windows XP, you will soon. Alleging extra protection from viruses and malicious web content, Microsoft is deploying SP2 very aggressively, both through the Windows Update website and with their Automatic Updates functionality built in to Windows. In fact, it would be downright tricky to avoid accidentally downloading or installing SP2 if it were not

for its huge file size. The "Express Install" is over 80MB, and a whopping 272MB for the standalone installer. Oh, and did I mention that even on a brand new Pentium IV machine the install can take as long as an hour to complete and requires that you have at least 1.8 gigabytes of free space on your hard drive?

Included with SP2 are features such as firewall settings in the control panel, and "enhanced" security for their already highly vulnerable web browser and E-mail client, Internet Explorer and Outlook Express respectively. The firewall, cleverly dubbed "Windows Firewall," has some seemingly obtuse default settings; it blocks ports needed for local network file sharing while allowing all outgoing traffic without restriction. From a networking perspective, a firewall on every client machine is poor practice and just plain inefficient when a single hardware firewall could protect an entire network.

Another feature of SP2 is their Attachment Execution Service (AES), affecting Outlook, Outlook Express, and Windows Messenger. By monitoring these programs, AES prohibits them from sending multiple attachments over a certain amount of time. This practice is surely aimed at the overwhelming amounts of mass mailing worms and viruses released in the past year.

These additions to XP, however, do not come without consequence. Since Microsoft changed some of the fundamentals of their permissions model, many software publishers are finding that their programs, which were once compliant, no longer work. Many home users have also complained about broken applications as well as slow and restricted network access, even after uninstalling the service pack out of frustration.

Overall, Microsoft means well with XP Service Pack 2, but I suspect a lack of resources during development caused it to be more of a kludge than a serious fix. Perhaps this is related to the continuing delays in the release date for their next planned version of Windows, code named Longhorn. For now I'll pass on Service Pack 2 until it can be proven stable and supported by more users and software developers.

Bill Cline,
Technical Assistant



Look, Ma, No Wires

Wireless, wireless, wireless, let me count the ways. Well, two of 'em, specifically WiFi and Bluetooth, and what their abilities and limitations are. In a nutshell, bluetooth is a short distance cable replacement, WiFi is a fairly robust standard for extending a network. Bluetooth is a low power, short range, low speed standard that allows devices such as keyboards, mice, PDAs, and printers to communicate with a PC or other bluetooth device, e.g. a wireless headset for your cell phone. This is accomplished with an inexpensive radio transmitter/receiver module in each device, which supplies the physical medium and protocols necessary for successful communication. The speed at which bluetooth operates – 712Kbps – is plenty fast enough for these types of devices to communicate, but not nearly fast enough to support networking, and the weak signal (1 milliwatt) limits the range to about 10 meters. WiFi, or the 802.11 standard, is designed to do just that, extend a LAN and/or allow sharing of an Internet connection to 802.11b/g clients. The speed of 802.11 is much more well suited to networking – 11Mbps for the 'b' standard, and 54Mbps for 'g', and typical signal strength from devices on the market will reach over 100 feet.

Jim Creason,
Director of Support Services