A Message from the Interim Vice President and Chief Information Officer

For 12 years, the Office of Information Technology (OIT) has served as the university’s central information technology organization. In serving in this important role, OIT’s main vision is simple and clear — to provide the university with a first rate information technology environment that will give the campus a competitive edge in education, research, and service. During the past fiscal year, OIT continued to be a key contributor to advancing the university’s strategic plan and its ranking among the very best public research universities.

This publication is intended to share with you the OIT accomplishments achieved from July 1, 2009 through June 30, 2010 in areas such as academic computing, enterprise systems, networking, security, software development, telecommunications, and user support. Throughout this publication, you will read about ways OIT has improved the IT environment for academic and administrative computing in close collaboration with university constituents. These are some of this fiscal year’s major accomplishments:

• Approximately 25 percent of general purpose classrooms were equipped with microphones and cameras as the first step in implementing lecture capture capability in all University of Maryland classrooms.

• OIT migrated 12,500 faculty and staff to the more reliable and robust Exchange e-mail system.

• The university’s wireless network, one of the largest for a public research university, grew to support traffic of up to 16,000 users at any one time and up to 40,000 unique users each month.

• OIT’s computer and software discount programs saved the university community more than $2 million on Dell and Apple computers and various software programs.

In addition to supporting the university with technology, OIT assisted in promoting the university through news coverage. University IT initiatives appeared in a variety of media outlets: consumer press such as CNN’s Headline News, FOX 5 TV, and USA Today; higher education trades such as The Chronicle of Higher Education, Inside Higher Ed, and Campus Technology; and local media such as The Washington Post, The Washington Times, and WYPR 88.1 FM’s “Maryland Morning.”

These contributions to the university would not have been possible without the university community’s participation and collaboration. I hope these achievements give you an understanding of OIT’s contributions to the University of Maryland and a sense of the ways OIT will play a part in the institution’s continued success.

Dr. Joseph F. JaJa
Interim Vice President
and Chief Information Officer
OIT Facilitates Learning Moments

Enterprise Learning Management System (ELMS)

Usage of ELMS (powered by Blackboard) saw continued increases in enrollment and functionality in its fourth year of service. This academic year has seen another increase (from 39 to 40 percent) in the number of instructors using ELMS. About two-thirds of the almost 16,000 university course sections offered during the fall and spring semesters are represented in ELMS. Of the more than 7,500 courses offered (of five or more students), about 63 percent have a presence on ELMS. These courses reflect approximately 90 percent of the total student population.

www.elms.umd.edu

Class Capture Pilot

Approximately 25 percent of the general purpose classrooms were equipped with microphones and cameras as the first step in implementing class capture capability in all University of Maryland classrooms. A software-based class capture solution was pilot tested during the Spring 2010 semester, and faculty and students involved in the pilot provided positive feedback.

Innovations in Teaching and Learning Conference

More than 130 participants from the university and several University System of Maryland and regional institutions attended the 2010 Innovations in Teaching and Learning (ITL) Conference, which, for the first time in the history of the conference, featured a break-out presentation by non-UMD panellists. College Park participants learned how university peers are promoting student engagement with multiple technologies, moving courses into a blended teaching and learning environment, and determining the effectiveness of interactive techniques on student learning. In addition, participants benefited from the perspectives on instructional technology strategies and support shared by the inter-college panelists.

Participants used clicker devices to interact with keynote presenters from the MIT Office of Educational Innovation and Technology and the Teaching and Learning Center at Lingnan University, Hong Kong. Keynote presenters spoke about changing the landscape of learning opportunity with network-enabled open education and mobile learning. A common theme of feedback from conference participants cited a recognition that “we have to meet students where they are with technology, even if we aren’t ‘there’ yet ourselves.” Another repeated sentiment was that of being “amazed at the new things I learn at this conference even when I feel that I keep current with technology.”

www.oit.umd.edu/ITL

Technology Classroom Upgrades

During fiscal year 2010, new AV systems were installed in 31 classrooms, making a total of 218 Technology Classrooms on campus. In addition, OIT oversaw the installation of technology in approximately 50 additional departmental spaces in Tawes Hall, Knight Hall, and the School of Public Health.

www.oit.umd.edu/tc

iTunes U Academic

The iTunes U Academic site went into full production during the Fall 2009 semester. Of the 107 course albums currently available via the Academic site, 57 were requested during the 2009-2010 academic year. Nearly 2,500 media files that were uploaded during this period received more than 10,000 browser hits. Student activity spiked in February 2010, with 4,544 tracks downloaded as many instructors integrated online lectures into courses that were impacted by university snow closures. Interesting uses of iTunes U for posting lectures and student podcast projects were highlighted in three presentations given at the 2010 Innovations in Teaching and Learning Conference: “Information 3.0: Student Engagement in an ‘I’ Course Using Multiple Technologies,” “Using Podcasts to Develop Student Literacies and Engagements,” and “Implementing Technologies for Learning,” a faculty roundtable discussion. The process and policies for requesting and managing an iTunes U Academic course site was also the subject of a four-part webinar series that is available on YouTube and OIT’s Learning Technologies website.

www.oit.umd.edu/itunesu-academic-site

www.youtube.com/ItLUofUM

Learning Technologies and Outreach to Faculty

OIT worked extensively this year to reach out to faculty members by providing more online opportunities for support, training, and community as well as by utilizing staff expertise to share experiences. The Learning Technologies website was redesigned in an effort to make it more user friendly and to provide more options for online support, including more multimedia and visual materials.

In the Fall 2009 semester, the “How Do I?” webinar series was launched. Each week, the series offered a 30-minute online session on a specific aspect of one OIT-supported service or tool. Topics included ELMS, clickers, iTunes U, Wimba tools, Twitter, and Second Life. Offered live through Wimba Live Classroom, the sessions were also archived, broken down into short video segments, and made available on OIT’s Learning Technologies website and YouTube. The archived sessions and short “how to” videos have been accessed hundreds of times.

Another effort was geared at capturing faculty uses of technology for teaching and learning. In January, OIT launched the Faculty Showcase interview series, and the first video featured a conversation with Dr. Mark Varner, a professor in the Department of Animal and Avian Sciences, on using current events and the ELMS discussion board for teaching physiology. Every month, a new faculty member and topic is highlighted on the Learning Technologies website.

http://ital.umd.edu

Faculty Technology Center

The primary faculty training facility for OIT was updated with new computers and reconfigured in a more accessible arrangement. The computers used for training in the Faculty Technology Center are now dual boot iMacs, which allow for both Windows- and Macintosh-focused training. This hardware change has allowed OIT and University Human Relations, which manages many university training programs, to expand offerings to Mac software. The seating reconfiguration allows for more flow among the participants and instructor. The technology center also now provides space for participants who bring their own laptops to participate in workshops. Additionally, there is a small set of laptops in a cart that can be used for training in other locations.

AT&T Internships

With help from OIT, AT&T established a student internship program for the university. Two University of Maryland students were selected to participate in internships with AT&T during each of the past two summers, and the student interns gained experience in designing wireless networks as well as in operations, sales, and marketing.

www.oit.umd.edu
### Voice Service Upgrades

This fiscal year, OIT consolidated and simplified the university's telephone switch environment. This consolidation allows the switch to more efficiently support E911 services and gave OIT the opportunity to create a lab environment to use for proactive tests on features and functions prior to deployment.

Additionally, all current Voice over IP phone users were migrated to the most current version of the Modular Messaging voice mail system. This new version provides additional back-end enhancements that will allow new features to be released to users in the future.

### Exchange E-mail Migration

During fiscal year 2010, OIT partnered with departments and colleges throughout the university community to successfully migrate more than 12,500 faculty and staff e-mail accounts to the university's new Exchange e-mail system.

Moving faculty and staff e-mail services to Exchange provides many benefits. It not only allows the university to eliminate some costly maintenance contracts for aging systems, but it also provides enhanced services to the university community. The Exchange e-mail system has been designed for high availability and prevention of data loss in the event of a system or hardware failure. E-mail storage has been increased so that every account migrated to Exchange received additional storage capacity. Processing speed in the new system is better, reducing service delays and slowdowns. The user interface for remote access, Outlook Web Access, provides greater functionality than the old system. The new Exchange system has a more robust contacts interface that provides ubiquitous access to a centralized address book.

www.oit.umd.edu/exchange

### Network Operations Center

OIT completed the creation of the university's first Network Operations Center (NOC) facility. The primary function of the NOC is to monitor critical network components to detect failures and degraded performance and to perform initial troubleshooting to determine the reason for any abnormality it detects. Currently, it is staffed 12 hours per day, Monday through Friday. The goal is to make this an around-the-clock operation. As the NOC expands, it will take on more monitoring responsibilities.

www.oit.umd.edu/nts/noc

### Drupal

The open source product “Drupal” was selected as the Web content management system that will be offered as a service to the university community. Led by OIT, the university procurement committee that selected Drupal included representatives from varied groups across campus. As part of the service development, OIT also partnered with the College of Arts and Humanities to develop a proof-of-concept Drupal environment and website to determine the viability of Drupal as a large-scale university service.

www.oit.umd.edu/exchange

### Mainframe Hardware Replacement

Many critical applications run on the university's mainframe. It is a source of data in an interactive mode and also runs large batch jobs to distribute the data to other platforms across the campus. During the 2009 winter break, OIT replaced the university's mainframe with new hardware. The new mainframe allows many of the university's critical applications to continue to run on supported hardware and enables OIT to add capacity if workload demands increase. The new model is more energy efficient and has resulted in cost savings on software and hardware maintenance contracts.

This fiscal year, more than 150,000 jobs were scheduled and executed on the mainframe with a success rate above 99 percent. To ensure security of the university's most important data, multiple reports on access to the critical data were reviewed daily, and OIT underwent audits as prescribed by the state legislature.

www.oit.umd.edu/networkrefresh

### Network Refresh

This fiscal year, network refresh activities were completed in eight campus buildings: the Computer Science Instructional Center, the Computer and Space Sciences Building, Fraternity/Sorority Row 3, Fraternity/Sorority Row 8, the School of Public Health, Somerset Hall, Talbot Hall, and Worcester Hall.

OIT created implementation plans for the accelerated five-year Network Refresh Project, collaborated with campus constituents to develop a five-year building refresh schedule, and began performing network refresh activities in the Year 1 and Year 2 buildings in the five-year building schedule.

In addition to the refresh of campus buildings, OIT also performed two parallel activities as part of the Network Refresh Project this fiscal year. The first parallel activity was the upgrade of wireless network access points to 802.11n, which offers increased bandwidth and speed. All wireless access points in administrative and academic buildings were upgraded to 802.11n. OIT also began upgrading wireless access points in residential buildings to 802.11n. The second parallel activity was the upgrade of the outside underground fiber plant and the move from a two- to a three-node core to make the network more robust and resilient. Phase one of this upgrade, which includes verification of all fiber routes, began this fiscal year.

www.oit.umd.edu/networkrefresh

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“Thanks for helping get DOTS mailboxes on Exchange. It was a smooth project from start to finish, well thought out and implemented.”

— Beulah V. Daniel, Department of Transportation Services

continued...
OIT Strengthens the University’s Technology Environment

Data Center Upgrades

OIT spent significant time this year working to improve the infrastructure for the campus data centers. The Primary Data Center has been operating at the edge of conditioned power. Working with Facilities Management (FM), a new uninterruptible power supply and its related infrastructure was installed, substantially increasing the available electrical supply to the Primary Data Center and providing a measure of redundancy for OIT systems that had not previously been available. OIT also added three new Power Distribution Units, one in the Research Data Center and two in the Primary Data Center, to improve electrical distribution.

Through new procedures and technology, OIT has been working to improve our capacity to monitor the power and cooling systems that supply our data centers. Newer infrastructure equipment provides us with greater capabilities for monitoring, and OIT and FM have been working together to make use of these features. We believe this will help us to better manage our energy resources and improve our ability to prevent infrastructure-related outages.

OIT also worked with FM this year as they installed a new building-wide fire detection and suppression system. The system being replaced was originally installed in 1987, and its technology and equipment were out-of-date and hard to repair. In recent years, the old system had resulted in several unplanned outages to the Primary Data Center.

Disaster Recovery Database Failover

This year, OIT successfully performed disaster recovery database failover from the main database servers in the university’s Primary Data Center to database servers in the Secondary Data Center. This failover process would be used in a real disaster or sustained power outage at the Primary Data Center. Database failover is a step toward being able to provide full disaster recovery of all critical applications in a shorter amount of time. Other services were also tested for failover. More tests are planned for 2011.

ITIL Standards

The IT Service Center (ITSC) is one example of a larger effort in OIT, begun in 2007 and still expanding, to better manage our IT services for the benefit of the university community. OIT is working to follow guidelines from the Information Technology Infrastructure Library (ITIL), the de facto world standard for effectively designing, delivering, and supporting IT-related services.

OIT has already adopted ITIL best practices for Incident Management (i.e., responding to customer issues via the IT Service Center). OIT also has been utilizing ITIL principles for managing changes to our production environment. In Spring 2010, we adapted the same software that underlies the ITSC to greatly expand our ability to record, authorize, and follow up on infrastructure changes that potentially affect services. ITIL principles and this same undepinning software will play a major role as we further review and refine our operations.

OIT Supports Research at Maryland and Beyond

Evergreen Cluster Project

The Integrated Assessment Research Program directly addresses the American Recovery and Reinvestment Act of 2009 to support improvements to U.S. Department of Energy (DOE) scientific facilities to strengthen the foundation for scientific research and leadership. The DOE funding for this project is enabling the creation of a high-performance computing cluster, dubbed Evergreen, for use by the Joint Global Change Research Institute (JGCRI) and other scientists across the country. The JGCRI is a collaboration between the DOE’s Pacific Northwest National Laboratory and the University of Maryland.

OIT designed and began building the Evergreen Cluster and will operate it for the next five years, during which time it will be used to support integrated assessment of human drivers of climate change and the consequences of those changes. Evergreen will have 272 nodes, 2,368 cores, and a theoretical peak performance of 26 teraflops. For comparison, it would take 2,600 laptops to provide the same computing power. Evergreen will have 1.4 petabytes of storage — equal to about 14,000 laptop hard drives — and will employ an InfiniBand network, which is about 13,000 times the speed of a typical home broadband connection.

This collaboration contributes to the university’s goal of enhancing its reputation as a leader in science and technology research.

High-Performance Computing

Deepthought, OIT’s High-Performance Computing Cluster, continues to grow as new groups join and existing units expand their contributions. This fiscal year, contributions from the Departments of Astronomy, Mechanical Engineering, and Chemical and Biochemical Engineering have expanded the cluster to an impressive 2,722 cores. Additionally, the Lustre file system was expanded to 15 terabytes. Lustre is a file system used in computer systems where there is a large amount of storage to manage and small increases in input/output bandwidth are critical. Rounding out the improvements, a new quad data-rate InfiniBand switch will greatly increase throughput to the InfiniBand compute nodes. Fast connections between the individual InfiniBand nodes allow for faster calculations. During fiscal year 2010, the 50 groups using Deepthought submitted 171,096 jobs, consuming more than 1,080 CPU-years of compute time. For more information about Deepthought and the Independent Contributions Program see www.oit.umd.edu/HPCC.

Visiting Chinese Scholar

OIT, along with the Center for Teaching Excellence (CTE), hosted a visiting Chinese scholar, Yichun Zhang. Dr. Zhang is a professor at Nanjing Normal University and is the director of the Modern Educational Technology Center, which provides services that are similar to OIT’s academic support offerings. Dr. Zhang worked with both OIT and CTE on projects that allowed him to further his research and to take best practices back to his institution.

Dr. Yichun Zhang
OIT Advances University Initiatives

Mobility Initiative

This year, the focus of the Mobility Initiative turned to supporting faculty in their investigations of mobile learning. This was done by acquiring a loaner pool of equipment and funding Mobile Learning Fellows. In partnership with the Office of the Provost, 66 iPod touch devices were acquired to enable faculty to provide their students with devices in support of course activities exploring how mobile devices can enhance learning. Partnering with the Center for Teaching Excellence (CTE), the Mobility Initiative supported six Mobile Learning Fellows who participated in the CTE Summer Institute on Teaching and Learning with New[er] Technologies and tried new mobile learning activities in their courses during the Fall 2009 semester. To provide opportunities for additional faculty to explore mobile learning, a proposal process was conducted for the Spring 2010 semester, which resulted in an additional four faculty fellows being approved to use the loaner pool of equipment. A second set of Mobile Learning Faculty Fellows were funded for the 2010 CTE summer institute and will be supported this coming academic year. Additionally, a new iPhone programming course was launched for the Spring 2010 semester, and it has received favorable news coverage from around the United States.

Several mobile applications were developed to support faculty and provide services to students. A “Media Diary” app was created for a communications course and a “Collector” app was created for a kinesiology course. Both were developed to enable collecting data in the field. In addition, an ELMS Mobile app was developed that provides students the ability to get quick access to announcements, documents, discussion boards, and grades for their courses from Apple mobile devices. This app is now available from the Apple App Store.

In addition to the approximately 150 Mobility Initiative students who will participate during the Fall 2010 semester, a new academic program is being supported by the initiative. The Digital Cultures and Creativity program in the Honors College joined the Mobility Initiative, and its students will receive iPads to use in their course activities.

www.mobility.umd.edu

PeopleAdmin

PeopleAdmin, the university’s new externally-hosted Web-based employment system, was released in March 2010. It is used at more than 300 public and private U.S. universities and is intended to transform the way faculty and staff searches are conducted on the College Park campus. OIT worked with University Human Resources to configure the system and to integrate it with existing university systems such as PHR, UMD’s online payroll and human resources system, prior to release. OIT continues to provide support.

http://uhr.umd.edu/peopleadmin

Communications Service Fee Committee

This fiscal year, OIT formed a new campus committee, the Communications Service Fee Committee (CSFC), to develop a fair, equitable, and flexible charging methodology for communication services on campus. As the networking and telecommunications infrastructure on campus is being revitalized over the next five years, it has become apparent that the current charging methodology for communication services does not provide enough flexibility to meet the needs of the campus. The current methodology has been in place for a long time, and technology changes have made it obsolete. In addition, this methodology has presented some challenges in rolling out new service capabilities due to difficulties in determining how to charge for such services. The CSFC is composed of members representing all constituencies of the university community and is chaired by OIT.

www.oit.umd.edu/CSFC

IT Service Transition for the Institute for Bioscience and Biotechnology Research

OIT successfully managed the transfer of services, including networking and Exchange e-mail, to the University of Maryland, College Park for more than 200 faculty and staff of the new Institute for Bioscience and Biotechnology Research. The institute will leverage the research assets of the two University of Maryland campuses at College Park and Baltimore plus the National Institute of Standards and Technology in Gaithersburg, and it will undertake major bio-problems that serve the expanding economic base of biosciences and biotechnology in the 270-corridor and across the state.

Advise on the Web

Several enhancements were implemented to improve the business process of Advise on the Web, including the abilities to send out mass e-mails and print batch transcripts by U ID number or by student name. System performance was also improved.

CourseEvalUM

OIT continued work with the Office of Institutional Research, Planning, and Assessment (IRPA) to further enhance the CourseEvalUM online course evaluation and reporting system. In preparation for implementing new functional requirements as defined by IRPA, the underlying infrastructure for the delivery of online course evaluations was upgraded. New functionality was added to allow department schedulers to see their respective lists of courses being evaluated without the manual intervention of IRPA in the process. For the reporting system, new functionality enables admin users to view reports from multiple colleges, departments, or course prefixes based on defined security levels and lets students search by course or instructor from the first screen.

www.courseevalum.umd.edu

Registration and Payment

OIT worked with Undergraduate Admissions to help integrate payment into the course registration process. Students are directed to a payment form after completing registration, and the form is also available on its own for those students who bypass it when they register or who need to amend their payments.

OIT in the News

In the University of Maryland’s strategic plan, Transforming Maryland: Higher Expectations, it is noted that “the University of Maryland has an extraordinary story to tell.” Part of the university’s vision is “to raise public awareness of the university as a world-class research and educational institution that is distinctively innovative, entrepreneurial, and engaged.”

OIT is contributing to the fulfillment of this part of the strategic plan by elevating “Maryland’s visibility and reputation” and “rais[ing] public awareness of the university’s accomplishments” through media coverage. University IT initiatives appeared in a variety of media outlets this fiscal year: consumer press such as CNN’s Headline News, FOX 5 TV, and USA Today; higher education trades such as The Chronicle of Higher Education, Inside Higher Ed, and Campus Technology; and local media such as The Washington Post, The Washington Times, and WYPR 88.1 FM’s “Maryland Morning.” In fact, 95 percent of all OIT-related news coverage was positive or neutral in fiscal year 2010.
OIT Enhances Campus Life

OIT Computer Labs
Several OIT Computer Labs were upgraded this year: new Windows machines were purchased for the Windows computer labs, and 21 Macs replaced the Windows computers in the lab in Computer and Space Sciences (CSS) Room 3330 to allow for Windows/Mac dual boot options in the labs in CSS 3310 and CSS 3332.

http://terpconnect.umd.edu/ads

the items to be sold. Ads stay on the site can provide as much information as sell something can post a free ad. They can provide as much information as they would like and include photos of the items to be sold. Ads stay on the site for 30 days and then are automatically removed.

http://terpconnect.umd.edu/ads

OIT Contributed to Presidential Events
OIT participated in establishing a high-speed connection for the White House to stream live video of President Obama’s Health Care Rally held at the university in September 2009. OIT also assisted University Communications to stream live video of Dr. Mote’s Town Hall Meeting in September 2009.

TerpConnect Marketplace
In Spring 2010, a new service was launched on TerpConnect: the Marketplace. The Marketplace gives students, faculty, and staff a way to sell and buy books, clickers, and more. Those wishing to sell something can post a free ad. They can provide as much information as they would like and include photos of the items to be sold. Ads stay on the site for 30 days and then are automatically removed.

http://terpconnect.umd.edu/ads

Graduate Student Election Application
In Spring 2010, the Graduate Student Government (GSG) used a Web application developed by OIT to run their annual elections. The new system allowed the GSG to set up and run their elections without assistance from university administrative units and allowed graduate students to authenticate via the GSG website to run for office or to cast votes for candidates and referendum measures.

Improved Cellular Coverage
This fiscal year, OIT continued to work with cellular providers to improve cellular service on campus. Construction of an AT&T temporary Cell-On-Wheels site was completed, and a cell site was activated. This temporary cell site primarily improves outdoor cellular coverage and could also improve indoor coverage. Development of a formal proposal for a permanent antenna will begin in fiscal year 2011.

OIT also worked with Verizon Wireless to add additional panels to their cell tower on the rooftop of a campus building to increase bandwidth to their cell tower and improve the reliability and speed of their network.

OIT Goes Green
Payroll and Human Resources (PHR)
OIT worked with the Office of the Comptroller and the Department of Human Resources to make enhancements that further establish PHR as a model Web service among higher education institutions. Significant functions added in fiscal year 2010 include automated calculation and display of furlough and salary reduction information, automated administration of advanced and extended sick leave, and automated print suppression of direct deposit advices. All of these features contribute to the university’s sustainability initiative by reducing paper and improving efficiency and accuracy by automating manual processes. State mandated functions added in fiscal year 2010 include data changes for domestic partner health options and security changes for using PartnerLink to transfer files. Federal mandated functions added in fiscal year 2010 include verification of employees working on federal contracts and grants (E-Verify) and collection of ethnicity and racial identity information. The mandated features were implemented using a “green” and efficient automated solution.

Electronic Forms (ELF) Enhancements
Several new electronic forms were developed and implemented during the fiscal year, including varied Miscellaneous Payment Request forms for campuswide and departmental use and a Vendor Maintenance form, which allows for the creation of new vendors within the Financial Records System. By replacing their paper counterparts, these new electronic forms reduce employee handling time and contribute to a greener campus.

Virtualization
OIT continues to invest in green computing through its multi-platform virtualization initiative. Numerous Microsoft Windows servers have been migrated to OIT’s growing VMware environment, and more than 20 physical Linux servers have been similarly virtualized this past year.

During the Fall 2009 semester, OIT brought up two VMware ESX environments to reduce the resources used for power and cooling and to reduce the cost for server hardware. Currently more than 60 systems reside on the VMware clusters, which requires approximately $600,000 in savings on hardware purchases as well as additional monthly savings due to the reduction of power and cooling requirements.

OIT has also reduced the number of physical UNIX Solaris servers, which host critical applications and Web resources, from 50 servers down to five larger servers running the same applications. This consolidation is made possible by a virtualization technology referred to as Logical Domains, which allows a physical server to be partitioned into multiple guests running independently. This technology, in concert with other technologies, allows us to balance the load not only within but between data centers, maintain core critical services in the event of a data center outage, and restore ancillary services quickly in the event of a disaster.

In April 2010, OIT began offering Solaris Virtual Machines to campus constituents as a for-fee service.

Sustainability
OIT has been an active participant in the university’s sustainability efforts as a member of the university’s Climate Action Planning group, which helped develop the university’s long-reaching sustainability goals, and by serving on the President’s Sustainability Council.

Despite the difficult economic climate, in the past year OIT has continued our equipment refresh efforts aimed at replacing less-efficient and older hardware with Energy Star and EPEAT certified equipment. Large numbers of servers, desktop computers, office equipment, and lab and technology classroom equipment were replaced along with the entire mainframe infrastructure. At the same time, OIT also eliminated out-of-date hardware through system upgrades and by creating virtual environments. We have increased our recycling efforts and our use of recycled goods. Recycled paper is being used for most printed output generated on the mainframe. We are working on methods to reduce printed output and a process for disposing of IT media in a secure and environmentally conscious manner.

www.umd.edu/sustainability

Accomplishment Highlights — Fiscal Year 2010

Office of Information Technology: Providing Computing and Communications Resources to the University of Maryland
Office of Information Technology: Providing Computing and Communications Resources to the University of Maryland

Accomplishment Highlights — Fiscal Year 2010

OIT Saves the University Community Money

**Software Licensing Savings**

OIT Software Licensing enhanced its Adobe and Microsoft offerings to students, faculty, and staff for personal and work-at-home use and made many software titles available through the Terrapin Technology Store. This fiscal year, Software Licensing saved the university community approximately $1.5 million off of manufacturers' suggested retail prices for personal use software purchases. Software Licensing continued to provide authorized and legal software products and licenses from such popular manufacturers as AutoDesk, McAfee, and Microsoft for institutional purposes as well.

www.oit.umd.edu/SUC

**Institutional Bulk Purchasing from Dell**

OIT’s bulk institutional purchasing program with Dell enabled departments to take advantage of bulk discounts during this past fiscal year. The university saved a total of $172,000 with an average discount of 18 percent above the regular educational discounts offered by Dell.

**New Database Consulting Services**

OIT began offering database consulting services for Oracle, Microsoft SQL Server, and MySQL databases. The benefits to departments include reducing the need for departments to maintain expensive database consultant contracts, decreasing the need for database-savvy personnel, allowing for departmental IT staff, and enabling units to focus professional development resources in other areas critical to department services.

**Undergraduate Admissions Application Processing**

OIT worked with Undergraduate Admissions to streamline online application submissions in several areas. First, the application for undergraduates formerly consisted of two parts, which needed to be submitted separately in a specific sequence. Those two parts were combined into one, so that the online undergraduate application can be completed as a whole.

Second, OIT modified the application submission programs to flag only the applications with errors. Undergraduate Admissions’ Enrollment Services Operations no longer needs to review every single application to check for errors. During the heaviest time for submittals, late October through November 2009, the change reduced the amount of work spent reviewing Web applications for errors by 91 percent.

Additionally, OIT launched an online application and imaging process for the Universities at Shady Grove, allowing students to apply electronically to that institution. OIT also improved Undergraduate Admissions’ Enrollment Confirmation programs to replace the paper mailing process, create an electronic survey, and automatically refer qualified applicants to the Honors and College Park Scholars websites.

**LCD Project Bulk Buy Savings**

Each year, OIT provides an opportunity for the university community to participate in a bulk buy of LCD projectors when it replaces its projectors that are at the end of their lifecycles. This reduces costs for all involved. This year, five units on campus participated along with OIT in purchasing LCD projectors, including the School of Architecture, Planning, and Preservation; the College of Education; the A. James Clark School of Engineering; the School of Public Policy; and the Joint Program in Survey Methodology. Due to the quantity of projectors ordered, the participants received a 55 percent discount off the list price of their purchases.

**Department of Transportation Support**

OIT worked with the Department of Transportation Services (DOTS) to prepare for the release of DOTS’ new License Plate Recognition (LPR) system. OIT rewrote the student parking permit request Web system to interface with the LPR system and released a new registration system that allows students to submit vehicle information and create, change, or cancel virtual parking permits. The LPR system and the new online registration tools potentially will save DOTS the time and effort spent on manual entry of about 8,000 parking permit requests during Summer 2010.

**Computer Discounts from Terrapin Technology Store and ACT Program**

The Terrapin Technology Store continued to be popular with the university community during fiscal year 2010, especially with incoming students and their parents. During its third full fiscal year of operation, the tech store saved the university community more than $255,000 on computer purchases alone. The Terrapin Technology Store offers hardware from the Academic Computers for Terps (ACT) program, software titles from OIT’s Software Licensing office, and IT accessories such as iPads and iTunes gift cards.

The ACT program is the overarching computer discount program at the university, and it provides discounts and extended warranties on Apple and Dell computers to faculty, staff, and students. During fiscal year 2010, savings to the university community on Web sales from the program totaled more than $267,000 off of MSRP.

Combining those savings totals, clients spent $522,000 less on their computer needs by taking advantage of the ACT program, either online or through the Terrapin Technology Store.

www.oit.umd.edu, Techstore
www.act.umd.edu

“I recently purchased an Apple laptop from the Terrapin Technology Store. The students were extremely helpful and even suggested software I needed but didn’t think was available from [the store]. The discount associated with being a member of this community was SO helpful and appreciated.”

— Jeanette J. Nelson, University Relations
OIT Provides Support in Times of Need

OIT Help Desk
The consolidated OIT Help Desk (composed of the Faculty/Staff Help Desk, the Student Help Desk, the Network Operations Center, the Networking and Telecommunications Service Desk, and Campus Information Services) received and processed more than 165,000 technical support and university-related phone calls during fiscal year 2010. www.helpdesk.umd.edu

ACT Program Warranty Service
The OIT Warranty Desk provides hardware warranty repairs for purchasers who obtained their computers through OIT’s Academic Computers for Terps (ACT) program. In addition, OIT operates and maintains the repair loaner program, which provides a free loaner computer to all clients whose repairs take overnight or longer. OIT also assists any university community member needing help with wireless configuration and problem troubleshooting. During fiscal year 2010, the Warranty Desk staff responded to more than 2,600 requests for assistance, averaging about 216 individual incidents per month.

IT Service Center
In January 2010, OIT unveiled the IT Service Center (ITSC), a Web-based complement to the OIT Help Desk. This resource allows faculty, staff, and students to search a self-help Knowledge Base of more than 500 (and growing) how-to articles, and, if needed, initiate a help request 24 hours a day using a simple Web form.

Any member of the university community can use the ITSC website to track the progress of a request, add updated information if the situation or problem changes, and see the entire history of their prior IT Service Center requests and solutions. In fact, no matter how a request is started — online, by e-mail, or by contacting the Help Desk on the phone or in person — it can be tracked at the ITSC website. Behind the scenes, the software that supports the ITSC allows OIT to better monitor and respond to the 3,000 ITSC requests typically received each month.

The IT Service Center also helps keep the university community up to date with alerts (called “Global Incidents”) about service interruptions and other issues. These alerts are viewable at the ITSC website and the Help Desk home page. There is also the option of subscribing to any of these Global Incidents in order to be automatically updated by e-mail when the status changes.

Project NEThics began using the ITSC for its case tracking this year. A separate partition was developed to ensure the security of sensitive cases; the software enables NEThics staff to automate some aspects of the management of copyright cases. This is helpful to realize efficiencies in the face of rising numbers of cases (from 773 in 2009 to 1,387 in 2010 — a 79 percent increase).

OIT plans to extend the ITSC functionality to other IT groups on campus that also need to log and track customer requests.

http://nethics.umd.edu

Computer Donations to Deserving Students
As part of their participation in the ACT computer discount program, Apple, Inc. and Dell Computer, Inc. donate current model laptop computers to be distributed through the university’s Office of Student Financial Aid. The number of donated computers is based on the number of sales through the ACT program and the Terrapin Technology Store. Between July 1, 2009 and June 30, 2010, 20 computers were distributed to deserving students through this relationship.

Project NEThics
Project NEThics, the OIT team that promotes responsible use of information technology through user education and policy enforcement, handles reports of sensitive incidents such as cyber-bullying, stalking, account intrusion, and harassment in addition to its primary role combating copyright violations. During fiscal year 2010, Project NEThics managed 74 inquiries of a sensitive nature along with 1,387 copyright cases.

www.itsc.umd.edu

Preparing for a Flu Outbreak or Other Emergency
As part of the university’s H1N1 preparedness efforts, OIT highlighted the services it provides that could help faculty continue teaching even if the campus closed. The services include ELMS course spaces, Wimba Live Classrooms, audio conferencing, Course Mail e-mail reflectors, and more. These preparations proved useful when the university was closed for several days due to severe winter weather.

http://nethics.umd.edu

www.umd.edu/umnews/OITh1n1all109.cfm
OIT Forms Meaningful Partnerships

Maryland Day
Because of their partnerships with OIT, two technology companies were first-time sponsors of Maryland Day 2010 and hosted events on the big day. Cisco personnel exhibited some of that company’s technologies, including its Network on Wheels van and its TelePresence technology, and also provided entertainment for all with Elmo and Cookie Monster characters. Avaya staff members demonstrated to viewers how to retrieve e-mail messages via an iPhone using speech access software. Avaya representatives also demonstrated the one-X Mobile solution, which extends the campus’ advanced telephone switch functions and features to the user community’s cell phones.

UM/Cisco Executive Partnership
OIT and Cisco further expanded their strategic relationship this fiscal year. OIT and University Relations worked with Cisco to establish five two-year scholarships for University of Maryland students in the A. James Clark School of Engineering and the College of Computer, Mathematical, and Physical Sciences. These scholarships will support talented undergraduate students and contribute to one of the university’s highest priorities: scholarship support.

OIT Staff Members Earn Kudos

EDUCAUSE Evolving Technologies Advisory Committee
Fran LoPresti, OIT Director of Technical Services and Support, was invited to serve a three-year term representing the University of Maryland on the EDUCAUSE Evolving Technologies Advisory Committee. The committee is charged with identifying developing technologies and evaluating their impact on higher education for the EDUCAUSE community. Committee members identify, research, and produce white papers about the technologies annually, and the information is presented in EDUCAUSE’s Evolving Technology Reports and at its annual conference.

EDUCAUSE Mid-Atlantic Regional Conference Program Chair
Ellen Borkowski, OIT Director of Academic Support, was selected to be the Program Chair for the ninth annual EDUCAUSE Mid-Atlantic Regional Conference, which will be held January 12-14, 2011 in Baltimore, Maryland. In her role as Program Chair, Ellen will help select the tone for the conference and guide the planning of the conference content, including the overall theme, keynote speakers, and more. Two OIT staff members have had presentations accepted for this conference.

OIT Staff Members Share Knowledge and Information

OIT in UM Classrooms
OIT staff members shared their expertise with students in the classroom, with some staff members teaching seminars or courses, while others served as guest lecturers and guest presenters in the following courses:
- BMGT405: Networks and Data Communications
- CPSP118D: Science, Discovery, and the Universe
- EDH788R: Integrating and Managing Technology in Educational Organizations
- UNIV100: The Student in the University
- UTAP (Undergraduate Technology Apprenticeship Program)

OIT Outreach
OIT representatives attended more than 40 university outreach events, such as new student and employee orientation sessions, the First Look Fair, and Maryland Day.

Professional Presentations
During fiscal year 2010, OIT representatives shared their knowledge via presentations and technical submissions at several national education and IT conferences, with subject matter ranging from elevating higher education network infrastructure into the 21st Century to mobile learning.

OIT Forges Ahead

We hope you enjoyed learning about OIT’s successes for fiscal year 2010. Many of these are only steps on the way to achieving larger IT enhancements at the university over time. Some of OIT’s plans for fiscal year 2011 include the following:

• Continue to lead the university’s involvement in the Kuali initiative, a collaborative effort with other higher education institutions to develop a new student information system, financial system, and open library environment that can be adopted here at Maryland as well as at other universities.

• Reduce infrastructure operating costs as well as the university’s carbon footprint by releasing a VMware infrastructure service that will allow the community to lease virtual machines.

• Transition the university’s Oracle Calendar system to Exchange, providing a single user interface for faculty/staff calendars and e-mail to complement the enhanced reliability of our e-mail system. Eliminating Oracle Calendar will also reduce licensing and maintenance costs for the university.

• Expand lecture capture capabilities in classrooms throughout the university and increase faculty participation in the pilot program.

• Enhance spam control for university e-mail accounts by installing a new anti-spam security device and integrating it into e-mail handling processes.

• Continue to improve and expand the use of the IT Service Center for requesting assistance from OIT and other departments across the university that provide IT support.

We look forward to continuing our efforts to further this great university through these planned activities and others that will improve the functionality, robustness, and reliability of information technology services for the entire University of Maryland community.
“The day before he died we met for an hour in my office to discuss OIT and his plans for the Fall. He could not think any other way.”

~ President Dan Mote