

## Annual Highlights Report: June 1, 2011 - June 30, 2012

### University Information Technology Services (UITS): uits.iu.edu

During 2011-12 UITS advanced action items associated with the university's IT strategic plan for information technology (IT) *Empowering People*, a multi-year plan for achieving greater efficiencies in IT resources, while providing for greater productivity in the university's missions of education and research.

#### Teaching and Learning

The release of Quali Open Library Environment OLE 0.3 in November 2011 provides IUPUI librarians with an easy-to-use system for selecting, acquiring, and describing library information resources that link with enterprise business processes, improving information management resources across higher education research libraries. IU faculty and staff have made significant contributions to Quali OLE.

<http://newsinfo.iu.edu/news/page/normal/20374.html>

Students using IU Mobile IU benefit from the release of IU's new Quali Mobility Enterprise. The move to the industry leading HTML5 standard means that IU information services can be developed once for all mobile devices and can adapt to the size and capabilities of each device.

<http://ovpitnews.iu.edu/news/page/normal/19343.html>

IUPUI students and instructors experience savings and flexibility with the university's eText initiative. In spring 2012, 130 class sections comprising 5,300 students took part. Students saved an average \$25 per book or online supplement. Texts from Flat World Knowledge, IU Press, MacMillan, McGraw Hill, Pearson, W.W. Norton, and Wiley are available via Courseload software for reading, annotating, and collaborative study on almost any computer, tablet, or smartphone device. <http://etexts.iu.edu>

**New IT-enabled classrooms** are offering flexible, collaborative seating that encourages group work.

- The collaborative classroom in ES 1117 provides six group collaboration tables, each with a large flat-panel display, a dedicated CPU, two laptop connections, collaborative software, and portable white boards.
- The renovated space in Cavanaugh 008 due for completion in fall 2012 will provide a new general inventory classroom equipped for collaboration, two composition classrooms with collaboration tables with CPUs and a large flat panel display, a GIS classroom with collaborative software, and the IUPUI Writing Center.
- The redesign of the BS3000 STC/Testing Center was completed in August 2011.
- A new IT-enabled immersive telecollaboration classroom was created in ICTC 121. It features the Cisco Telepresence Active Collaboration Room café-table seating concept, which inspires movement within the space. Automated camera positioning systems provide point-of-view and "life size" camera imagery.

**Faculty support.** New members have joined the iPad in Teaching and Learning Faculty Learning Communities, which focus on how mobile tablets, specifically the Apple iPad, enhance teaching and learning across disciplines through the 2011-2012 academic year. The Second Life FLC is conducting discussions "in-world" (i.e., within Second Life) on the contributions of virtual learning environments.

#### Oncourse enhancements

- Migration from the Original Test and Survey tool is underway in preparation for its decommissioning in August 2012. Replacing it is the new Tests & Surveys tool, currently available as Tests & Surveys Beta. The Tests & Surveys tool provides improved features and functionality.
- Assignments 2 was integrated with portfolio evaluations and offers integration with Turnitin.com for

all course sites.

- Oncourse was upgraded to Sakai 2.7, involving performance enhancements throughout the application.
- Site Setup now allows site owners to set an easy-to-remember alias in place of the auto-generated site ID, especially useful for project and portfolio sites.
- New Oncourse gateway page. A redesigned page was put in place in January 2012 that provides continuously updated tech news and a one-stop location for information about new features and enhancements. Student and instructor “spotlights” highlight innovative uses of Oncourse.
- For lecture capture, the Kaltura product is being piloted to augment Echo360 with abundant near- and long-term storage, ease of use across a variety of courses, rigorous access control or open sharing control of materials, and simple import/export/reuse in Oncourse.

### **Research, Scholarship, and Creative Activity**

Advances underway or newly funded provide researchers with new capabilities.

- Several large-scale international networking grants support the growing collaborative scientific research between the US and international counterparts.
- The planned NSF-funded high performance research network link between the US and China will support scientific and medical collaborations that lead to technical innovations and breakthroughs in healthcare. <http://newsinfo.iu.edu/news/page/normal/19911.html>
- The university’s Data to Insight Center and three other universities are sharing \$8M in NSF funding for the SEAD project to develop tools for the curation and preservation of scientific data. <http://newsinfo.iu.edu/news/page/normal/20053.html>

Other resources will help boost researcher productivity.

- Researchers working with the new wealth of gene sequence information will gain from IU’s \$1.5-million grant to establish the National Center for Genome Analysis Support (NCGAS). <http://ovpitnews.iu.edu/news/page/normal/19895.html>
- The Extreme Science and Engineering Discovery Environment (XSEDE) is replacing the decade-old TeraGrid with an advanced and powerful collection of integrated advanced digital resources, especially critical to researchers in such fields as earthquake engineering, materials science, medicine, epidemiology, genomics, astronomy and biology. <http://ovpitnews.iu.edu/news/page/normal/19166.html>
- Technologies provided by the Center for Research in Extreme Scale Technologies (CREST) will help researchers address challenges from the ever-increasing volume of digital scientific research data, paving the way for breakthroughs in science and engineering. <http://ovpitnews.iu.edu/news/page/normal/20301.html>
- For IUPUI researchers, the IU-Penguin Computing agreement means access to powerful shared computing resources in a secure environment. Individuals and organizations can share the resources of large computing systems without individually purchasing and maintaining the costly equipment. <http://ovpitnews.iu.edu/news/page/normal/20208.html>
- The Internet2 NET+ Services document storage and collaboration environment called Box provides IUPUI faculty and researchers with cloud-based storage accessible by web, desktop sync, and mobile device apps. Box is recommended for personal files and some university data, but not for sensitive data or data that falls under such laws as FERPA, FISMA, GLBA, and HIPAA. <http://iu.box.com>

Local networking advances will benefit researchers at IUPUI and beyond as they make progress toward the next-generation Internet2.

- Four new NSF Global Environment for Network Innovations (GENI) project grants totaling \$2.3M support the university’s efforts to build, test, and support faster, cheaper computer networks and

affirm the state's investment in creating more high-tech network jobs in Indiana.

<http://ovpitnews.iu.edu/news/page/normal/20685.html>

- IU's involvement in the Midwest OpenFlow Crossroads Initiative (MOXI) means multiple benefits for researchers and network operators. MOXI is a partnership of the Indiana University Global Research Network Operations Center (GlobalNOC) and the Committee on Institutional Cooperation (CIC).
- Indiana is the first state to launch a high-speed, 100-gigabits-per-second (Gbps) network link dedicated to research and education. Monon100 is 10 times faster than the current network link, allowing scientists and medical researchers to quickly share the massive amounts of data created by modern digital instruments such as gene sequencers, powerful microscopes or the Large Hadron Collider. Monon100 runs from Indianapolis to Chicago, linking the Indiana GigaPoP with Internet2, a national research and education network. [http://it.iu.edu/archive/index\\_5.html](http://it.iu.edu/archive/index_5.html)
- The National Science Foundation (NSF) has awarded \$800,000 to the IU-operated Research and Education Networking Information Sharing and Analysis Center (REN-ISAC) to develop new capabilities to collect and share cybersecurity threat data and intelligence.

**Preserving the Scholarly Record.** IU is in the vanguard of developing solutions for preserving, storing, and curating digital scholarly content.

- The IU Libraries/UITs is a founding partner in the Digital Preservation Network (<http://digitalpreservationnetwork.org/>) being developed by more than 30 US research institutions. This initiative will offer a managed solution for large-scale digital preservation that leverages next-generation Internet2 network capabilities.
- The Media Preservation Initiative has developed a comprehensive, 15-year plan developing a Media Preservation Center and strategies transforming media assets into usable, digital, searchable resources that stands to revolutionize the use of archival media for teaching and research. [http://www.indiana.edu/~medpres/documents/iu\\_mpi\\_report\\_public.pdf](http://www.indiana.edu/~medpres/documents/iu_mpi_report_public.pdf)
- The Digital Library Program has developed tools to facilitate storage of digital collections in the Scholarly Data Archive (SDA, <http://pti.iu.edu/storage/sda>) together with the IU Digital Collections Repository. An agreement for out-of-region storage for redundancy was developed with the Texas Advanced Computing Center.
- The Libraries at IUPUI and IUB have hired two new e-science librarians to focus on data publishing and curation workflows and policies, working with staff from UITs and the Data to Insight Center.

### **Civic Engagement**

Through successive expansions of the I-Light network, 63 Indiana institutions now have Internet access, including 21 Ivy Tech campuses recently connected through an I-Light/Zayo Bandwidth partnership, funded by a \$25.1-million US Commerce Department award.

<http://newsinfo.iu.edu/news/page/normal/20129.html>

UITs expertise in geographic information systems (GIS) serves the Indiana Geographic Information Council and the State of Indiana Counties by making accessible more than 20 terabytes of Indiana geospatial data. Datasets in the Indiana Spatial Data Portal (IDSP, <http://www.indiana.edu/~gisdata/>) include all Indiana US topographical maps, aerial photos, elevation data, and digital, high-resolution aerial photographs of the Indiana's 92 counties. These images are used in such business and government areas as homeland security and emergency management.

The Indiana Clinical and Translational Sciences Institute (CTSI) will use a \$500K National Institutes of Health grant to increase the technical and human resources fighting cancer at IU Health Arnett Hospital in Lafayette, IN. The work is a collaboration of the IU Melvin and Bren Simon Cancer Center and the Oncological Sciences Center at Purdue. <http://newsinfo.iu.edu/news/page/normal/19713.html>

The fourth annual e-Waste Collection Days event engaged the Indianapolis, Bloomington, and South Bend campuses and surrounding communities in collecting some 1.8M pounds of disused electronic products. <http://ewaste.indiana.edu/>

Indiana University's Summer of Networking internship program, which provides students with hands-on, practical training from the university's acclaimed network engineering staff, has received a two-year, \$270,595 grant from the National Science Foundation. The grant will enable IU to expand the program and continue focusing on preparing students for the high-tech job market. <http://ovpitnews.iu.edu/news/page/normal/19629.html>

In the Ready, Set, Robots! summer workshop, middle and high-school students are introduced to computer programming, high performance computing, and networking, and apply critical thinking, logic, and creativity as they learn to operate their robots.

## **Best Practices**

### *IT Support*

- Students, faculty, and staff have on-the-go access, from any personal device, to hundreds of software applications through IUanyWARE, the university's cloud-based application virtualization service. The service is delivered to all university campuses, which saves students from installing software on individual devices or finding labs that host the applications they need. <http://iuanyware.iu.edu>
- To meet multiple learning preferences, new IT training formats include online webinars, one-on-one coaching; hybrid workshops with hands-on training, online office hours, and self-study material; and the IT Training Tips blog. All UITS workshop materials are available for free download. <http://ovpitnews.iu.edu/news/page/normal/21974.html>
- The new Research Analytics group combines the services and expertise of the Stat/Math Center and Geographical Information System professionals.
- Supporting the growing need for device-independent ways to store material and interact with collaborators, Box.com provide the university community with a secure, web-based file storage and collaboration platform. <http://ovpitnews.iu.edu/news/page/normal/22356.html>

### *Security and privacy*

- The comprehensive and strategic Information Security and Privacy Program (ISPP) provides a framework where the university community can review its activities, people, tools, and principles. <http://protect.iu.edu/privacy/program>
- The "12 Domains in 12 Months" campaign is introducing the areas or domains of the program, such as risk assessment, asset management, and compliance.
- The 2012 Data Privacy Day event, broadcast to all IU campuses, provided an overview of FERPA with real-life scenarios that build understanding of how to comply with FERPA at IU.
- A business continuity project is ensuring that at least 80% of IU departments complete business continuity plans by October 2013. Two Emergency Management for Higher Education (EMHE) grants from the US Department of Education support the effort.

## **Diversity**

Adaptive Educational Services (AES) at IUPUI is closing its adaptive technology lab to focus on addressing clients' accommodation needs. UITS is now responsible for those services and focusing on IT tools.

As a result of an Adaptive Technology Center review of hardware and software accessibility in the STCs, three new applications that increase universal access were implemented in all STCs at IUPUI and IUB. The Center has been focusing on compliance training to ensure IT resources remain accessible to those with disabilities.

Gerald R. Bepko student interns will gain real-world experience in international networking as they work with IU's network experts on the ACE (America Connects to Europe) project, whose overarching mission is education.

Students interested in a career in networking can gain real-world experience and hands-on training in network engineering, software development, network security, and network research the InCNTRE Summer of Networking internship program. <http://incntre.iu.edu/summer>

### **Awards and honors**

IU Vice President for Information Technology Brad Wheeler was named "Tech Innovator" by the Chronicle of Higher Education and hailed among the 2012 Doers, Dreamers, and Drivers by Government Technology magazine for the university's eText initiative, which also earned the university the 2012 C. IO 100 award from IDG's CIO magazine. <http://chronicle.com/article/Bradley-Wheeler/130913/>  
<http://www.govtech.com/top-25/>  
<http://newsinfo.iu.edu/news/page/normal/22498.html>

IT pioneer Garland C. Elmore, associate vice president of information technology and associate professor of informatics, was awarded the President's Medal for Excellence by IU President Michael A. McRobbie in honor of Elmore's more than three decades of service to the university.  
<http://newsinfo.iu.edu/news/page/normal/21043.html>

Geoffrey Fox, distinguished professor and director of the Digital Science Center at IU's Pervasive Technology Institute, has been named a 2011 Fellow of the Association for Computing Machinery, the world's largest educational and scientific computing society.  
<http://newsinfo.iu.edu/news/page/normal/20613.html>

IU's Chris Maurer and Lynn Ward have been named 2012 Sakai Fellows by the Sakai Foundation.  
<http://ovpitnews.iu.edu/news/page/normal/22438.html>

The National Security Agency renewed the university's designation as a National Center for Academic Excellence in Information Assurance Education for 2012-17 for the national leadership of the Center for Applied Cybersecurity Research in applied cybersecurity research, education, and policy guidance.  
<http://newsinfo.iu.edu/news/page/normal/22154.html>

IU's Advanced Visualization Lab has been named a 2011 3D Film Festival Winner in the Best of Shorts category for the production "A Universe of Questions." <http://pti.iu.edu/news/avl-named-2011-3d-film-festival-winner>