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## *Welcome to*

# *The Harlow Report - GIS*

Welcome to the 2<sup>nd</sup> issue of 2003! Take a look at our new permanent feature “Out of the Box.” This issue contains part 2 of a three-part series of excerpts from the Executive Summary of the newly released “GIS and Mobile Computing Solutions Market Study for North American Electric Utilities” conducted by InfoNetrix. You may recall that in the last issue we provided a short background on Web Services. In this issue we tell what the OGC is doing to standardize Geography Markup Language 3 that will be an important component of Web Services for GIS.

- **GMCS Market Study Excerpts Pt 2** In this comprehensive research study, seven signs of market evolution are discussed. We give you a look at the signs # 4 and 5 in this issue.
- **Thanks a Lott!** At a time when he must still be spinning from a questionable off-the-record remark, Senator Trent Lott got a momentary reprieve from public condemnation from the ASPRS.
- **OGC Announces GML3** Recently, the organization announced the approval and release of Geography Markup Language version 3.0 (GML 3). It defines a data encoding in XML that allows geographic data and its attributes to be moved between disparate systems with ease.
- **Some More about Viruses** The Internet was just hit with the “SQL Slammer Worm” a computer bug that mostly affects larger networks using Microsoft SQL server. It seemed to me that it was good time to give us all a refresher course on computer viruses. And who better to tell you about it than Richard Lowe Jr.?
- **Top Eight Morons of 2002** Presented just for fun, and funny it is
- **Out of the Box** This is a new feature that we will bring you each month. These are excerpts from articles that are just outside the GIS Box ... items about government, technology and utilities that could shape your GIS thinking.

As always, we provide you with the latest links to new topics, products, services and oddball ideas that either pertain to GIS, or seem like fun. You know that is located in GIS Net Surfing. If you just want the latest in GIS news, then click on over to News to Use.

As always, we thank you for your support, and trust that you and your loved ones remain safe, healthy and prosperous.

*Chris Harlow*



# **GMCS Market Study Excerpts**

## **Part 2 (of 3)**

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**Editor's Note:** In the last issue I provided excerpts from the Executive Summary of the definitive study of GIS & Mobile Computing Solutions (GMCS) for the North American Electric Utility Marketplace. The study was conducted by InfoNetrix ([www.InfoNetrix.com](http://www.InfoNetrix.com)), a market research and consulting firm with offices in New Orleans and Sacramento. Here we present part two of the three-part series. In this issue we cover the third and fourth signs of the "Seven Signs of GMCS Market Evolution," with the remainder covered in the next issue.

Although the GMCS market will experience a wide range of pervasive changes during the 2002-2006 forecast period as the result of many factors on several different levels, some factors will have a more significant impact on how the GMCS market evolves than others. The study refers to these factors as The Seven Signs of Market Evolution.

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**T**he Seven Signs of GMCS market evolution are listed below with a brief synopsis of each to be presented in serial form over the next few issues. (More comprehensive analyses, as well as pertinent details about how each of these will impact the GMCS market are provided in Section 3: Principal Market Drivers, Issues & Trends.) The signs are:

1. Regulatory Policy & Governance
2. Economics & Investment
3. Technology, Integration & Standardization
- 4. Data Integrity & System Security**
- 5. Web & Wireless Solutions**
6. Enterprise Applications
7. Customer Satisfaction & Service

### **Data Integrity & System Security**

Data integrity is quickly migrating from a general consideration to an implicit expectation.



That is, end-users may not express the need for data integrity because they now expect the supplier to have built-in safeguards for their data as part of the baseline offering. With increasing acceptance of commercial-off-the-shelf relational database systems and general maturity of the applications, these expectations are gradually being met by the vast majority of suppliers.

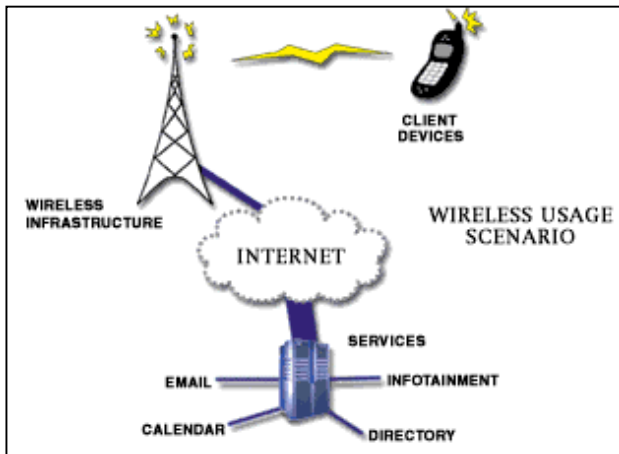
Security, however, raises different questions. Clearly, the War on Terrorism plays a big part in the heightened awareness of security. Yet while most of the public emphasis seems to be focused on the physical security of the utility assets and infrastructure, the data security issues are

equally important. In the GMCS marketplace a dichotomy has developed: On one hand, users realize that they must protect the sensitive data that describes the physical assets of the utility. At the same time, however, there is rapidly growing interest in Web and wireless solutions — two highly vulnerable penetration points for cyber-attacks and other invasive threats.

**Editor's Note:** For additional information about securing your systems, read "Seven Simple Computer Security Tips for Small Business and Home Computer Users" (<http://www.theharlowreport.com/2003/issue27tips.asp>) from the National Infrastructure Protection Center

## Web & Wireless Solutions

The Web arguably represents what is perhaps the most ubiquitous dimension of technological impact on our daily lives, whether at work, at home or at play. The Web has taught corporate users certain things about how to use a computer. (e.g., If it is blue and underlined, click it!)



Although most corporate systems are not yet as easy to use, GIS is rapidly becoming Webified — or at least adopting a more Web-friendly approach. Indeed, now that much of the protracted AM/FM/GIS development and conversion work have been completed by the largest utilities, a steady stream of internal users are demanding access to the resultant data. But, unlike traditional GIS users, these new users may not necessarily be GIS users exclusively. Instead, only occasional access — whether local or remote — may be required. As such, the demand for expanded GIS applications that can

be most easily facilitated via the Web is increasing daily. Wireless applications will likely have an easier time being accepted than early GIS systems because unlike GIS (at the time), wireless technology is already pervasive — not just among utilities but in our everyday lives. However, the true productivity gains of wireless technology will ultimately come from driving many of the previously centralized applications to the field operations level for easy access and use by field crews without host system intervention.

Because of the nature of electric utilities (i.e., assets spread out over an expansive service territory) and the presence of a large mobile workforce, wireless connectivity looms large as a potentially valuable solution set. However, spotty coverage and insufficient bandwidth to support increasingly robust mobile applications continue to impede the advancement of wireless in the utility market. Fortunately, a convergence is taking place between wireless and mobile technology that allows a significant amount of data to be stored in the field device itself and permits wireless access when the latest information is required. Yet while it is clear that utilities want wireless/mobile technology, they are still looking for the mission-critical applications that their field crews will sponsor and use.

Because wireless technology is highly vulnerable to invasive forces, security issues must also be addressed. Indeed, for many users each level of security impacted represents another deterrent to deploying and using the system. Currently, there are three central concerns in the security arena: (1) Stealing data from the airwaves; (2) Stealing bandwidth (for Web surfing or other non-productive activities); and (3) Gaining corporate system access via the wireless connection. Yet although concern #1 is reasonably handled through data encryption; #2 can be easily handled with password protection; and #3 can be overcome through a combination of firewalls, passwords and active device authentication, every level of security remains vulnerable and adds to concerns about broadening user access to the data.

**Find out more**

To learn more about the GMCS Market Forecast, and how you can obtain the complete study, visit InfoNetrix ([www.InfoNetrix.com](http://www.InfoNetrix.com))

## ***Thanks a Lott!***

**A**t a time when he must still be spinning from a questionable off-the-record remark, Senator Trent Lott got a momentary reprieve from public condemnation.

The reprieve came from none other than the ASPRS ([www.asprs.org](http://www.asprs.org)). The imaging and geospatial information society awarded the senator from Mississippi the prestigious ASPRS George E. Brown, Jr. Congressional Honor Award for 2002. The award was given to Sen. Lott in recognition of his leadership, policy guidance, and legislative efforts contributing to significant advancements in the science, engineering, application, education and commerce of imaging and geospatial information.

According to the ASPRS' Anna Marie Kinerney, "Sen. Lott has worked for many years to support the work of NASA, and specifically the John C. Stennis Space Center, a unique multi-agency center of geospatial science and applications in South Mississippi." The Stennis Center works to advance geospatial research, applications and commerce through the cooperation of the National Aeronautics and Space Administration, Naval Research Lab, Naval Oceanographic Office, U.S. Geological Survey, Environmental Protection Agency, as well as many other federal and state agencies and private contractors.

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**Editor's Note:** Sadly, as I am writing this article, I am listening to the news about the tragedy of the Space Shuttle. I know that the employees at Stennis and all the space program locations are saddened by the loss of the seven brave crew—members of the Columbia. Our prayers are for the crew, their families, friends, and countrymen.



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ASPRS President-elect Donald Lauer noted in presenting the award, "Senator Lott has been very active and incredibly supportive of Mississippi-based remote sensing activities which have moved the remote sensing industry and the science ahead throughout this great Nation in a very favorable manner. And while Senator Lott has taken a slightly different approach from that pursued by Congressman Brown, for whom the award is named, the effects of his efforts are equally noteworthy. Senator Lott is highly commended for those efforts and clearly is an example for other legislators to follow in this regard."

ASPRS created this award in honor of the late Congressman George E. Brown, Jr. in acknowledgement of his contributions to advance the benefits of imagery and geospatial information to society. Representative Brown was very supportive of this industry authoring key legislation affecting the industry, supporting relevant research and promoting development of the commercial remote sensing industry.

## **Conclusion**

I once met Senator Lott at a city hall in a small Mississippi town. He was there to get license tags (plates for you non-Southerners) for his daughter's car. He might have been any Dad helping his daughter. He took time for casual conversation with the locals, and little ol me. Odd that a man so down to earth was so instrumental in the space program.

He was to receive the award in April 2002, but scheduling conflicts prevented that. In a way, it is fortunate that the delay occurred, so that he could receive this award now, after his ordeal. It is a terrible thing to see a man who has dedicated his life to governing be so quickly vilified for one remark. Lott was no better, nor no worse than his colleagues. The timing of this award may have been awkward, but I hope it played some part in the healing of a victim of our politically incorrect times.

## **OGC Announces GML3**

As noted in InfoNetrix' (<http://www.InfoNetrix.com>) Market Horizons Report On Gis And Mobile Computing In The Electric Utility Industry (for more information read the excerpts in this issue), there are several converging forces that are dramatically impacting GIS technology. Chief among them is the use of the Web browser as a GIS platform. This is important because it allows GIS to use a much larger tool kit, and delivers GIS to the widest market at the lowest cost.

Nothing comes easy, though. While just about anyone can create a web site (gee, I did!), it takes a special skill to provide true GIS on the net. If the internet stands for anything it stands for standards and open technology. In the GIS arena, the Open GIS Consortium (OGC) — [www.opengis.org](http://www.opengis.org) — has made great strides in providing open standards. In fact, its very mission is “to deliver spatial interface specifications that are openly available for global use.”

Recently, the organization announced the approval and release of Geography Markup Language version 3.0 (GML 3). It defines a data encoding in XML that allows geographic data and its attributes to be moved between disparate systems with ease.

New additions in GML 3 include support for complex geometries, spatial and temporal reference systems, topology, units of measure, metadata, gridded data, and default styles for feature and coverage visualization. GML 3 is almost entirely backwards compatible with GML 2, so that developers and users familiar with GML 2 can begin working immediately with GML 3. Like GML 2, GML 3 will play a key role in both spatial data encoding and transport, and in the description of geographic objects for geospatial Web services.

According to Mark Reichardt executive director, Outreach and Community Adoption “The new release is modular, meaning that users can select out only the parts necessary for use, which simplifies and minimizes the size of implementations.”

Kurt Buehler, OGC CTO explains “GML 3’s modular structure means that those choosing to use GML can literally pick out the schemas or schema components that apply to their work. GML 3.0 also includes a sample packaging tool that creates a tailored schema containing only the required components from the GML core schemas.” Buehler also points out that it is OG ’s intention that this very broad specification, with more than 1000 new tags covering over 400 pages, remains relatively unchanged, save for minor bug fixes, over the next year or so. This stability will give potential implementers time to learn about and use GML 3 effectively.

### **Getting the specification**

As with most specifications, there is lots of documentation, and only the serious GIS geek need bother to read them. But, if you are such a geek, click on over to <http://www.opengis.org/techno/implementation.htm> and start downloading.

## **About OGC**

OGC is an international industry consortium of more than 240 companies, government agencies and universities participating in a consensus process to develop publicly available interface specifications. OpenGIS<sup>®</sup> Specifications support interoperable solutions that “geo-enable” the Web, wireless and location-based services, and mainstream IT. The specifications empower technology developers to make complex spatial information and services accessible and useful with all kinds of applications. Visit the OGC Website at [www.opengis.org](http://www.opengis.org).

# ***Some More About Viruses***

by  
**Richard Lowe Jr.**

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**Editor's Note:** Richard Lowe is back with another top-notch technical article for the not so technical reader. This time he is discussing the inner depths of computer viruses — a timely topic, to say the least. The Internet was just hit with the “SQL Slammer Worm” a computer bug that mostly affects larger networks using Microsoft SQL server. It is thought to have started in South Korea. Jeff Strout, director of IP Services at Cox Communications, said “What it does ... it exploits a hole in the Microsoft SQL server and then propagates itself around the Internet,” Strout says. “Once you're affected, then you go after other people and affect them.”

It seemed to me that it was good time to give us all a refresher course on computer viruses. And who better to tell you about it than Richard Lowe Jr.? He is the webmaster of Internet Tips And Secrets at <http://www.internet-tips.net> By now you should know that he is one of our favorite guest writers.

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**I**n the news it's always reported as a "virus" outbreak. Or someone will say they were "hit by a new virus", or their computer was destroyed by the "I Love You" virus. They are not, in fact, speaking about viruses at all, except in a very general sense. When your average person speaks of a virus, they mean “some unauthorized piece of code was executed on my system”. Technically, this definition is incorrect. Most "viruses" are worms, logic bombs, Trojan horses, and other invading software.

## **Some examples include:**

**Worm** - A worm is a self-replicating virus. Some of the more common worms, such as "I Love You" use Outlook to send themselves to every email address listed in the contact list. Others actually include their own SMTP (simple email system) server internally to send to every email address they can find in any file on the hard drive. Some worms, such as Nimda, actually install themselves on web servers (Microsoft IIS systems) and then search through the internet for other vulnerable machines. When these machines are found, the worm penetrates and installs itself automatically.

**Logic Bomb** - This is a virus or piece of code (often installed by hostile employees) which is timed to trigger its payload at a specific date in the future. For example, a malicious employee might leave some code embedded within the accounting package which causes it to delete all records a year in the future. These types of infections are very difficult to detect and even harder to eradicate, as they may have

been added to the system years before, backups may be corrupted with the malicious code and even the "safe" source copies may have been compromised.

**Trojan Horse** - This type of malicious code is simply a virus or other dangerous program which is embedded within some desirable program. For example, someone might post a very nice screen saver on their web site which includes some code which deletes files, sends information to someone or which simply sits and waits for instructions (these are called zombies).

As you can see, these definitions can overlap. It's possible to write a Trojan horse program which launches a worm which then installs a logic bomb which is set to relaunch itself a month later and start the whole process again. Open the email and nothing happens at all for a month, until the logic bomb triggers. Or a malicious programmer could leave a logic bomb behind him after he leaves a company which launches a month later. This program could scan the corporate address book and send copies of itself to every person listed, as well as making copies on all drives visible on the network. The payload of this worm could be a cool graphic which is actually an executable image which, when opened, deletes every file on the disk.

### **There are several infection routes for viruses.**

**Files** - Many viruses embed themselves within files. The file may just contain the virus, or it may contain real data with the virus hidden inside. They may infect any type of file which is executed, or which contains executable parts. These include .EXE and .COM files, as well as .SYS, .OVL, .PRG and .MNU files. When the program or code is loaded and executed, the virus triggers, and they payload is activated. The "I Love You" virus is an example of this type. Quite often these viruses will be sent as attachments to an email message.

**System or boot code** - A few years ago, way back in the days of MSDOS and CP/M, this was one of the more common infection methods. A virus would embed itself within the system areas on a disk, and when that disk was mounted or the system was booted the virus would execute. These spread by writing themselves into the DOS boot sector on floppy disks or the Master Boot Record on hard disks. In the early days of computers, email was not the most common method of distributing information and files - floppy disks were. So it was very common to mount a floppy and then find your computer has been disabled by a virus. This is becoming less common now that email and the internet is being used more and more to distribute information.

**Macros** - In order to make their products competitive and extremely flexible, many vendors have added the capability to automate certain functions. This is called

scripting, and it is a feature of many word processors, spreadsheet programs and applications. Unfortunately, Microsoft made the decision to allow complex scripts to be executed from within an email message to their email clients (Outlook and Outlook Express). This decision, while seeming to add benefit for many of their customers, actually more or less eliminated any semblance of security from the programs and has resulted in a huge plague of easy-to-write and exceptionally deadly virus attacks. Later versions of this software have tightened security greatly and with proper installation these types of attacks can be greatly reduced.

Other macro viruses can come embedded within Word and Excel documents, PowerPoint presentations and just about any other document which supports scripting. Since Microsoft has tended to allow scripting within virtually their entire product line (this is a great feature to mention in promotional materials), it means that the possibility exists to receive infections from anything with their logo printed on it.

So how do you protect yourself with all of these (and many more) types of viruses waiting to damage or destroy your system?

1. Purchase the most recent version of anti-virus software, and keep the definitions up-to-date. This is probably the most important decision you can make in regards to the safety of your system. My advice: spend the money and buy the best anti-virus product you can find, and update the version every single year.
2. I'll repeat this again - keep those definitions up-to-date. Make sure your anti-virus software downloads new definitions at least once per week.
3. If you use Outlook 2000, be sure you have installed the Outlook Email Patch or Service Release 3. This will further protect you.
4. Don't use Outlook express before version 6 (which comes with Internet Explorer 6) to read email. Use either a patched version of Outlook 2000, Outlook XP, Outlook Express version 6 or above, or some other email product such as Eudora.
5. Set the folder attribute "Hide extensions for known file types" to "off". This is critical. Otherwise, file types will be hidden from you which you MUST be able to detect.
6. Do not open executable attachments, regardless of who they came from. Not that rule #5 (above) must be followed for you to be able to do this.
7. Subscribe to the newsletter produced by your favorite anti-virus company.
8. Don't listen to anyone who says you do not need anti-virus protection on your system. These people are uneducated fools.
9. Beware of virus hoaxes that tell you to delete things on your system or forward warnings to all of your friends. These are, without exception, hoaxes. Just delete these emails immediately.

Some More About Viruses

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## Top Eight Morons of 2002

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**Editor's Note:** I suppose this is the time of year to think about resolutions and the good times of the past year. Then again, if you have nutty friends — John Kercher comes to mind — you get oddball emails. John sent me the following list of the Top Eight Morons of 2002. I cannot resist sharing it with you. Perhaps you know of these folks.

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1. **WILL THE REAL DUMMY PLEASE STAND UP?** AT&T fired President John Walter after nine months, saying he lacked intellectual leadership. He received a \$26 million severance package. Perhaps it's not Walter who's lacking intelligence.
2. **WITH A LITTLE HELP FROM OUR FRIENDS:** Police in Oakland, California spent two hours attempting to subdue a gunman who had barricaded himself inside his home. After firing ten tear gas canisters, officers discovered that the man was standing beside them in the police line, shouting, "Please come out and give yourself up."
3. **WHAT WAS PLAN B?** An Illinois man, pretending to have a gun, kidnapped a motorist and forced him to drive to two different automated teller machines, wherein the kidnapper proceeded to withdraw money from his own bank accounts.
4. **THE GETAWAY!** A man walked into a Topeka, Kansas Kwik Stop, and asked for all the money in the cash drawer. Apparently, the take was too small, so he tied up the store clerk and worked the counter himself for three hours until police showed up and grabbed him.
5. **DID I SAY THAT?** Police in Los Angeles had good luck with a robbery suspect who just couldn't control himself during a lineup. When detectives asked each man in the lineup to repeat the words: "Give me all your money or I'll shoot," the man shouted, "That 's not what I said!"
6. **ARE WE COMMUNICATING?** A man spoke frantically into the phone, "My wife is pregnant and her contractions are only two minutes apart!" "Is this her first child?" the doctor asked. "No!" the man shouted, "This is her husband!"
7. **NOT THE SHARPEST TOOL IN THE SHED!** In Modesto, California, Steven Richard King was arrested for trying to hold up a Bank of America branch without a weapon. King used a thumb and a finger to simulate a gun, but unfortunately, he failed to keep his hand in his pocket. (helllllloooooo!)
8. **THE GRAND FINALE (I LOVE THIS ONE!)** Last summer, down on Lake Isabella, located in the high desert, an hour east of Bakersfield, California, some folks, new to boating, were having a problem. No matter how hard they tried, they couldn't get their brand new 22 ft. boat going. It was very sluggish in almost every maneuver, no matter how much power was applied. After about an hour of trying to make it go, they putted to a nearby marina, thinking someone there could tell them what was wrong. A thorough topside check revealed everything in perfect working condition. The engine ran fine, the out drive went up and down, and the prop was the correct size and pitch. So, one of the marina guys jumped in the water to check underneath. He came up choking on water, he was laughing so hard. NOW REMEMBER THIS IS TRUE ... under the boat, still strapped securely in place, was the trailer.



## Out of the Box

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**Editor's note:** In “Out of the Box” we bring you news snippets that are not necessarily related specifically to GIS. These are items that come across my screen that help me understand our industry, by understanding the world around us. For the complete article just click “Details Here.” Think of it as thinking **Out of the Box**

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### In State and Local Government ...

- As a sluggish economy and revenue shortfalls continue to plague state government budgets, many governors are deciding how best to use limited funds for competing priorities — and some are looking at technology as one answer. [Details Here:](#)

<http://www.fcw.com/geb/articles/2003/0127/web-input-01-29-03.asp>

- Snow is hurting already tight city budgets. Schenectady City Council President Frank Maurizio said the snow put that city deeper into a deficit situation after spending \$110,000 on overtime alone after the holiday nor'easter. In Syracuse, where \$600,000 were added to last year's \$3 million snow-removal budget, officials aren't sure it will be enough. Syracuse is running nearly 20 inches of snow above normal, Rochester nearly 30 inches. [Details Here](#)

[http://www.wokr13.tv/news/state/story.aspx?content\\_id=16A5F694-BC74-4CD5-8BCC-9596DC1309CE](http://www.wokr13.tv/news/state/story.aspx?content_id=16A5F694-BC74-4CD5-8BCC-9596DC1309CE)

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### In Technology ...

- Forget coupons and advertising; the next frontier for location-based wireless services is the location-appropriate downloadable app. [Details Here](#) <http://www.business2.com/articles/web/0,1653,46530,00.html>

- “Criminal activity on the Internet is growing — not steadily, but exponentially, both in frequency and complexity,” said Larry Ponemon, chairman of the Ponemon Institute, an information management group and consultancy. “Criminals are getting smarter and figuring out ways to beat the system.” The number of successful, and verifiable, worldwide hacker incidents for the month of January is likely to surpass 20,000 — above the previous record of 16,000 in October, as counted by mi2g, a computer security firm based in London. [Details Here](#)

<http://www.nytimes.com/2003/01/27/technology/27ECOM.html?ntemail0>

- Automated Vulnerability Remediation - The Cure for Security's Common Cold. This Executive White Paper from the Aberdeen Group provides insight into the evolution of automated vulnerability remediation, an overview of the types of solutions available, examples of suppliers, and criteria that IT buyers can use when evaluating solutions. [Details Here](#)

<http://www.aberdeen.com/2001/research/12023072.asp>

- Technology companies and the Pentagon reached an agreement to release more spectrum for the next generation of wireless devices. This could lift the popularity of high-speed wireless Internet service. [Details Here](#)

<http://www.nytimes.com/2003/02/01/technology/01SPEC.html?ex=1044766800&en=0fc9e7289915c161&ei=5062&partner=GOOGLE>

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## **In Utilities ...**

- Vermont must upgrade its electric lines, build more power plants or start conserving energy better to avoid future power shortages, according to the people who run the state's high voltage power grid. "We've seen a big increase in summer demand over the past three years, but no major power plants or lines have been built in Vermont for about 20 years," Tom Dunn, a project manager at the Vermont Electric Power Co (VELCO), said. Details Here [http://www.forbes.com/home\\_europe/newswire/2003/01/28/rtr861926.html](http://www.forbes.com/home_europe/newswire/2003/01/28/rtr861926.html)
  - Pakistan "saboteurs" reportedly blast gas pipeline. The main gas pipeline to the Punjab and the North-West Frontier Province [NWFP] from Sui was blown up again on Sunday [26 January] night as the blast completely damaged two supply pipes of 30 inch and 20 inch diameter. The incident took place inside Balochistan, a few kilometres away from Sui. Initial reports suggested the saboteurs dug out the subsurface supply line and blew it up with a bomb. This main supply line catered to around 45 per cent needs of the total gas requirement of the Punjab and the NWFP. The channels supply 600m cubic feet from the total of 1000 mc/ft of gas every day to Punjab and the NWFP. The big explosion was followed by a huge fireball, which could be seen from miles. The Sui Northern Gas Pipeline [SNGPL] teams were dispatched to the spot and the restoration work was underway. Details Here <http://www.paktribune.com/news/index.php?id=15167>
  - The Tennessee Valley Authority (TVA) is preparing to raise electric rates this fall for the first time in six years, TVA distributors were told. The proposed rate changes would boost wholesale rates to residential and commercial customers by 8.1 percent. "The time has come when we simply need more money to meet the important environmental commitments we have made," TVA Chief Financial Officer David Smith said. "In order to offset the costs of installing emissions control equipment needed to cover the requirements of the existing Clean Air Act, we are proposing a rate increase for fiscal year 2004." The rate increase is projected to yield an additional \$365 million a year for the federal utility. Details Here [http://www.knoxnews.com/kns/local\\_news/article/0,1406,KNS\\_347\\_1694852,00.html](http://www.knoxnews.com/kns/local_news/article/0,1406,KNS_347_1694852,00.html)
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## ***GIS Net Surfing***

### **A Tribute to President Bush**

<http://www.angelrays.com/mb/pres/bush.html>

A series of inspirational messages based on acts of faith, honesty and loyalty by President George Bush.

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### **Welcome to ColorBrewer!**

<http://www.personal.psu.edu/faculty/c/a/cab38/ColorBrewerBeta.html>

ColorBrewer is an online tool designed to help people select good color schemes for maps and other graphics. It is free to use, although we'd appreciate it if you could cite us if you decide to use one of our color schemes.

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### **MapInfo's Tips and Tricks**

<http://dynamo.mapinfo.com/miproducts/Support.cfm?ProductID=1181>

This page provides tips and tricks for MapInfo® TargetPro® v4.0 — the first analytical customer relationship management (CRM) solution that enables organizations to tightly link location analysis to CRM systems and other databases.

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### **Los Alamos National Laboratory**

<http://nis-www.lanl.gov/groups/nis-4/>

Space Instrumentation and System Engineering NIS-4 is a design-to-completion science and engineering group that develops and produces sensors, instruments, and systems for applications requiring advanced monitoring, detection, and evaluation technology.

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### **Stanford University GPS Lab**

<http://www.stanford.edu/group/GPS/>

The GPS Laboratory is in the Department of Aeronautics and Astronautics at Stanford University and has approximately 30 people including Professors, Research Associates, and students.

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### **Metadata Tools**

<http://www.fgdc.gov/metadata/toollist/metatool.html>

Great site for ... guess what? Metadata!



## ***News to Use***

### **Malaysian Department of Survey and Mapping**

<http://www.jupem.gov.my>

The Department of Survey and Mapping Malaysia (DSMM), the government agency responsible for all topographic mapping in Malaysia, selected Intergraph's GIS, cartographic, and photogrammetric solutions for its new Fast Mapping System. The Fast Mapping System is designed to provide geospatial data to the various departments within the Malaysian government. The Department of Survey and Mapping Malaysia's mandate is to develop an enterprise GIS and mapping system that produces sophisticated, integrated spatial information in a variety of digital products and is readily available to the country's decision makers within various government departments.

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### **Applied Geographics**

<http://www.appgeo.com>

Applied Geographics, Inc. (AGI) announced that Rich Grady was elected President at the Board of Directors (BOD) meeting on January 16, 2003. Mr. Grady joined AGI in 1994, and has served as Executive Vice President since 1995. Joan N. Gardner, founder and former president, will remain as Chairman of the BOD and Treasurer of the company. Mr. Grady built AGI's Facilities & Environment practice, and manages large projects for both government and private sector clients. He received a letter of recognition from the US Navy for his work in support of Web-based installation management at Portsmouth Naval Shipyard over the past five years.

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### **MapQuest Enterprise v2.0**

<http://www.mapquest.com/solutions>

MapQuest® announced the launch of its next-generation mapping and location-based service for businesses — MapQuest Enterprise v2.0. MapQuest Enterprise v2.0 is a high performance mapping, routing, geocoding and spatial searching engine that fully integrates and leverages the highest quality geographic data available. A locally hosted solution, MapQuest Enterprise v2.0 allows businesses to map and route-enable their Web sites, intranets, extranets and wireless applications to better serve their customers and improve the way they do business. “The release of MapQuest Enterprise v2.0 is an important milestone in the evolution of MapQuest technology and our advanced business solutions,” said Tommy McGloin, Senior Vice President and General Manager of MapQuest. “We’re empowering businesses to integrate mapping, routing and other location-based services across multiple platforms in order to improve their marketing and customer service functionalities. ...”

## **The Geography of Health Care Planning and Marketing**

<http://campus.esri.com>

The Geography of Health Care Planning and Marketing is a new ESRI Virtual Campus course that teaches how GIS software can be used by health care professionals to optimize service delivery and identify new marketing opportunities. This six–module course (the first module is free) shows the various ways ArcView Business Analyst 1.1a adds value to business spatial studies. Greg Pugh, director of corporate planning at Jewish Hospital HealthCare Services (JHHS), is the course author. JHHS, a regional network, provides health care services at many hospitals and locations throughout Kentucky and southern Indiana and is known for high–quality, advanced health care.

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## **Lakeview Technology Inc**

<http://www.lakeviewtech.com>

Lakeview Technology Inc., a leader in the development and distribution of infrastructure software for the information enterprise, announced a relationship with ESRI. Lakeview’s OmniReplicator simplifies data distribution through an intuitive graphical user interface. Administrators can point and click to select data sources and targets without the need to modify any application code. “Prior to our relationship, some ESRI customers who realized they had a need for replication found OmniReplicator on their own,” said Glenn Adriance, OmniReplicator’s worldwide independent software vendor partner manager. “For example, one ESRI customer, a large forest management company, uses OmniReplicator to synchronize one database it uses for editing purposes with another one it makes available to its customers. The company’s vice president of technical services told us optimizing the value of a timber investment requires accurate data. The company couldn’t continue with the enhancements of its systems (that make this value optimization possible) without OmniReplicator’s ability to synchronize its edit and live databases.”

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## **GITA**

<http://www.gita.org>

The Geospatial Information & Technology Association (GITA) announced that it has published the Geospatial Technology Report 2002: A Survey of Organizations Implementing Geospatial Information Technologies. The report, the fifth in an annual series from GITA, contains detailed information on the complexity, direction, and completeness of geographic information systems (GIS) projects being implemented at 187 infrastructure–based organizations — an increase of 19%; from the 2001 study. In addition to comprehensive cross–industry analyses and trends, the 91–page report on CD provides detailed information on five industry sections: electric, gas, pipeline, telecommunications, and water/sewer/storm. Information in each industry section focuses on landbase accuracy, sophistication, maintenance cycles, application usage, and interfaces. The report, which is provided free of charge to survey participants, is available for \$125 for GITA individual members and \$175 for nonmembers.

## **Coulter Mapping Solutions and Azteca Systems**

<http://www.cmsgis.com/> and <http://www.azteca.com/>

Coulter Mapping Solutions, Inc. and Azteca Systems, Inc. partnered to create a computer maintenance management system for Public Works and Utilities organizations. The companies combined their respective technologies to provide a comprehensive solution for GIS-based asset and maintenance management for water, wastewater, storm Water, streets, electric and gas utilities. Both firms will offer Coulter Mapping Solution's CMSEdit with Azteca Systems's Cityworks Enterprise Asset & Maintenance Management software. "This collaborative effort truly benefits our customers," said Brian Haslam, president of Azteca Systems. "Being able to offer the functionality available in CMSEdit, combined with Cityworks, provides customers with an excellent set of asset management tools."



***If you change your  
Email address,  
tell us!***

[Charlow@charter.net](mailto:Charlow@charter.net)

