

# UBIT fall 2011 news

### Message from the CIO

Student Services Transformed!

Lockwood Cybrary Grand Re-Opening

New Virtual Computing Lab

Computing Center Upgrade

The New Wired ResNet

UB's New Supercomputer

Identity Finder Protects UB & You!

SPSS Update

Coming Soon: SharePoint 2010



### Message from the CIO

By TOM FURLANI, Interim Associate Vice President for IT, [furlani@buffalo.edu](mailto:furlani@buffalo.edu)

While the successful student systems transformation has been a high-profile project involving a substantial and sustained commitment of resources throughout CIT, that does not mean that all other IT projects have been put on hold pending its completion. Indeed, as this newsletter will show, IT staff have been quite busy with a series of important projects, many of which directly impact students, faculty and staff.

For example, students returning to the Lockwood Cybrary will likely do a double take, making sure they are in the right location given the dramatic transformation it has undergone since classes ended last May.

In addition to being more aesthetically appealing as the pictures in this issue show, it is more functional with new spaces and power connections to accommodate laptops. Furthermore, new online tools are being piloted to allow students to gauge the availability of workstations in Cybraries, hopefully eliminating or reducing the amount of time they spend standing in line waiting for computers to open up.

Providing students with a sufficient number of computers in the public labs has always been a challenge due to limited space and budgets. However, this semester's rollout of the My Virtual Computing Lab pilot project promises to allow students, faculty and staff to run much of the specialized software found in these labs on their desktop or laptop computer - all from the comfort of their office, residence hall, or home. For many software packages, students will no longer find themselves at the mercy of a computer lab, waiting for an empty seat to materialize in order to carry out their assignment.

Students returning to the residence halls this semester will experience a much more robust Internet experience as the ResNet network has been upgraded with new switches, replacing infrastructure that was more than 10 years old in some cases.

These are only a few of the projects that have kept our staff busy over the past year. Many other infrastructure improvements have been undertaken, a large fraction of which, while not directly visible to the university community, will nonetheless improve the reliability and quality of the IT services we deliver.

I hope you find the information in this newsletter useful. As always, we look forward to comments and suggestions for future topics as well as feedback on IT services and initiatives in general. You can find previous issues of the newsletter on our Web site: [www.cio.buffalo.edu](http://www.cio.buffalo.edu)

### Did You Know...



You can forward your UB VoIP phone voicemail to your @buffalo.edu email?

See <http://ncs.buffalo.edu/Services/VoIP/VoicemailForwarding> for details.

This feature will send your voicemail as an attachment in an email message instead of listening to voicemail through the VoIP phone. The attachment is a standard "wav" file that can be played by any media player.



September 15, 2011 marked the 25th anniversary for LISTSERV. Eric Thomas, CEO of

### UB's Student Services Transformed!

By TOM FURLANI, [furlani@buffalo.edu](mailto:furlani@buffalo.edu)

The five-year project to move a large portion of student services online into the HUB is nearing completion. The transition has sometimes been challenging for students, faculty and staff alike, but the reward is a system that is more flexible and convenient for students. While the transformation project itself is winding down, improvements and refinements to the HUB will continue to be made to both improve performance as well as add functionality.

Students can now search and register for classes, plan their academic career, view and accept financial

L-Soft presented UB with a commemorative plaque in recognition of the UB's role as one of the first LISTSERV participant sites.

It may be hard to remember what preceded the World Wide Web, but back when BITNET was "THE" academic network, it had a Network Information Center (NIC) with mailing list programs designed to be tolerant of common network link failures. Eventually those programs became LISTSERV that is now a worldwide service for distributing email to mailing lists.

Steve Roder was the principal CIT system administrator who played a large part in supporting some of Eric's work on UB's VM mainframe computer during this important developmental phase.

aid packages and manage bills and credits online. The system is highly available, making the management of life at UB more convenient and environmentally friendly. Very few paper-based transactions remain, with electronic notifications sent to the student's "@buffalo.edu" email account.

Students applying to UB also have limited access to HUB, allowing them to track the status of their application. After becoming a UB student, full access to the HUB Student Center is granted through MyUB.

Faculty began using HUB to submit grades during summer sessions and now have the opportunity to look at student rosters (both current and past) for classes taught. Faculty who serve as advisors received specialized HUB training in order to learn about features more specific to that role.

There are many instances of projects of this magnitude not going well at other institutions. Indeed, in some cases the entire project was terminated some 3 or 4 years into the proposed transformation. UB's HUB project remains on-time and within budget - a testament to the high quality of the staff working on the transformation team.

We urge the campus to continue to be patient as we get acclimated to the HUB. Not surprisingly, it takes time to become comfortable with such a substantial change. With time, it will only get better.

- For more project information: [www.buffalo.edu/ub2020/sst](http://www.buffalo.edu/ub2020/sst)
- For student tutorials: [www.buffalo.edu/hub](http://www.buffalo.edu/hub)
- For faculty/staff: [www.hubtraining.buffalo.edu](http://www.hubtraining.buffalo.edu)

### W.O.M. IT Word of Mouth

Do you treat yourself to something special after the "back to school" rush?



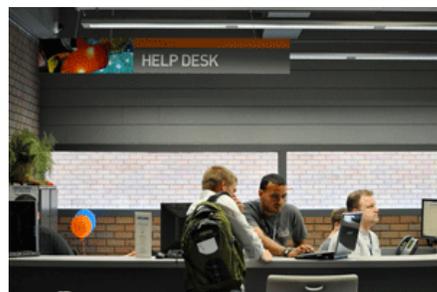
*"I take a mid-Fall vacation. Summer is our busy time in EIS with lots of projects while most of the students are away. So I take a day off here and there during the summer, and wait until after the semester startup issues have eased-up and then get away..."*

- Margery Muniak  
Project Manager,  
Enterprise Infrastructure  
Services



*"Every day I ask myself whether I deserve a piece of chocolate, and the answer is invariably 'Why, yes... Yes I do.' So maybe after the rush it will be 'Do I deserve another piece of chocolate?'"*

- Bethany Gladkowski  
Project Manager,  
Enterprise Infrastructure  
Services & Shops



### Lockwood Cybrary Grand Re-Opening

By NANCY KIELAR, [kielar@buffalo.edu](mailto:kielar@buffalo.edu)

Featuring bright colors and a scientific motif, the Lockwood Cybrary has received a major upgrade this summer. The offices of the CIO, University Communications, University Facilities and Academic Budget and Planning collaborated to create a more comfortable, appealing and flexible environment that enables students to use their own mobile devices.

The walk-in Help Desk has been conveniently relocated near the entrance, featuring additional counter space and increased capacity to assist students with hardware and software troubleshooting. Moving past the Help Desk, a quick glance to the monitor above the public site printing racks alerts students to a new feature that provides status information on which of the 59 workstations are available, saving on the need to stroll up and down the aisles to locate an available computer. It also provides information on other computer lab spaces on campus if all the Lockwood workstations are in use.

The wall near the express stations is decorated with framed images of scientific research from throughout campus, and just past the public site workstation area is an attention-grabbing, wall-sized mural of an enzyme protein created at the Center for Computational Research. This bright and airy location features more spaces for students to work, including 21 movable tablet armchairs and additional work areas to accommodate 44 people with easily accessible power to support wireless device use.

For more information: [www.ubit.buffalo.edu/sites/lockwood2.php](http://www.ubit.buffalo.edu/sites/lockwood2.php)



*"Chocolate is how I cope with the back to school rush. As for after, this year I believe I'll treat myself to a massage."*

- Beth Fellendorf  
Multimedia Support Specialist,  
Network & Classroom Services



*"I like to treat myself to a day off in September after the rush."*

- Amy Loucks-Dimatteo  
Manager of Library Network  
Support, University Libraries



*"I know this sounds corny, but my children's laughter centers me. Watching a movie with them on the couch or reading a good book with them seems to melt away everything else."*

- Kim Behun  
Senior Program Analyst,  
Health Sciences



*"I don't wait until after the back to school rush; I treat myself right away - for example, heading to the Buffalo Irish Festival!"*

- Terry McCormack  
Assoc. Dir., & Head,  
M. Robert Koren Ctr. &  
Charles B. Sears Law School  
Library



### UB's New Virtual Computing Lab

By DENNIS REED, [reeddj@buffalo.edu](mailto:reeddj@buffalo.edu)

CIT is now piloting "My Virtual Computing Lab," a virtual (cloud) computing lab that provides students access to UB-licensed software from their personal computers. The goal of the project is to provide students access to a wide variety of software packages without requiring them to be physically present at a computing site or Cybrary.

Students expressed the need for such a service, and we listened. In last year's Student IT Survey, seventy percent indicated it was "important" or "very important" for them to have access to a virtual computer. Students ranked Photoshop, Acrobat Professional, MATLAB, Dreamweaver, Visual Studio, Mathematica and Maple among their top ten most-desired programs. All of these programs are now available twenty-four hours a day, seven days a week through My Virtual Computing Lab, all locally in your personal computer.

Students, faculty and staff may log into My Virtual Computing Lab from either on or off campus (off-campus use requires a secure connection through a virtual private network client such as AnyConnect). Once connected, key Cybrary station functionality is available: files may be opened from and saved to any connected drives (the local hard drive or a USB stick, for instance); the person's UBfs Myfiles storage space is automatically mapped and made available; and finally, documents may be printed to any connected printer.

Response to the pilot has been very positive! Many students have already suggested that additional software titles be added.

This is a pilot project and we are anxious to receive feedback from those who are using the new service," said Director of Enterprise Infrastructure Services Saira Hasnain. "We expect that this will enable students easier access to software to support their academic careers at UB." Further development of My Virtual Computing Lab is being carried out in collaboration with the Science & Engineering Node Services.

For more information: [www.ubit.buffalo.edu/software](http://www.ubit.buffalo.edu/software)

**"I just tried connecting to the cloud using your pilot for the first time. I just wanted to say that it's pretty slick and I'm now a fan. Whatever cool stuff it is you're doing, keep doing it."**

- Matthew Szczepankiewicz,  
freshman honors student  
studying computer engineering



## **A Return to State-of-the-Art? The Computing Center Machine Room Upgrade**

By RICK LESNIAK, [lesniak@buffalo.edu](mailto:lesniak@buffalo.edu)

The old adage, "If something isn't broken, don't fix it" has a corollary: "If you must touch it, improve it." This corollary is the guiding principle behind the extensive upgrade now being planned for the machine room in UB's Computing Center.

Twenty-five years ago, the new Computing Center building was a state-of-the-art facility. Its machine room featured three hulking mainframe computers connected to large scale "line printers" (so named because they printed one line of text at a time) with lots of green bar paper. These refrigerator-sized, liquid-cooled behemoths were attached to washing machine-sized disk storage devices with capacities inferior to today's \$10 USB drives. The scale of the units, and the need for them to be directly cabled together, dictated machine room design.

Evolving technology and increased service demands have changed what is required of a machine room. Today's facilities are designed around modular, compact "blade" servers, and storage capacity has increased exponentially. Green design practices have enabled devices to use much less power, saving energy and resulting in lower cooling costs. Server cabinets are now typically cooled through the floor. Network cables are routed overhead, no longer choking under-floor spaces. The constant availability of servers expected by today's Web-hungry audiences requires multiple redundant power and cooling sources and meticulous disaster preparedness plans.

The current state of the machine room is unable to accommodate further server growth and consolidation. It no longer has enough power and cooling, contains an obsolete fire suppression mechanism, and has structural problems with the raised floor. UB has reached a point where no new equipment could be plugged in without the risk of overloading unprotected circuits. Saira Hasnain, Director of CIT Enterprise Infrastructure Services, remembers "we could not add redundancy for some of our servers, so in some cases machines could be single points of failure."

In 2006, these challenges were initially presented to UB's leadership. In 2010, UB's Space Planning Board approved a rough plan and seed funding to remodel the Computing Center machine room to modern standards. But one major obstacle remained: as the room was being rehabbed, where would all the machines go?

Fortunately, the relocation of the Center for Computational Research from Norton Hall to the Center for Excellence in 2006 provided the necessary "swing space." The Norton site offered substantial power, modern raised access flooring and increased network capacities.

The evacuation of the Computing Center machine room is already well underway. The next steps of the project are to identify options for the actual rehabilitation of the machine room and to present these options to UB leadership for selection and funding. "We have a great relationship with University Facilities as our partner, and they are supportive of what we're trying to accomplish," says Mark Deuell, Director of Network and Classroom Services. Both Deuell and Hasnain agree that Co-Project Managers Jennifer Kuhn and Joe Pautler have provided excellent guidance throughout the project.

---

## The New Wired ResNet

By KATHLEEN MURPHY, [kbrown@buffalo.edu](mailto:kbrown@buffalo.edu)

Fifteen years ago UB launched a major project to wire all residence halls for high-speed Ethernet networking. At the time, having high-speed Internet was a considerable selling point for campus housing; today it represents a basic utility. In 2004, a system for registering computers and checking them for basic safe computing software was introduced.

Flash forward fifteen years. The current generation of ResNet electronics is tired and reaching obsolescence. Like many large-scale infrastructure projects, updating the wired ResNet was reaching a critical state, but it had to wait until higher-priority efforts were completed.

Meanwhile, the rest of UB's network infrastructure moved on, spurred by the VoIP telephone project and our campuses' thirst for more and faster data connectivity—especially between buildings. For example, in 2009 all hubs were replaced with modern switches, and the following year UB completed a major network backbone project that connected all major buildings with redundant 1Gbps service.

Enter the new wired ResNet. This past summer, CIT and Campus Living teamed up to complete a project that replaced many of the active components of the wired ResNet. Over the course of eight months, 203 network switches (the equivalent of 9,744 ports) in 14 residence halls and apartments were replaced. Additionally, the wired ResNet was integrated with the UB10Gig backbone network, and the homegrown NetPass computer registration and quarantine system was upgraded to an appliance purchased from a leading vendor. The new infrastructure offers improvements in reliability, security and speed.

Many thanks to the collaborative project teams from CIT and Campus Living.



Sam Guercio, Lead Systems Administrator at CCR, works with student intern Jeremy Pagano on the U2 upgrade.

## UB's New Supercomputer

By SAM GUERICO, [sguercio@ccr.buffalo.edu](mailto:sguercio@ccr.buffalo.edu)

UB's High Performance Computing Center (CCR) has just completed the installation and testing of the latest and largest upgrade to its most powerful supercomputer, "U2". With the addition of over 5,000 CPU cores and 23 terabytes of distributed memory, the U2 cluster will be capable of almost 70 teraflop/s (trillion) floating point operations per second, boosting its high-performance computing capacity by more than 40 TFlop/s. To put this in perspective, a calculation that would take one year to complete on a desktop (or powerful laptop) system would take just a mere 2.5 hours on the U2 cluster! If the recently added GPU cluster is included, CCR's total compute capacity is over 100 TFlop/s, which is almost a tenfold increase from little more than a year ago.

Each compute server is connected to a 40Gb Infiniband fiber optic network that enables low-latency, high-speed inter-processor communication between all the compute servers, creating a whole that is much greater than the sum of its parts. The final cluster configuration functions as a single supercomputer.

The U2 installation is also supporting UB's campus "green" initiative. First, the newly-added compute servers are much more energy efficient than the servers they are replacing, which is a good thing given the substantial increase in compute capacity. The upgrade also features state-of-the-art, energy-

efficient in-row cooling for the server racks that brings the cooling (chilled water) directly to the racks where it is needed, as opposed to the current method of cooling the entire machine room.

The final validation phase was recently completed and the new and more powerful U2 cluster is now open to the CCR user base. This is the final phase of a \$9 million-dollar upgrade.

For more information: [www.ccr.buffalo.edu](http://www.ccr.buffalo.edu)



### **Identity Finder Protects UB and You!**

By RICK LESNIAK, [lesniak@buffalo.edu](mailto:lesniak@buffalo.edu)

What if your laptop were stolen? What if your desktop computer were hacked? Are you comfortable that your machine has never contained purchase records or any personal information? Do you work with any sensitive information (Private Regulated Data) downloaded from UB? Student names? Social Security numbers, especially your own? How can you find out?

The answer is Identity Finder - new software licensed by UB that can scan your computer, drives, USB keys, etc. to identify and alert you to any "Personally Identifiable Information" (PII) that is present on your computer. Two versions of Identity Finder are available: one for UB-owned devices (Endpoint), and one for personally-owned computers (Desktop).

The Desktop edition of this software is available for download on personally-owned computers for Windows and Mac OSX at no additional charge to current faculty, staff and students.

For UB-owned workstations, the Enterprise version of Identity Finder, Endpoint, is available for UBIT workstation support technicians. This version will automatically register the workstation with a centrally-managed console where scanning reports will be aggregated.

#### **What is PII?**

Personally identifying information is any piece of information that can potentially be used to uniquely identify, contact or locate a single person. PII is generally kept private and often used for financial, medical or research identification. Examples of PII include Social Security numbers, credit card numbers, bank account numbers, driver's license numbers and account passwords.

#### **How does Identity Finder work?**

Identity Finder systematically scans your selected devices, searching thoroughly through all email, files, indexes and resource areas for PII. When found, the location of the PII is reported to you. The Endpoint version will also report the potential PII to the central management console for review by the Information Security Office.

Identity Finder has built-in wizards that coach you each step of the way. You are asked to select from a list of built-in tools that will assist you with PII on your device. These tools allow you to either delete the file with a secure shred, scrub the data from the file while maintaining the file's integrity or encrypt the data file for secure storage and transmission.

Remember, you are responsible for any PII found on your personal computer.

For more information: [www.ubit.buffalo.edu/software/IdentityFinder/index.php](http://www.ubit.buffalo.edu/software/IdentityFinder/index.php) for installation and usage directions.

### SPSS Update

By LISA STEPHENS, [stephens@buffalo.edu](mailto:stephens@buffalo.edu)

Following a series of challenging vendor transitions and negotiations, UB has successfully renewed use of SPSS statistical software with IBM. Faculty, students and staff will have access to SPSS in lab environments, as well as an annual low-cost home-use option.

The campus-wide site license for UB-owned computers will function on Windows, Mac and Linux machines. The aggressively-negotiated package is a "win-win" both for departments maintaining labs and faculty machines. UB faculty, staff and students can purchase the software with the annual license through UB Micro for non-UB owned machines.

- Base statistics (frequencies, crosstabs, correlation, ANOVA, etc.)
- Advanced (GLM, HLM, MANOVA, non-linear models, etc.)
- Regression (MLR, Non-linear, PROBIT analysis, etc.)
- AMOS (structured equation modeling)

Other SPSS titles are available by direct purchase of the Faculty Pack from IBM. The costs for UB students, faculty and staff are:

- \$10/seat for UB student labs (UB-owned equipment)
- \$20/workstation for a UB-owned PC or Mac (Faculty/Staff workstations)
- \$53.70 workstation for a work-at-home installation for UB Faculty/Staff, personally-owned equipment

For more information: [www.ubmicrosuny.com](http://www.ubmicrosuny.com)

---

### Coming Soon: SharePoint 2010

By RICK LESNIAK, [lesniak@buffalo.edu](mailto:lesniak@buffalo.edu)

UB has enjoyed offering Microsoft Office productivity tools to faculty, staff and students for nearly a decade. The latest releases of Microsoft Office 2010 for Windows (2011 for Mac) include tight integration with SharePoint collaboration software. Microsoft says, "SharePoint 2010 makes it easier for people to work together. Using SharePoint 2010, your people can set up Web sites to share information with others, manage documents from start to finish, and publish reports to help everyone make better decisions."

UB has provided SharePoint 2007 services on a small scale for the past several years, but the updated SharePoint 2010 will soon be available enterprise-wide to foster collaboration among team members. SharePoint 2010 has many Web-based features including: a calendar (which integrates with Outlook/Exchange), a document library, task lists, a wiki, contact lists and forms. UB's implementation of SharePoint 2010 has a default UB theme for site design based on the new eUB look and feel.

Anyone using MS Word 2010 or 2011 has noticed that SHARE is present on the file menu with SharePoint as an option. Once a SharePoint site is established with document libraries, this feature makes collaborative editing and sharing of documents very easy. Similarly, Outlook/Exchange can integrate calendars with shared SharePoint calendars to enable powerful team scheduling tools that can be used offline from the Web (with a UBITName).

SharePoint 2010 services are suited for administrative and research collaboration for individuals with UBITnames. Because this service is not set up with appropriate safeguards, SharePoint 2010 sites are not suitable for instructional use.

For more information: [www.ubit.buffalo.edu/sharepoint2010](http://www.ubit.buffalo.edu/sharepoint2010)