

# ecomunicator

## Visualization Lab Brings Mars to NUIT

With the help of some innovative technology at the NUIT Visualization Lab (Vislab), students and researchers can view a wide variety of three-dimensional images from the Mars Exploration Rovers.



*A Geology class views 3-D images from the Mars Rover in Northwestern's Vislab, hence, the cool-looking 3-D glasses.*

Dr. Doug Roberts, manager of the Vislab for NUIT Academic Technologies and an astronomer with Chicago's Adler Planetarium, arranged for Northwestern to share Mars Rover images with the Adler. After mirroring the Adler database and housing it on two servers at NU, Roberts manipulated the raw images from Mars and turned them into 3-D wonders.

The Mars images are viewed on a geowall system. This system is a combination of stacked projection technology using polarizing filters/glasses, fast graphics cards, and inexpensive PCs. This makes it possible to visualize images in stereo. Stereo visualization, also known as 3-D visualization or stereoscopy, is based on delivering slightly different images to the left and right eyes. The images appear to have depth as they are projected on a special screen by visitors wearing 3-D glasses such as the ones used in IMAX theaters.

"The human eye-brain system is the fastest way for humans to absorb large amounts of information," said Roberts. "The advanced visualization resources in the Vislab bring this capability to teaching and research at NU."

NU will have access to the Mars images until the mission is completed this summer. Both the Geology and Astronomy departments at NU have used the lab as part of their curriculum. Students from outside the University have come to campus to view and study the Mars images as well, including girls visiting for Take Our Daughters to Work Day. The Vislab also worked with David Singham, a freshman at Evanston Township High School, who helped create 3-D images of Mars during a half-week internship.

The Mars expedition creates enormous opportunities for Northwestern to "take the show on the road." Recently, Professor Mark Robinson, Director of NU's Center of Planetary Sciences, and Roberts gave a presentation at the Adler in an effort to do additional outreach and bring Mars even closer to home.

As time-consuming as the Mars project is, there are a variety of projects taking place in the Vislab that are enhancing research at NU. Work has begun on the 3-D visualization of solid objects and large databases, such as the Eros 433 asteroid that was visited by the Near Earth Asteroid Rendezvous (NEAR) Shoemaker spacecraft. In addition, work is also being done with Professor Fred Rasio of WCAS Physics & Astronomy on the visualization of 3-D calculations of dense star clusters and galactic centers.

NUIT's Vislab is designed for research and as a component to enhance the classroom experience. It is open to the entire University, but is especially targeted for use by faculty and departments with significant visualization needs. The lab was designed to be flexible in how data was presented, leaving the door open for many new technologies. For more information, please visit <[vislab.northwestern.edu](http://vislab.northwestern.edu)>.

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## NUInfo's Greatest "Hits"

Ever wondered which NU Web pages are accessed most often? Here's our "top ten list" for the months of January-March, 2004.

### The top ten home pages:

1. HereAndNow  
<[hereandnow.northwestern.edu](http://hereandnow.northwestern.edu)>
2. NUTV  
<[www.tss.northwestern.edu/nutv/helpguide/](http://www.tss.northwestern.edu/nutv/helpguide/)>
3. Northwestern University home page  
<[www.northwestern.edu](http://www.northwestern.edu)>
4. WebMail  
<[www.northwestern.edu/webmail/](http://www.northwestern.edu/webmail/)>
5. CAESAR  
<[www.northwestern.edu/caesar/](http://www.northwestern.edu/caesar/)>
6. Academics top-level Page  
<[www.northwestern.edu/academics/](http://www.northwestern.edu/academics/)>
7. Student top-level Page  
<[www.northwestern.edu/student/](http://www.northwestern.edu/student/)>
8. Admissions top-level Page  
<[www.northwestern.edu/admissions/](http://www.northwestern.edu/admissions/)>
9. Faculty/Staff top-level page  
<[www.northwestern.edu/staff-fac/](http://www.northwestern.edu/staff-fac/)>
10. Human Resources Jobs Search  
<[www.northwestern.edu/hr/jobs/](http://www.northwestern.edu/hr/jobs/)>

*Thanks to Adam Finlayson of University Relations' Web Communications department for providing these statistics.*

## Featured Web Site: Network Services

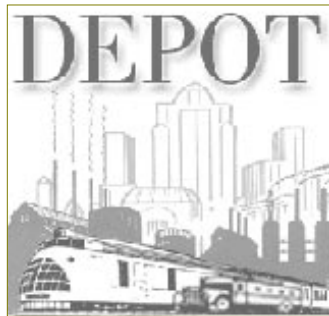
NUIT introduces a new Web site with answers to commonly asked questions about network access-related services, and links to other network-related information. Learn how to configure your computer for a dynamic or static Ethernet connection, connect using a wireless or dial-up connection, configure Virtual Private Network (VPN) software, and more.

The Wireless Networking section describes how to set up your computer to connect to NU wireless networks. It also includes wireless access locations on campus, informs NU departments and schools about implementing wireless networks, and provides wireless zone signage information for departments to increase the awareness of wireless access on campus.

Visit the Network Services Web site at <[www.it.northwestern.edu/network/](http://www.it.northwestern.edu/network/)>.

## A Gateway to Learning Tools

The University's Course Management System (CMS) is drawing increasing interest from faculty for its ability to provide a simple gateway to a variety of new services being introduced to the NU community. Many faculty have long appreciated the ease with which the CMS may be used to distribute course readings, announcements, and the like, but now more sophisticated tools are being made available within the interface.



Northwestern's Depot file management service <[www.at.northwestern.edu/depot](http://www.at.northwestern.edu/depot)> is an interesting example of the new technology now delivered through the CMS. Students in the 24 sections of the McCormick School's Engineering Design and Communication course (IDEA 106) now "see" the Depot service in their CMS sites, and can share files within the small project teams that are integral to the course objectives. The availability of the service in this way means students do not need to remember or bookmark still another URL, and are much more prone to use the service as a result.

Another new service available to all NU students is RefWorks, a Web resource provided by the University Library to enable students and faculty to maintain their own personal databases of bibliographic citations on the network. Students can go into the "Tools" area of their CMS sites and click on the RefWorks button, providing them a valuable personalized resource that they don't even need to enter a password in order to view. Faculty can easily insert bibliographies into any content area of their CMS courses using the RefWorks tool.



A number of other new CMS tools should be appearing in the near future.

## Smart Classrooms Initiative

Although smart classrooms (technology-enhanced classrooms) have been in use at the University for some time, a major initiative launched by the Provost's Classroom Committee will add basic network connections and LCD projection capabilities to every general-purpose classroom controlled by the Registrar's Office. The first phase of the 10-year initiative was completed over Spring Break and encompassed a total of eight classrooms, four in Kresge Centennial Hall and four in the Technological Institute. The next phase will involve renovation of between eight and ten additional classrooms during the summer or fall quarter.

"When you have a smart classroom that's used smartly, you have more potential for innovation," said Gregory Light, director of NU's Searle Center for Teaching Excellence and a member of the Classroom Committee.

"This initiative will mean more flexibility for faculty in terms of the range of materials they can bring to their students."

Unlike most of NU's more conventional Smart Classrooms with networked desktop computers, faculty who use the redesigned rooms will need to bring their own laptop computers.

Each room will have a bright, ceiling-mounted projector, VCR, DVD player, a control system, and a tethered, mobile cart to allow the instructor to relocate the cart/lectern to a position and location that better fits their teaching style.

"What we foresee is that as faculty, and students, bring laptops to class, there will be more group-oriented work done on projects," Light said. "The technology and flexibility of this design allows for greater variety."

## "Lightweight" Directory Knocks Out Ph

It didn't take ten rounds, but it has been planned for a year. At the end of 2004, Ph (the current online directory service) will hang up its gloves and the new Lightweight Directory Access Protocol (LDAP) will take its place. LDAP is a network protocol standard which allows users to locate organizations, individuals, and other resources such as files and devices in a network. The change is being made in preparation for the future implementation of a Web single sign-on environment which will allow users to access multiple secured Web pages by only signing on once using a single page.

LDAP is far more robust than Ph because it can hold more than just directory information and can also be used by networks and Web servers for authentication (the process that checks the user's identity). LDAP is also platform-independent, meaning that it will work with all operating systems.

The migration to LDAP, which began in May 2003, has been gradual. Ph will be completely retired in the fourth quarter of this year. One important, upcoming milestone of this transition will be the retirement of the LDAP directory mirror, [ldap.nwu.edu](http://ldap.nwu.edu), which will coincide with the retirement of the [nwu.edu](http://nwu.edu) domain name from e-mail delivery on June 20, 2004. Any user who has e-mail software configured to use the [ldap.nwu.edu](http://ldap.nwu.edu) mirror site must reconfigure their e-mail client to point to the new directory service, [directory.northwestern.edu](http://directory.northwestern.edu). Step-by-step instructions to configure e-mail client software are located at [www.it.northwestern.edu/e-mail/config/index.html](http://www.it.northwestern.edu/e-mail/config/index.html). For more information regarding the LDAP migration, please visit the NUIT Transitions site at [www.it.northwestern.edu/transitions/](http://www.it.northwestern.edu/transitions/).

So although Ph had a good run here at Northwestern, LDAP becomes the new "lightweight" champion of NU's world.

## Videoconferencing Connects to the World

The Academic Technologies group of NU Information Technology continues to make major investments in videoconferencing equipment. Improved facilities, faster networks, and lower costs have all contributed to a growing interest in videoconferencing at Northwestern.

In recent months, there has been special interest in international videoconferencing for education and research. "We used to host two, perhaps three, international videoconferences a year," said Gretchen Guo, videoconference coordinator for NUIT Academic Technologies. "But this year, we've hosted several within the past few months." She listed Russia, Taiwan, Israel, England, Sweden, Switzerland, Canada, and France among this year's international participants.

"Videoconferencing has become a mission-critical technology for universities and research institutions around the world," said Larry Amiot, digital video systems engineer for NUIT

Academic Technologies. "Faculty and staff here are using videoconferencing for interactive classes, seminars, research collaborations, business meetings, and remote attendance and presentations at conferences."

A videoconference with Moscow in January was "very successful," according to Irwin Weil, Professor Emeritus in the Weinberg College of Arts & Sciences. Professor Weil, a member of the WCAS Slavic Languages and Literature department, worked with NUIT to coordinate the link-up between Northwestern, the Russian State University for the Humanities in Moscow, the American Council of Teachers of Russian, and five U.S. universities.

"This was a chance for important specialists on both sides of the ocean to work with each other towards the creation of a center for American studies," said Professor Weil. "This was my first videoconference, and everything went smoothly, despite the nine-hour time difference between here and Moscow."

*Continued on page 5*

## NU Hosts 33rd Annual ACUTA Conference in August

Northwestern University is the official host of "Learning, Networking and All That Jazz," ACUTA's 33rd annual conference and exhibition, scheduled for August 1-5 at the Sheraton Chicago Hotel downtown. NUIT will staff a hospitality table at the Sheraton Hotel for the first three days of the conference.

ACUTA, the Association for Communications Technology Professionals in Higher Education, is an international non-profit educational association serving colleges and universities and represents 825 institutions of higher education. For further information about the conference, please visit Northwestern's Welcome ACUTA Web site at [www.it.northwestern.edu/acuta/](http://www.it.northwestern.edu/acuta/).

## Q & A: Keeping Your Home Computer Secure

**Q: I frequently connect to the NU network from home. Does my home computer need to be as secure as my computer at work?**

**A.** Yes, it does! If you access the NU network from home using VPN software or the modem pool, you could be vulnerable to any number of threats, such as the recent "Gaobot" computer virus outbreak on campus. If your home computer becomes infected, NU will disable your netid to protect the network.

To help your computer stay safe, follow these steps:

- Install the latest NUIT-supported version of Symantec AntiVirus (SAV).
- Configure SAV to run LiveUpdate and scan your hard drive daily.
- Set your operating system to check for updates automatically.
- Set strong passwords, and change your password/s often.
- Disable the Guest account.
- Disable file sharing.
- Use a personal firewall.

Visit the Viruses section of NUIT's "Get Control" site [www.it.northwestern.edu/getcontrol/viruses.html](http://www.it.northwestern.edu/getcontrol/viruses.html) and scroll down to "Ensuring Your Network Connection" for helpful links to software downloads, virus definition updates, and more.

## Software Corner

### Intellisync

Intellisync, a Meeting Maker platform add-on, provides two-way synchronization between Meeting Maker clients and Pocket PCs. With Intellisync, Meeting Maker users are able to synchronize calendars, to-do lists, and contact information with all Pocket PC (Windows CE) devices. It also works with Outlook Calendar. Intellisync is available for \$35 to Northwestern users with a registered and validated installation of Meeting Maker 7.2.1 or above. Users are required to have Windows 2000 Professional or Windows XP installed. Additional information on purchasing and configuring Intellisync can be found at [www.it.northwestern.edu/introductions/](http://www.it.northwestern.edu/introductions/).

### SPSS 12.0

Users with a current (fiscal year 2004) SPSS Windows license may upgrade to the new version of the software free of charge from NUIT's software server or can purchase media for installation for \$15. Users who own an FY03 SPSS license may purchase an SPSS 12.0 Windows License Renewal with Upgrade for \$125. Users with fully expired licenses (non FY03 or FY04) and all other, new users may purchase the new SPSS 12.0 software for the initial license price of \$250. Additional information and purchasing guidelines can be found at [www.it.northwestern.edu/introductions/](http://www.it.northwestern.edu/introductions/).

### Maple 9.0

NUIT is making available the most current version of Maple computation software for faculty, staff, and students for a fee of \$35. This new pricing structure will ensure that the latest versions of Maple software continue to be available to the Northwestern research and teaching communities at a significant discount. Currently, users will be able to purchase each new version as it becomes available for the \$35 fee and older versions will be available at no cost. Additional information and purchasing guidelines can be found at [www.it.northwestern.edu/transitions/](http://www.it.northwestern.edu/transitions/).

If you have software questions, please e-mail [questions@northwestern.edu](mailto:questions@northwestern.edu).

## NUIT Gets Tough With Viruses

NUIT has rolled out a virus response plan to better manage the ever-growing challenge of virus and security threats on campus. NUIT began drafting the response plan after the Bugbear virus outbreak last summer and has successfully implemented it during recent outbreaks.

The plan is meant to minimize the impact of future University network threats by defining procedures for responding to virus and worm incidents. Members of NUIT's Virus Response Team assume various roles and notify key staff across campus when a network threat is detected.

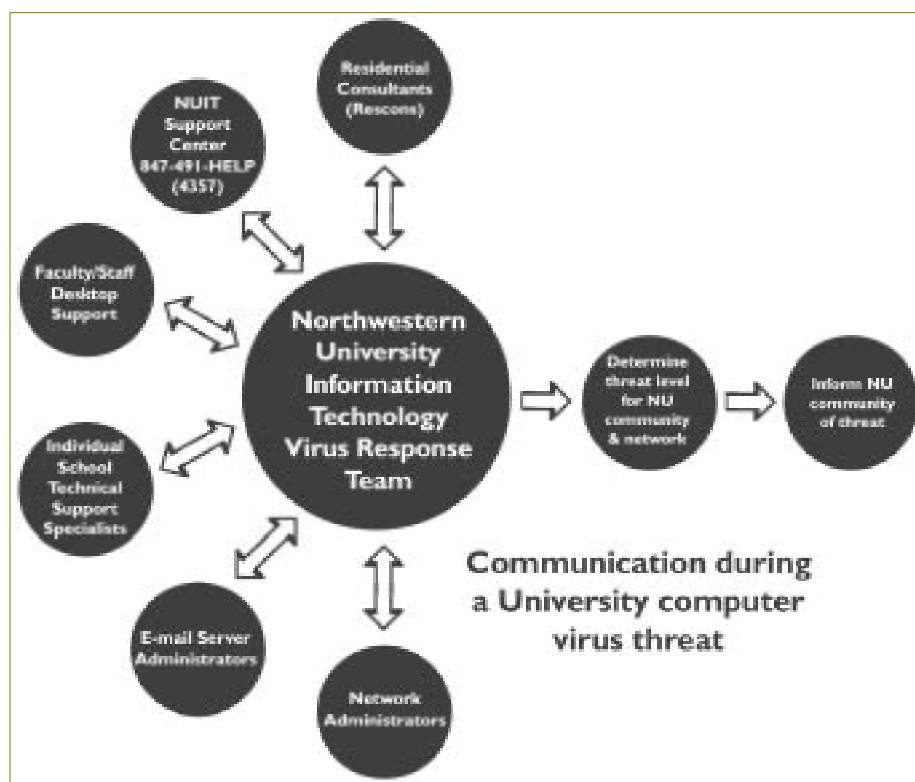
The virus is monitored by the team and the first line of defense is put into place. When possible, this results in blocking the virus at the network border. Given the open nature of information flow at the University, however, this does not always prevent network threats from reaching your computer.

If the virus threat grows, it is given a higher alert level and the NU community is notified via e-mail and/or through postings on NUIT's Get Control site. If the virus outbreak becomes severe, a link will be posted on the Northwestern home page and HereandNow.

"This growth of viruses is not letting up," said Wendy Woodward, director of Technology Support Services. "NUIT must continue to be alert at all levels."

In today's world, viruses are becoming part of a typical day and it doesn't look like they're going away any time soon. In the meantime, NUIT will continue its efforts to keep the NU network safe and secure. Over the summer, additional network tools will be explored to help fight virus outbreaks.

It's crucial that individual users stay vigilant and partner with NUIT to combat this problem. You can be prepared by running Symantec's



LiveUpdate on a daily basis, creating strong passwords, and making sure you have the latest operating system patches for your computer. For more information, please visit [www.it.northwestern.edu/getcontrol/](http://www.it.northwestern.edu/getcontrol/).

## CONDUITS Update

The much-anticipated CONDUITS project (Customer-Oriented Network Delivering University Information Technology Services) is an integrated system designed to accommodate all University customer products and services offered by NUIT. The system will feature a Web portal through which departments can order services, with a "shopping cart" type interface. Bills will be available online as PDFs or Excel files; the Excel format will allow for more efficient bill sorting and distribution by departments. Also, departments will have greater control over what services are ordered, as all orders will require approval by designated departmental contacts. Look for deployment of CONDUITS in early fiscal year 2005.

# Free Technology Presentations

## Tech Talks: Technology for You

Each quarter, NUIT presents a variety of free "Tech Talk" presentations open to the entire University community. Tech Talks cover new technology offerings and technology-related issues that improve the every day work environment of the University. All Tech Talk presentations are videoconferenced to Wieboldt Hall, Room 421 on the Chicago campus.

### **Purchasing Software and Computer Equipment at NU** June 2, 3:00 p.m. - 4:30 p.m. University Library, Forum Room

Prepare for Fall Quarter and learn about the availability of personal and departmental site-licensed software, computer equipment, and the proper ordering process. This presentation will cover new features of Microsoft's Office 2003 suite and other new software titles available from NUIT.

For detailed descriptions of future Tech Talks and registration information, please visit <[www.it.northwestern.edu/events/](http://www.it.northwestern.edu/events/)>.

## 2East: New Technology Series

In partnership with the University Library, the 2EAST: New Technology Series is specifically intended for Northwestern faculty who want to take advantage of the teaching and research capabilities of digital media, course management

systems, online archives, advanced visualization technologies, electronic journals, and other emerging technologies.

### **Exploring AyeWare: An Online Group Decision-Making Tool** May 4, 12:30 p.m. - 1:30 p.m. University Library, Forum Room

AyeWare is a group communication, collaboration, and decision-making tool developed by Kellogg and NUIT. AyeWare provides an online workbench for the design, definition, preparation, execution, and evaluation of many different kinds of structured multi-stage rule-driven group decision-making experiments.

### **Educational Uses of Blogs** May 18, 12:00 p.m. - 1:00 p.m. University Library, Forum Room

Weblogs, or "blogs," are an extremely popular mode of micropublishing on the Web. NUIT Academic Technologies and the Library have been testing blog software and will share their results, demonstrating how some educators use this tool for student communication and publishing.

For detailed descriptions of future 2East: New Technology presentations and registration information, please visit <[2east.northwestern.edu](http://2east.northwestern.edu)>.

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## Videoconferencing, continued from page 2

Weil was admittedly skeptical at first. "I was expecting some artificiality," he said, "but instead I felt like I was in the same room with those guys." He hopes to arrange a repeat videoconference in the near future.

The Internet2 consortium has actively promoted videoconferencing as an advanced application on an international basis, according to Larry Amiot. Worldwide "Megaconferences" have allowed engineers and technicians to develop tools and technologies to establish state-of-the-art Internet videoconferencing communities in education and research around the world.

In May, "Megaconference Jr.," a new project designed to involve elementary and secondary students worldwide, will make use of advanced multi-point videoconferencing technology. Among the participants is NUIT's Collaboratory Project.

With three dedicated videoconferencing classrooms and several seminar rooms equipped with the technology, NUIT currently coordinates 15 to 20 sessions a week, and recently has seen a rise in demand for the service. More information on NUIT's videoconferencing services can be found at <[www.at.northwestern.edu/ctg/videoconf/](http://www.at.northwestern.edu/ctg/videoconf/)>.

# What's New and What's Changing: Technology at NU

## What's New?

- NUIT changed the NUTV Web portal ([www.northwestern.edu/nutv/](http://www.northwestern.edu/nutv/)) and view tool to better reflect service options available to the on-campus community. This new portal includes two "tiers" of NUTV service for the University - Basic and Expanded. "Expanded NUTV" is currently available to students living in the residence halls. The newly added "Basic" service is available to the entire NU community over multicast-enabled, switched network connections. The channels are determined by the University and are provided for the purpose of supporting Northwestern's academic mission.

For more information about NUIT announcements, please visit <[www.it.northwestern.edu/introductions/](http://www.it.northwestern.edu/introductions/)>.

## What's Changing?

- Effective September 1, faculty and staff who require appointments for computer laptop issues will be referred to local technical support or Distributed Support Services (DSS). Faculty and staff can continue to call the NUIT Support Center as their first line of defense in troubleshooting computer issues. For additional information on DSS services, please visit <[www.tss.northwestern.edu/DSS/dss\\_services.html](http://www.tss.northwestern.edu/DSS/dss_services.html)>. Please direct questions to the NUIT Support Center at 847-491-HELP (4357) or e-mail [consultant@northwestern.edu](mailto:consultant@northwestern.edu).

- On June 20, the "nwu.edu" domain will be retired and e-mail addresses ending in nwu.edu will no longer function. This means you must configure your e-mail client to reflect the northwestern.edu address. Users who have subscribed to a listserv under the old domain should unsubscribe from the list and re-subscribe using the new domain address before opting out of the domain name. For information on how to unsubscribe and re-subscribe, visit <[www.tss.northwestern.edu/conferencing/listserv/](http://www.tss.northwestern.edu/conferencing/listserv/)>.

- In the interest of creating a more secure and convenient e-mail environment at Northwestern, NUIT is phasing out its current password technology (Kerberos) on NU's central e-mail servers (casbah, hecky, lulu, and merle). All e-mail users must upgrade and/or reconfigure their e-mail software to SSL (Secure Sockets Layer) before January 2005. For more information and details on upgrading your e-mail software, please visit <[www.it.northwestern.edu/transitions/phase\\_kerberos.html](http://www.it.northwestern.edu/transitions/phase_kerberos.html)>.

For more information about NUIT changes, please visit <[www.it.northwestern.edu/transitions/](http://www.it.northwestern.edu/transitions/)>.

## Update Your System to Avoid Viruses in Disguise

A variant of the "Beagle" computer virus began circulating in NU e-mail just before Spring Break. The e-mail appeared to come from a legitimate northwestern.edu address, contained an attachment that allegedly required a numeric password to activate, and used wording designed to scare the recipient into action. NUIT warned the University community via bulkmail and was able to contain the virus before any real damage was done.

Even if you never click on unexpected e-mail attachments, simply opening an e-mail message can trigger some new virus variants. Often, these viruses exploit flaws in Microsoft software. To avoid risks, keep your virus definitions and operating system patches updated.

To update your Windows system, visit <[v4.windowsupdate.microsoft.com/en/default.asp](http://v4.windowsupdate.microsoft.com/en/default.asp)>. This site will scan your hard drive and list updates you need so you can install them. If you use Windows XP or Windows 2000, you should set an "Automatic Updates" option that runs this process on a regular basis. (Macintosh users can run "Software Update" from the Systems Preferences window.)

Find more information on the NUIT Get Control site at <[www.it.northwestern.edu/getcontrol/](http://www.it.northwestern.edu/getcontrol/)>. Remember, being prepared is the best defense against computer viruses. **Be safe, not sorry!**



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Published by the Northwestern University  
Information Technology  
Communications Department  
Technology Support Services (TSS).

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## NUIT and the City of Evanston Solve Network Infrastructure Challenges

Through a successful partnership with the City of Evanston, both the University and the City have solved some infrastructure challenges and initiated a process for improved networking capabilities for the Evanston community.

It was October 2001 when the University and the City of Evanston entered into negotiations for a fiber build project. The project, financed by Northwestern, was the answer to some of the network infrastructure challenges both the University and the City were experiencing. Evanston was dealing with an unreliable network cable infrastructure that was increasingly expensive to maintain and unable to meet their bandwidth requirements. At the same time, Northwestern was planning to create a fiber path to Ryan Field and a backup fiber path for a key NU network facility. Working together, the City and the University negotiated an easement agreement, allowing both parties to achieve their goals.

After months of negotiations and planning, ground was broken March 8 as NUIT and Evanston officially began to upgrade the City's coaxial cable infrastructure with a new fiber-optic cable system. The new fiber infrastructure will connect 15 City buildings to allow for bandwidth growth well into the future, and will create redundant paths for the Police / 9-1-1 and backup facility. With its expertise in networking and project management, NUIT will act as general contractor for the project, saving the City staff hours and outside consulting fees. In return, the University will be able to meet its growing fiber infrastructure requirements.

As part of the agreement, Evanston will provide all communications and interfacing with citizens and maintain its own fiber paths within buildings and city property that is not part of NU's easement. Northwestern will be responsible for maintenance and repair of fiber paths that run on-campus or through NU easements. The project is expected to be completed this August; however, both Evanston and the University will be able to start taking advantage of some of the new fiber this spring.

