Mission

University Information Technology Services (UITS), with offices on the IUB and IUPUI campuses, is responsible for the continued development of a modern information technology environment throughout the university in support of IU’s vision for excellence in research, teaching, outreach, and lifelong learning. The information technology environment that UITS provides comprises tools and services that support the academic and administrative work of the university. Computing tools include a variety of timesharing computers; hundreds of public-access, Internet-connected workstations, all equipped with current software; and a number of supercomputers. Interconnecting these resources is a high-speed network that links computers of many types and sizes in a complex, interactive web. Under the leadership of the Office of the Vice President for Information Technology, UITS is centrally responsible for implementation of the IU Information Technology Strategic Plan, available at http://www.indiana.edu/~ovpi/isetategic/. Activities reported here reflect the goals, objectives, and implementation activities of this plan for the 2004-05 fiscal year.

Goals and Objectives

Access to Network Resources

Access to computing and network services, on and off campus (Recommendation 2, IU Information Technology Strategic Plan)

Campus Planning Theme: Teaching and Learning

Secondary Goals:

Sub Unit:

Time Frame: July 1, 2005 - June 30, 2006

Actions taken for 2005-2006:

Continued increase in the use of local, high-speed, off-campus Internet Service Providers has resulted in decreased use of the IUPUI modem pools. In 2005, UITS reduced the number of IUPUI modem lines to 529. The user community move to high-speed providers is yielding cost savings UITS uses to further advance the high speed network with new assessments or fees. The total number of IUPUI buildings on the network stands at 71. In 2005, several small buildings were added to the network along with the Herron School of Art. In various buildings, HP4000 switches were replaced with HP4104s and HP4108s, which have a higher backplane bandwidth. Some 930 new data jacks were installed during 2005, bringing the total number of active Ethernet jacks to 29,732. Of these, 21,000 are capable of supporting up to 100Mbps. I-Light continues to benefit inter-campus connectivity and connectivity to the commodity Internet. The Wireless Project implementation stage is complete, with wireless coverage available in all academic facilities at IUPUI. More than 529 VPN-secured access points are installed at IUPUI. Installations will continue in campus apartments, medical facilities, and remote locations at IUPUI. See http://www.indiana.edu/~uits/telecom/data/waps.html.

Evidence of Progress for 2005-2006:

Data for 2005-2006 will be available through the UITS Finance Office, Cost and Quality of Services Report, at http://uits.in.edu/scripts/ose.cgi?apjv.ose.help=cost
Activities planned for 2006-2007:

The university will continue the deployment of outdoor wireless connectivity work to further reduce the campus dependence on modem pools.

Community Engagement

Informatics and Communications Technology Complex

**Campus Planning Theme:** Civic Engagement

**Secondary Goals:**

**Sub Unit:**

**Time Frame:** July 1, 2005 - June 30, 2006

Actions taken for 2005-2006:

The technology-rich Informatics and Communications Technology Complex (ICTC) at IUPUI houses the Indiana University Schools of Informatics, Journalism and Music; the Pervasive Technology Labs of Indiana University, and University Information Technology Services (UITS). Resources in this building provide essential tools for scientific research, technical support, teaching, and learning that will help build a stronger economy in Indiana, by educating the current and future workforce and supporting statewide IT initiatives. To support collaborative research among scientists in the US and abroad, technology professionals manage several high-speed education networks and support I-Light, the optical fiber infrastructure that links several Indiana universities and colleges to each other and the Internet. This technology environment also makes supercomputing technology, advanced visualization technologies, and technical support available to roughly 1,000 research scientists on all eight IU campuses, enabling scientists to analyze vast amounts of information and accelerating research. UITS has worked with university academic and service units to provide a technology presence at such community events as the International Science and Engineering Fair in May 2006 and the planning of IU’s presence at the Indiana State Fair. Both campuses also partnered to provide a scientific and technology presence at the Indiana State House. UITS hosted the third annual Indiana Higher Education Cybersecurity Summit at IUPUI in March, bringing together information assurance professionals from Indiana state universities and colleges and other public institutions to share best practices, trends, and innovations in information assurance. The Pervasive Technology Labs worked with the Indiana State Museum and the Indianapolis Museum of Art to create interactive exhibits.

Evidence of Progress for 2005-2006:

UITS, at the ICTC, has welcomed thousands of visitors and hosted many Indiana constituencies including business leaders, technology professionals, state legislators, and the media. The ICTC hosts the monthly Tech Tuesdays, a meeting of members of TechPoint, a statewide technology trade group representing 400 members, including publicly-traded companies, private businesses, colleges, research universities, and local economic development organizations, of which the university is a member.

Activities planned for 2006-2007:

The ICTC will continue to be a site for engaging the community of IT professionals by hosting community events such as those sponsored by TechPoint and the IUPUI Solution Center. Videos to facilitate tours of the IU Global Research...
Digital Libraries and the Scholarly Record
(Recommendation 9 of the IU Information Technology Strategic Plan)

Convenient and reliable access to a comprehensive and coordinated collection of electronic information resources

**Campus Planning Theme:** Best Practices

**Secondary Goals:**

**Sub Unit:**

**Time Frame:** July 1, 2005 - June 30, 2006

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**Actions taken for 2005-2006:**

The IU Digital Library Program is a collaborative effort of the Indiana University Libraries, the Office of the Vice President for Information Technology, and the university research faculty with leadership from the School of Library and Information Science. Three Library Services and Technology Act (LSTA) grants were awarded to IUPUI University Library in 2005. Projects include: Historic Maps of Indiana, in collaboration with the IU Bloomington Geography and Map Library; a Historic Indiana Architecture Slide Collection, in collaboration with the Historic Landmarks Foundation of Indiana; and the Governor Morton Telegraph Books, in collaboration with the Indiana State Archives. Collections are being digitized and metadata is being created and managed through the CONTENTdm software system. University Library at IUPUI is completing the second and final year of a grant, funded by the Central Indiana Community Foundation Library Fund, in collaboration with the Indiana State Library and the Indianapolis-Marion County Public Library. Collections have been digitized and metadata is being created and managed using CONTENTdm. Collections include the Indiana State Plat Books at http://indiamond6.ulib.iupui.edu/IndianaPlat/, and the Sanborn Map Collection. Users can search by a landmark’s name, type of landmark, and address at: http://indiamond6.ulib.iupui.edu/SanbornIP2/. Digitization is also complete for the Indianapolis City Directories and the Historic Atlas. University Library at IUPUI is also collaborating with the Indiana Supreme Court and the Indiana Historical Bureau to provide online access to copies of original documents and research materials relating to Indiana’s constitutional history (Road to Indiana Statehood). The first phase will make available and fully searchable documents and transcriptions that led to Indiana statehood in 1816. See http://indiamond6.ulib.iupui.edu/isc/. The Electronic Atlas of Central Indiana is a Web-based repository of maps and GIS (Geographic Information Systems) data covering Central Indiana. Partners include the IUPUI Center for Earth and Environmental Science, The Polis Center, the United Way of Central Indiana, and the Natural Resource Conservation Service. Funding comes from Indianapolis Foundation grants. The team has consulted with the Indiana State Library, the Indiana State Museum, and the IU Geography and Map Library on the project. (See atlas.ulib.iupui.edu/) Work continued on the Cultural Digital Library Indexing Our Heritage (CLIOH) project to digitally preserve endangered archaeological sites. CLIOH recently received approval from the Cambodian government to travel to and document the Angkor Watt archaeological site. See www.cs.iupui.edu/~clioh.

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**Evidence of Progress for 2005-2006:**

The number, variety, and extent of digital library projects proposed and funded will be an important measure of progress and effectiveness.

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**Activities planned for 2006-2007:**

The Digital Libraries Project will continue to leverage IT Strategic Plan resources as matching contributions for future
Institutional Commitment: Faculty and Staff Engagement
(Recommendation 3, IU Information Technology Strategic Plan)

Faculty engagement and incentive programs
Campus Planning Theme: Teaching and Learning
Secondary Goals:
Sub Unit:
Time Frame: July 1, 2005 - June 30, 2006

Actions taken for 2005-2006:

UITC encourages faculty to transition to the university's updated course management system, Oncourse CL. Activities include meeting with faculty, determining priorities through the Oncourse Priorities Committee (OPC) and the Functional Requirements Committee (FRC), and developing mechanisms for suggestions for improvement. The FRC prepared a comprehensive report on the transition to Oncourse CL, which includes development accomplishments and user transition information. Four IUPUI faculty meet regularly as part of the OPC. The Office of the Vice President for Information Technology established the position of Associate Dean for Teaching and Learning Information Technologies (TLIT), responsible for developing and leading initiatives that assist faculty in enhancing teaching and learning through effective use of technology. The AT&T Fellows Program (http://atff.iu.edu/), formerly the SBC Fellows Program, funds innovative faculty projects integrating information technology into teaching and learning. Established in 1999 through a $1-million gift from the Ameritech/SBC Foundation, the program has supported 72 faculty projects (23 at IUPUI) that integrate information technology into teaching. IUPUI Fellows for 2005-2006 included: Rachel Applegate, IU School of Library and Information Science; Eugenia Fernandez and Sally Catlin, Purdue School of Engineering and Technology, Computer and Information Technology; Sara Anne Hook, IU School of Informatics; Angela McNels and Sara Horton Deutsch, IU School of Nursing, Environments for Health; Dale Roberts, Purdue School of Science, Computer and Information Science; and Chris Thomas, IU School of Science, Department of Earth Sciences. Fellows mentor other faculty in the use of their innovations, contribute to best practices, make campus presentations, and participate in the annual AT&T Fellows Summer Leadership Forum. See http://atff.iu.edu/

Evidence of Progress for 2005-2006:

Each semester, more university faculty use Oncourse CL. In fall 2005, 29% of faculty used Oncourse CL. By spring 2006, use had increased to 47%, and is expected to reach 60% by fall 2006. In the AT&T Fellows program during 2005-2006, $142,336 in grant dollars supported the completion of 16 faculty projects. Eight projects were featured during the annual IU AT&T Summer Leadership Forum at the Informatics and Communications Technology Complex in June, 2006. Final reports and examples of good practices in teaching and learning with technology are available on the program web site http://atff.iu.edu/about/goodpract.

Activities planned for 2006-2007:

To support faculty making the transition to Oncourse CL, the Center for Teaching and Learning (CTL) will provide group consultation sessions on Oncourse CL in August 2006 and January, 2007, an Oncourse CL tech camp during Spring Break, 2007, and intensive workshops throughout summer 2007. The goal is to have 70% of all active courses established in Oncourse CL by the spring 2007 semester.
Staff and faculty support (Actions 4, 8, 10, 16, and 23 of the IU Information Technology Strategic Plan)

**Campus Planning Theme:** Teaching and Learning

**Secondary Goals:**

**Sub Unit:** None

**Time Frame:** July 1, 2005 - June 30, 2006

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**Actions taken for 2005-2006:**

In 2005, UITS IT Training and Education provided access to more than 1,200 self-paced NETg courses through its IT Training Online service. Topics ranged from basic IT skills to preparation for certification. Free Microsoft self-study courses in Office applications and basic Windows computing skills were offered as part of IU’s site license agreement with Microsoft. Microsoft Office Specialist exams tested beginning through advanced skills in Office applications. Local Support Provider (LSP) Services staff provide advanced consulting and support for Windows and Macintosh workstations and servers; IT security consulting; advanced email and mobile computing support; access to reserved software; access to restricted network and user management tools; technical training; and technical certification opportunities. In 2005 UITS provided LSPs with additional training in technical support and consulting services, and partnered with University Human Resources to provide LSPs with courses on time management, building partnerships, and creating self-reliant users.

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**Evidence of Progress for 2005-2006:**


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**Activities planned for 2006-2007:**

Continued training and certification will continue to be provided to technical support and consulting staff who support technology use in departments. This will be done through professional certification programs, locally developed workshops, and self-paced learning opportunities.

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**Research: Computation, Communications, Collaboration (Recommendation 5 of the IU Information Technology Strategic Plan)**

**Provide advanced data storage and management services for research**

**Campus Planning Theme:** Research, Scholarship and Creative Activity

**Secondary Goals:**

**Sub Unit:**

**Time Frame:** July 1, 2005 – June 30, 2006

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**Actions taken for 2005-2006:**

The Research Database Complex (RDC) provides IUPUI database researchers with two Sun V1280 systems and a Sun V880, with 28 CPUs, 200GB memory, and multiple terabytes of high-speed disk for high performance database and information management research. The complex is especially useful to those who study knowledge management and database performance, and who use biomedical data suites and geographic information system (GIS) datasets. In 2005, $50,000 in funding from the Department of Homeland Security and a $40,000 grant from the Indiana Geographic Information Council allowed the purchase of ten terabytes of high-speed disk to house aerial digital photographs of all U.S. airports. The NCE Sea/Noaa data grant provided funding for high-resolution digital photographs and
Indiana counties. The NSF-funded Data Capacitor, at the center of the university's local cyberinfrastructure, provides researchers with hundreds of terabytes of fast temporary storage that serves compute resources, visualization resources, archive storage, and scientific instruments. It enables researchers to simultaneously visualize, archive, and compute using the same data set. The $1.72-million NSF grant also funded systems to run web services that help organize and catalog the enormous amounts of data handled by Data Capacitor. IU's Massive Data Storage System (MDSS), based on the High Performance Storage HPSS) software, gives university researchers access to 880TB of capacity. Data are automatically mirrored across the IUPUI and IUB campuses over the I-Light network, making MDSS the first disaster-tolerant, high performance mass store system anywhere. Automatic duplication of data between Indianapolis and Bloomington (resulting in 318TB of data stored on tapes) assures that biomedical and other data, often irreplaceable, will not be lost were a disaster to strike one of the university’s two Advanced Cyberinfrastructure Facilities. The unique architecture of the MDSS provides a considerable competitive advantage for those seeking research grants that require substantial amounts of storage. A new storage service prototype created in 2005 called the Research File System (RFS) enables researchers from all disciplines to access their data from easy-to-use desktop and web-based interfaces anywhere in the world, and to collaborate via file sharing with researchers inside and outside the university.

Evidence of Progress for 2005-2006:

The UITS User Survey for IUPUI reveals high levels of satisfaction with research and academic computing services, including roughly 94% satisfaction with massive data storage.

Activities planned for 2006-2007:

The Research Computing division is also performing significant upgrades to MDSS in FY2006/2007. Two petabytes of tape storage will be installed along with 40 new high-speed tape drives along with new storage servers and disk. The old MDSS hardware will be phased out, and speed increases are expected to be 100 times what the existing system provides. IU was awarded a $1.72-million NSF Major Research Instrumentation grant for the Data Capacitor in October, 2005. The Data Capacitor will provide a total of 535 terabytes of short-term online and near line rate high-speed disk storage over a large aggregate bandwidth to multiple IUPUI departments and research labs. The system will be available to researchers in FY2006/2007. A replacement for the Research Database Complex will be made available in FY2006/2007, with a significant increase in database storage to 50 terabytes. The Big Red cluster will also provide significant storage resources with 260 terabytes of temporary file storage.

Continue a commitment to high performance computing and computation, so as to contribute to and benefit from initiatives to develop a national computational grid

Campus Planning Theme: Research, Scholarship and Creative Activity
Secondary Goals:
Sub Unit:
Time Frame: July 1, 2005 – June 30, 2006

Actions taken for 2005-2006:

The TeraGrid is a grid computing project for building the world's largest, most comprehensive distributed infrastructure for open scientific research. In October 2003, Indiana University, in collaboration with Purdue University, was named one of nine resource providers for the National Science Foundation's Extensible Terascale Facility, also known as the TeraGrid. The university received an additional five-year funding in March 2005. In exchange for funding to build a TeraGrid network, IU is integrating its world-class computational, data storage, networking, visualization, instrumentation, and data collection resources into the TeraGrid national grid infrastructure. In 2004, the AVIIDD-I64
Itanium2 Linux Cluster at IUPUI was fully dedicated for use by national researchers with awarded TeraGrid allocations. A percentage of the compute cycles on the AVDD PentiumIV Linux Cluster at IUPUI are available for TeraGrid use. The additional resource partner funding awarded in 2005 has enabled UITS to hire six additional fulltime staff dedicated to IU’s TeraGrid efforts.

Evidence of Progress for 2005-2006:

IU’s TeraGrid resources automatically report usage to the TeraGrid central accounting database. TeraGrid allocations are awarded as service units; use of resources at each site decrements the balance of service units available to a specific project. TeraGrid users can select to use resources at a particular site, or use a roaming allocation at multiple sites depending upon availability of cycles and software. On the AVDD clusters, 2200 TeraGrid accounts have been created, an increase of 900 accounts from the previous fiscal year, with additional accounts created each quarter as new allocations are awarded.

Activities planned for 2006-2007:

A goal in FY2006-2007 is to expand TeraGrid accessibility to new systems. The Big Red Supercomputer cluster will be brought online for 20% TeraGrid allocation. At the time of installation, the Big Red cluster and the Texas Advanced Computing Center’s Lonestar cluster can provide more TeraGrid cycles than all other resource providers combined.

☑ Provide broad support for basic collaboration technologies and begin implementing more advanced technologies

Campus Planning Theme: Research, Scholarship and Creative Activity

Secondary Goals:

Sub Unit:

Time Frame: July 1, 2005 – June 30, 2006

Actions taken for 2005-2006:

During this reporting period, the IBM Research SP was retired and replaced by two smaller machines: Libra, an AIX cluster for serial computation, and AVDD-O, a Linux cluster for small parallel jobs. IUPUI researchers accounted for 21% and 60% utilization for those systems respectively during FY2005-2006. The AVDD-1 and AVDD-B clusters that are geographically distributed between IUPUI and IUB also had 16% utilization from IUPUI researchers. A quintet of geographically distributed Linux clusters, three of which are housed in the Advanced Cyberinfrastructure Facility on the IUPUI campus, offer multiple terabytes of high-performance file systems implemented with IBM’s General Parallel file systems software, using Myrinet high-speed interconnect and directly attached high-speed disk. AVDD was funded by a $1.8 million NSF Major Research Instrumentation grant plus an additional $1.2 million of funding from UITS.

Evidence of Progress for 2005-2006:

The UITS User Survey for IUPUI reveals high levels of satisfaction with research and academic computing services, including 92% satisfaction with high performance support; 93.9% satisfaction for massive data storage; and 97.1% satisfaction overall for research computing.

Activities planned for 2006-2007:
Activities planned for 2006-2007:

During FY2006-2007 the Big Red supercomputer cluster will be installed at IUB and the AVIDD systems will be phased out. The Big Red cluster, which will be accessible to researchers at IUPUI, IUB, and the other regional campuses, will have approximately 10 times the available CPU hours as the AVIDD clusters.

Security, Privacy, Intellectual Property
(Recommendation 10 of the IU Information Technology Strategic Plan)

Campus Planning Theme: Best Practices
Secondary Goals:
Sub Unit:
Time Frame: July 1, 2005 - June 30, 2006

Actions taken for 2005-2006:

Information Technology Policy Office The Information Technology Policy Office (ITPO) develops and implements policies regarding the appropriate use of information technology (IT), educates the campuses about technology policies, and coordinates investigations of reports of abuse. Four university-wide IT policies completed a full review last year and are now formally approved. In fall 2005, the ITPO created a Sensitive Data Exposure Kit to guide units that experience security breaches involving social security numbers, credit card numbers, and other protected or sensitive data. In cooperation with University Counsel, ITPO has made dozens of presentations about the new Indiana laws protecting SSNs and other personal data. ITPO and University Counsel prepared a communication about these laws and their consequences, which President Herbert emailed to the university community. For National Cybersecurity Awareness Month in October, students at IUPUI, IUB, and IU Southeast produced three-minute videos promoting security. ITPO promoted information security with a poster campaign, mailing more than 22,000 postcards university-wide each week during October. The IUPUI Sagamore highlighted the campaign. One poster received an Excellence award in the Society for Technical Communication Chicago Chapter competition. The campaign was also packaged into a kit and made available to other educational institutions. See http://itpo.iu.edu/education/ncamkit.html.

Information Technology Security Office The Information Technology Security Office (ITSO) provides security analysis, development, education, and guidance related to the university’s information assets. An Automated Network Isolation (ANI) service went into production, reducing the amount of time a compromised device remains on the network. Intrusion Detection Systems (IDS) have been deployed on five of seven campuses, allowing quick identification of compromised machines. In August 2005, additional protections were placed on the residential networks to protect student computers. A local Microsoft Update Service was deployed in September 2005, providing a local resource for Microsoft software patches. The ITSO hosted the SANS Institute’s Securing Microsoft Windows training course at IUPUI in October to kick off National Cybersecurity Awareness Month, hosting 245 representatives from 38 higher education and other non-profit institutions. In April ITSO participated in the Indiana Higher Education Cybersecurity Summit, bringing together information assurance professionals from Indiana’s leading universities and colleges to share best practices, research, trends, and innovations in information assurance. Center for Applied Cybersecurity Research The Center for Applied Cybersecurity Research (CACR) developed three new cybersecurity classes on the IUPUI campus. It collaborated with the IUPUI Computer and Information Technology department to host the 2005 Secure Indiana Symposium, and with the Computer Science department to develop the Trusted Electronics and Grid Obfuscation (TEGO) Center. With support from Purdue University and the University of Notre Dame, the center hosted the second annual Indiana Higher Education Cybersecurity Summit at IUPUI in April. CACR served as an expert resource for various news sources including WISH-TV 8 in Indianapolis.

Evidence of Progress for 2005-2006:
Awareness of the importance of protecting sensitive institutional and personal data has increased as a result of various educational campaigns. Moving to private IPs those computers that host internal data has reduced the threat of Internet attacks. The IU National Cybersecurity Awareness Month Kit has been used by a number of other institutions as part of their own awareness activities. One hundred five university technicians received the premiere training for securing Windows 2000/XP/2003 networks at the SANS Institute Securing Microsoft Windows training course hosted at IUPUI.

Activities planned for 2006-2007:

The ITPO and ITSO will increase the security of passwords, one of the weakest security links, by transitioning university Network IDs and Windows ADS accounts to the use of passphrases during 2006. ITPO will continue to coordinate educational campaigns and provide tools for better protection of sensitive data at IU. Intrusion Detection Systems (IDS) will be deployed on the remaining campuses.

Solid Foundation of IT Infrastructure and Sound Fiscal Planning
(Recommendation 1, IU Information Technology Strategic Plan)

- A solid foundation of IT infrastructure and sound fiscal planning

  **Campus Planning Theme:** Best Practices

  **Secondary Goals:**

  **Sub Unit:** None

  **Time Frame:** July 1, 2005 - June 30, 2006

Actions taken for 2005-2006:

In 1999, Indiana University set the goal of implementing a fully-funded lifecycle replacement model for information technology. IU is the first large, public, higher education institution in the nation to have achieved that goal. The accomplishment has enabled the university to leverage buying power and negotiate excellent pricing for hardware and software, a benefit that has also extended to IU faculty, students, and staff for personal purchase. Since deployment of the lifecycle funding model, estimates indicate the university has saved more than $15 million above the standard educational pricing through negotiated hardware prices, and more than $111 million through software agreements. The accomplishment has greatly enhanced faculty and student opportunities to make full use of information technology for learning, instruction, administration, and research.

Evidence of Progress for 2005-2006:

Very substantial savings for the university continue to be realized through leveraging mass purchasing power to realize the lowest workstation and notebook prices in meeting lifecycle funding objectives. Negotiations such as the Dell Preferred Partnership have resulted in university schools and departments realizing savings of more than $20.3-million over standard educational pricing. The remarkable success of IU’s Microsoft Enterprise License Agreement (MSEL) has continued. Signed originally in 1998, the agreement enabled the distribution of more than 683,913 copies of Microsoft software, valued at more than $111,006,382. Combined with agreements with other software vendors, including Macromedia, Symantec, Oracle, SPSS, and others, such arrangements have saved the university more than $62M. In addition, the common base of software and hardware allow for improved service to users. Along with gaining the university national attention, the successful implementation of lifecycle funding enhances the university’s ability to fully use its information technology resources.
Activities planned for 2006-2007:

Lifecycle funding of essential technology will continue on an ongoing basis.

University information systems

Campus Planning Theme: Best Practices
Secondary Goals:
Sub Unit: None
Time Frame: July 1, 2005 - June 30, 2006

Actions taken for 2005-2006:

The Student Information System that enables all 100,000 university students to conduct activities related to admissions, advising, enrollment, financial aid, and other financial processes in a web-based environment, became fully functional in 2005. Notable enhancements in 2005-06 include an automated process for calculating family contributions and financial aid budgets for students, improved usability in Student Self-Service and Registration, and the addition of Advising Contacts Tracking, new features to support advisors, and autosave functionality for grade entry via Faculty Self-Service.

The Human Resource Management System provides services for human resources information including personnel records, benefits, and payroll for the university’s more than 35,000 faculty, staff, student workers, and retirees. Enhancements included employee self-service for electronic pay advices and direct deposit enrollment, as well as electronic distribution of W2s. The PeopleSoft e-Benefits module was added in 2005, enabling employees to view information about, and make changes to, their benefit plans. A $2.5-million Andrew W. Mellon Foundation grant partially supports the development of Kuali Financial Systems, a community source financial system for colleges and universities, in which the university is a founding partner. Development of the first release was completed in June 2006. In e-commerce services, the IUPay web application was developed, enabling departments to accept credit card payments on the web for low-volume sales. The OneStart web-based application portal offers a common front door to online services at Indiana University campuses. Added in 2005 were distributed help support, the University Administration Role, and options for publishing for those associated with human resources organizations. Oncourse CL (Collaboration and Learning) was introduced at IU with a variety of new tools including a new forum for one-to-one and class discussion, message tracking, and grade posting. A faculty committee was created and charged with providing guidance to the development of Oncourse CL. The disaster recovery initiative continues to assess requirements and recovery strategies needed to assure preservation of university systems and data should a disaster strike the IT facilities. Plans are ongoing to ensure data are backed up, replacement hardware and software is available, and training is provided.

Evidence of Progress for 2005-2006:

Nearly all University constituents are using OneStart to access some functions of their work. In 2006, Indiana joined with MIT and several other institutions to create the next generation system, called Kuali Research Administration or KRA. Additional data for 2005-2006 will be available through the UITS Finance Office, Cost and Quality Services Report, http://uits.iu.edu/scripts/ose.cgi?apjw.ose.help#cost.

Activities planned for 2006-2007:

The Electronic Research Administration (ERA) system provides IU researchers with an electronic system for developing and submitting research proposals. The enhanced Time Keeping system that can handle time keeping for bi-weekly employees will be rolled out to all departments over an 18-month period. Third-party access functionality will be added
to the SIS to allow students to authorize individuals to view portions of their bio-demo and academic record. Other processes will be automated.

Support for Student Computing
(Recommendation 8 of the IU Information Technology Strategic Plan)

A model for student technology support

Campus Planning Theme: Teaching and Learning
Secondary Goals:
Sub Unit:
Time Frame: July 1, 2005 - June 30, 2006

Actions taken for 2005-2006:

The UITS Support Center, with locations at IUPUI and IUB, has enhanced its self-service and online services by providing 24-hour support and live chat. It continued enhancing systems, including help desk inquiries, service requests, account management, and requests for instructional technology resources. The Adaptive Technology Center (ATC) experienced some growth and an increase in demand for services, including conversion of print materials to electronic format. The ATC also updated its website for ease of use and created a captioned video called “Tracy’s Success Story” for web delivery, highlighting the success of a student who uses ATC services. The Online Support Environment (OSE), which provides a modern, intuitive means of accessing help, was recognized by ACUTA, a premier association of telecommunications professionals in higher education, as the “ACUTA Member Site to See.” The OSE also won the Distinguished Award in the Society for Technical Communication Chicago Chapter competition for online user support tools, making it eligible for the society’s international competition. UITS also won first place award for its orientation video that informs new students about IU’s IT services and benefits such as email, software and hardware deals, computer security, and technology support from the Special Interest Group for University and College Computing Services (SIGUCCS). In July 2005, the EDUCAUSE Center for Applied Research (ECAR) published a second paper submitted by University Information Technology Services, titled, “An Architecture for Evolving IT Customer Service.”

Evidence of Progress for 2005-2006:

In 2005, the IT Support Center located at IUPUI and IUB received 41,376 walk-in contacts; 34,748 email contacts; and 173,427 phone contacts; and 2,406 ITHELPLive chat sessions, logging satisfaction levels of 96%. The Knowledge Base logged nearly 22-million hits during the year with user satisfaction rates of 93.5%. IU is now delivering Knowledge Base services to the IU Global Research Network Operations Center and research and development partners such as Sakai and the TeraGrid. Additional data for 2005-2006 will be available through the UITS Finance Office, Cost and Quality Services Report, http://uits.iu.edu/scripts/ose.cgi?apjw.ose.help#cost.

Activities planned for 2006-2007:

UITC is building additional automated tools and systems to encourage use of online services and support. Tools such as the desktop client ITNow, which was recently released, pushes communication of IT news, alerts, and events directly to the user. This enables user communication even in the event that email or web servers are unavailable. UITS will continue to serve as an academic leader by submitting more papers in the future.

Teaching and Learning: Content, Access, Distributed Education (Recommendation 4, IU Information Technology Strategic Plan)

[8]
Cost and quality analysis for classroom technology

Campus Planning Theme: Teaching and Learning
Secondary Goals:
Sub Unit: None
Time Frame: July 1, 2005 - June 30, 2006

Actions taken for 2005-2006:

This objective focuses on analyzing costs and quality for providing and supporting instructional technology at IUPUI. To date, a complete analysis of costs by classroom building at IUPUI has been prepared and projected through 2010. A pilot launch of a redesigned model for supporting instructional technology at IUPUI was begun in 2004. The goal is to reduce or at least contain costs related to providing mobile technology support in classrooms while maintaining the highest levels of service. This new model will create a more holistic response to classroom technology support. It will permit the ongoing lifecycle replacement of classroom technology, and with the implementation of the campus wireless network, informal learning spaces will be addressed.

Evidence of Progress for 2005-2006:

To date, multiple mobile PC carts have been assigned to school-based technology support providers for deployment to departmental classrooms. This has reduced the need for mobile delivery of those items in those areas. Additional data for 2005-2006 will be available through the UITS Finance Office, Cost and Quality Services Report, http://uits.in.edu/scripts/ose.cgi?apjw.ose.help#cost

Activities planned for 2006-2007:

Work will continue in deploying the new model for supporting instructional technology in classrooms and maintaining the highest service levels.

Digital media and web development (Actions 13, 14 and 20 of the IU Information Technology Strategic Plan)

Campus Planning Theme: Teaching and Learning
Secondary Goals:
Sub Unit: None
Time Frame: July 1, 2005 - June 30, 2006

Actions taken for 2005-2006:

UITS Digital Media Services (DMS) produces multimedia using advanced tools and techniques. In 2005-2006, the unit accepted 112 projects including streaming media, CD and DVD duplication, 3D animation, and video production, and projects utilizing high-definition video. Forty of the projects were web-based, including the conversion of full-length university courses to the web and administrative applications using the web. In 2005-2006, the unit provided a wide variety of production resources for the three additional IUPUI Course Transformation Projects.

Evidence of Progress for 2005-2006:

A steady influx of projects and high user satisfaction levels will be among the primary indicators of success. Additional

Activities planned for 2006-2007:

DMS will continue to provide the university community with an in-house production service specifically attuned to the requirements, logistics and policies for presentation of multimedia in the IU Information Technology environment. Effective July 1, 2006, this unit merged with Media Production in Bloomington, which expands the service base on the core campuses.

☑ Evaluation and assessment (Actions 24, 25, and 26 of the IU Information Technology Strategic Plan)

Campus Planning Theme: Teaching and Learning

Secondary Goals:

Sub Unit: None

Time Frame: July 1, 2005 - June 30, 2006

Actions taken for 2005-2006:

In 2002, the university adopted a strategy that supports assessment through the development and implementation of an electronic portfolio (ePortfolio) application. As part of the IU learning environment strategy, IU joined the Open Source Portfolio Initiative (OSPI) to develop the ePortfolio in open source code. The ePortfolio toolset utilizes the Sakai framework as a means to implement the project allowing the application to be used independently or implemented as a rich toolset in the OnCourse Collaboration and Learning environment (OnCourse CL). IU’s ePortfolio, when fully implemented, will be an assessment-based design that enables users to catalog and assess authentic or artifact-based evidence of their learning. It also will provide a means for users to build web shareable portfolios (web pages) of their work.

Evidence of Progress for 2005-2006:

When these tools are fully implemented, their success will be measured in part by an increase in faculty efforts to assess and document the role and effectiveness of technology in teaching and learning. Additional data will be available through the UITS Finance Office, Cost and Quality Services Report, http://uits.iu.edu/scripts/ose.cgi?apjw.ose.help#cost.

Activities planned for 2006-2007:

A renewed emphasis will be placed on developing the Open Source Portfolio (OSP) tools and introducing new tool functionalities to provide additional capabilities and improved user experience. Locally, the university will focus developer resources on local priorities, integrate community-developed enhancements into the local OnCourse CL environment, and continue to roll out OSP to targeted IU schools and programs. The university will remain active in the OSP community, contributing enhancements to the generic OSP source code.

☑ Excellence in classroom instructional technology (Actions 21 and 22 of the IU Information Technology Strategic Plan)

Campus Planning Theme: Teaching and Learning

Secondary Goals:

Sub Unit: None
Time Frame: July 1, 2005 - June 30, 2006

Actions taken for 2005-2006:

Classroom support at IUPUI is based on input of schools, faculty, and the campus Learning Environments Committee, which helps guide planning and installing instructional technology upgrades in classrooms. Project planning is coordinated with the Office of the Registrar and Campus Facility Services. Progress continues in implementing a new service model that reflects the significant reduction in mobile equipment delivery and the increase of higher-end technical support for permanently installed technology classrooms. As part of the next-generation learning environment, academic spaces that support informal learning will also have wireless connectivity. University Information Technology Services (UITS) Classroom Services upgraded 30 additional enhanced technology classrooms at IUPUI with computers and large-screen projection during 2005-2006. There are now 142 out of 150 (95%) general-purpose classrooms at IUPUI with permanently installed instructional technology equipment. All classroom buildings have access to wireless network connectivity.

Evidence of Progress for 2005-2006:

Classrooms with permanently installed presentation technology supported 3,909 class sessions at IUPUI during the 2005-2006 fiscal year. Mobile technology supported 1,130 sections. Results from the annual UITS User Satisfaction Survey suggest that 86% of the users of all classroom technology are satisfied with the quality of service.

Activities planned for 2006-2007:

Progress will continue transitioning to the new service model that reflects a reduction in mobile equipment delivery and an increase in higher-end technical support for installed technology classrooms.

Faculty support for teaching and learning with technology (Action 11 of the IU Information Technology Strategic Plan)

Campus Planning Theme: Teaching and Learning

Secondary Goals:

Sub Unit: None

Time Frame: July 1, 2005 - June 30, 2006

Actions taken for 2005-2006:

The Center for Teaching and Learning (CTL) on the IUPUI campus continues to improve services for faculty and academic units on teaching and learning issues, multimedia, web applications, and instructional design. In 2005, UITS staff within the CTL conducted 1,210 consultations and 68 workshops with a total enrollment of 481 faculty. The CTL received requests for service from 28 schools and 67 departments. The CTL hosted the 2005 National Institute for New Faculty Developers (NINFD) in June at University Place Hotel and Conference Center. CTL consultants are working with faculty from the departments of physics and geography who received academic transformation grants to create courses that adhere to best practices in online teaching and learning. IUPUI’s JumpStart program, now in its third year, offers instructional design and production support to faculty as they use technology to enhance gateway courses, general studies degree completion courses, and professional degrees and/or certificates. JumpStart begins with an intensive four-day workshop that focuses on best practices in online course design. As part of a grant from the Lumina Foundation, CTL staff developed the Diversity and Learning web site, a comprehensive online resource for faculty interested in issues of multicultural education. See http://www.opd.iupui.edu/meiupui.
Evidence of Progress for 2005-2006:

The CTL continues to contribute to faculty efforts to introduce technology into teaching and learning. Additional data for 2005-2006 will be available through the UITS Finance Office, Cost and Quality Services Report, http://uits.iu.edu/scripts/ose.cgi?apjw.ose.help#cost.

Activities planned for 2006-2007:

Action 11 calls for a standard level of baseline support for teaching and learning technology for all IU faculty, increasing the opportunities to explore new applications of information technology. The promotion or introduction of technology in courses and disciplines, previously without access to relevant applications or support, is also an important component of the IT Strategic Plan. The overall objective of supporting faculty in their use of technology is further enhanced by second-tier, professional course development services provided through Actions 7, 13, and 20.

Web-based course services and infrastructure (Actions 12, 18, and 19 of the IU Information Technology Strategic Plan)
Campus Planning Theme: Teaching and Learning
Secondary Goals:
Sub Unit: 
Time Frame: July 1, 2005 - June 30, 2006

Actions taken for 2005-2006:

One of the university’s most-used information systems, Oncourse allows faculty and students to use web-based teaching and learning resources and multimedia content in a single, consistent web interface. As a member in the Sakai Partnership, the university partnered in creating a community source collaboration and learning environment, and piloted its own implementation of Sakai, called Oncourse Collaboration and Learning (Oncourse CL), in spring 2005. Oncourse CL released the 2.1 version at the end of 2005, and in spring 2006 introduced new tools including the IU PostEm tool for giving grades and comments to students, and a new discussion forum and private message tool called Message Center. This supports one-to-one communication, whole-class and group discussion forums, tracking of messages, and posting discussion grades. Oncourse CL also provided a new online user file storage system in the Resources tool, which replaced the Common File System (CFS) and original Oncourse Filemanager. A faculty Oncourse Priorities Committee (OPC) was formed to provide guidance for developing new features and enhancements for Oncourse CL. The Functional Requirements Committee (FRC) assists the OPC by summarizing user suggestions and experiences and translating them into specific development requirements. Oncourse CL usage at IUPUI increased in spring 2006 to 35% of course sections that used a course management system. Oncourse CL gained increased stability and improved performance while seeing large increases in average hits per day (up 15% since fall 2005), page views per day (up 30%) and data transferred per day (up 183%). It also gained new tools, including those supporting podcasting and wikis.

Evidence of Progress for 2005-2006:

In fall 2005, 29% of course sections system-wide using a course management system were regularly utilizing the new Oncourse CL for courses and/or gaining familiarity with the new system during this transition year. By spring and summer 2006 this increased to 40%, and by fall 2006 to 55%. Additional data for 2005-2006 will be available through the UITS Finance Office, Cost and Quality Services Report, http://uits.iu.edu/scripts/ose.cgi?apjw.ose.help#cost.
Activities planned for 2006-2007:

User comments and feedback will continue to be collected, assessed, and translated into development requirements and a faculty advisory group will continue to provide feedback on the development of Oncourse CL. By May 2007, Oncourse CL will match the core functionality of original Oncourse, and continue to experience increased capabilities and scalability.

Telecommunications: Applications, Infrastructure, Convergence
(Recommendation 7 of the IU Information Technology Strategic Plan)

Advanced network applications
Campus Planning Theme: Research, Scholarship and Creative Activity
Secondary Goals:
Sub Unit: None
Time Frame: July 1, 2005 - June 30, 2006

Actions taken for 2005-2006:

IU has maintained its position as a leader in advanced networking through a variety of endeavors. In November 2005, Indiana Governor Mitch Daniels announced the state’s funding support for the I-Light Expansion Project to establish a statewide higher education optical fiber network. The university, along with Purdue University, was assigned the responsibility for the expansion, management, and operation of the statewide higher education network. The Internet2 Abilene network, managed by the Global Network Operations Center (Global NOC) at IUPUI, is one of the world’s most advanced and far-reaching educational research networks, with enough capacity to send 9.7 million, five-paragraph e-mail messages in one second. Through Abilene, researchers at IUPUI can leverage high performance research and education networks around the world. The international TransPAC network, also managed at IUPUI, received five more years of National Science Foundation support. Now called the TransPAC2 project, it enables researchers to collaborate with colleagues in the Asia-Pacific region in astronomy, molecular biology, high-energy physics, medicine, meteorology, visualization, and computational science. The Global NOC continues to provide the advanced networking infrastructure that supports researchers at IUPUI and collaborators around the world. It also provides engineering and operations services for leading high performance research and education networks, for international connections to US and global research and education networks, and provides support for grid operations.

Evidence of Progress for 2005-2006:

Measures of progress and effectiveness can be found in the faculty’s increased use of the university’s advanced networking capability and in the growth of collaborative activity among researchers in the state. When the entire I-Light network is completed by the end of 2006, 1,000 miles of fiber will extend across Indiana. Data for 2005-2006 is available through the UITS Finance Office, Cost and Quality of Services Report, http://uits.iu.edu/scripts/ose.cgi?apjw.ose.help#cost.

Activities planned for 2006-2007:

Indiana University will continue to work with Purdue University to expand the I-Light Network into a statewide higher education optical fiber network. Indianapolis, Anderson, Muncie, Marion, Fort Wayne, South Bend, Gary, West
Lafayette, and Kokomo will make up nine major network connection points to support the northern ring. Connectivity for Southern Indiana will include access points in Evansville and Sellersburg. Improved connectivity will support research, education, and collaboration, and support economic development throughout the state.

**Converged telecommunications infrastructure**

**Campus Planning Theme:** Best Practices  
**Secondary Goals:**  
**Sub Unit:** None  
**Time Frame:** July 1, 2005 - June 30, 2006

**Actions taken for 2005-2006:**

UIITS evaluated and tested Voice over IP (VoIP) during 2005. The VoIP gateways were upgraded to new hardware and software in 2005 to accommodate the growth of voice over the data network and to fully support the Session Initiation Protocol (SIP) deployments. An open source version of SIP was established in the Telecom Lab to develop understanding of how to develop and support telephone services in the open-source environment. The ongoing partnership with Interactive Intelligence (IIN) came to fruition in 2005 with the move to the Communiqué unified messaging platform developed by IIN. Several members of the Telecom staff participate in collaborative venues exploring the future of VoIP, including EDUCAUSE, the Internet2 VoIP Working Group, the Committee on Institutional Cooperation (CIC) Telecommunications Working Group, CIC Wireless Working Group, and Common Solutions Group (CSG). Staff attended multiple meetings to participate in discussions about voice over the data network. Current focus is the potential deployment of VoIP over the wireless networks, because of the expanded use of mobile devices and the need to extend voice to those devices.

**Evidence of Progress for 2005-2006:**

Data for 2005-2006 will be available through the UITS Finance Office, Cost and Quality of Services Report, http://uits.iu.edu/scripts/ose.cgi?apjw.ose.help#cost

**Activities planned for 2006-2007:**

The implementation of additional enhancements of the university’s telecommunications infrastructure will proceed in accordance with the implementation plan detailed at http://www.indiana.edu/~uits/telecom/stplan.html.

**Fiscal Health**

* Fiscal health report for 2006-07 is attached as PDF file.

**Note for Que 13:**

The Indiana University Board of Trustees, on April 5, 2002, approved a temporary doubling of the student technology fee (STF) that all IU students pay. This increase, along with a hike in tuition, is intended to help offset the more than $100 million in cuts and state appropriations withheld from IU. The technology fee increase will be rescinded when the state technology funding is reinstated. The temporary assessment helps to fund Indiana University IT Strategic Plan (ITSP) initiatives, many of which are critical to preserving and advancing resources for students. The ITSP replacement funding for IUPUI includes: Advanced Visualization (VR/VE): $39,736; Authentication Services: $3,971; Classroom Technology: $506,545; Collaborative Technologies $69,174; Decision
Reallocation Plan

Other Question(s)

1) *Doubling goals:* In what ways has and will your responsibility center contribute to the Chancellor’s doubling goals for enrollment (retention and graduation rates and degree conferrals), research and scholarship (grants and contracts), and civic engagement (service learning, internships, community collaborations)?

2) *Diversity:* What actions have you taken and what results have you achieved in retaining and graduating a diverse student body; enhancing diversity in research, scholarship, and creative activity; and recruiting, developing, and supporting diverse faculty and staff?

3) *Campus collaboration:* In what ways has your unit collaborated with other units to enhance teaching and learning and/or research and scholarship? What plans do you have to strengthen collaborative activities in coming years?

4) *International scholarship:* How extensively are faculty in your school involved in research on international topics or in collaborations with international colleagues? Please cite some examples.

5) *Internationalization of curriculum:* How extensive are international perspectives and content in curricula in your school? Are international perspectives present in the core requirements for undergraduate degrees? Are there degree or certificate programs with an international emphasis? Do you have study abroad programs?