ict

INFORMATION + COMPUTING TECHNOLOGY

2010-2011 ANNUAL REPORT

Mission Statement

The Information, Computing and Technology Group's mission is to provide the Maxwell community with the highest quality computing, multimedia and web services available. Our vision is to increase productivity and promote sustainability using state of the art technology, innovation, and through collaboration with our users. We strive to create an efficient, secure and educational environment for our faculty, staff and students.

ICT in Action

Over the last decade, ICT has made a strong commitment to bringing the very best technology to the Maxwell School. The deployment of Windows 7 (Maxwell was the first on campus) allowed ICT to offer a faster, more secure desktop experience along with advanced sustainability features. The hybrid sleep mode feature in Windows 7 reduces the power draw of a computer from 5 watts down to 1-2 watts when in idle mode, reducing the carbon footprint. To leverage this feature, ICT developed, in house, a system that allows a faculty or staff member to remotely wake up their computer from a sleep or powered off state (http://wakeme.maxwell.syr.edu). This enables our remote desktop users to be able to participate in the green initiative. The computers in Maxwell, along with the monitors, printers and scanners are rated EPEAT gold, saving the Maxwell school thousands of dollars in energy savings per year.

ICT has worked with the central computing group to develop a central research computing cluster, which offers a high powered computing environment located in the new Green Data Center; taking the physical, power consuming computing clusters, which are expensive to operate, out of the academic units and places it into a virtual, secure, and green environment. We have also collaborated with Dell and the central computing group to develop a low cost 64-bit desktop

solution that retains the same amount of computing power but in a smaller eco-friendly package.

ICT's multimedia production and web services are among the best available on campus. Our full featured content management system facilitates the departments in their creation of a strong web presence, which is crucial in promoting the Maxwell brand. We have full multimedia production capabilities in Maxwell which includes teleconferencing, audio and video recording and post-production editing, to Skype on the desktop. Our top notch training program gives the Maxwell community the opportunity to learn how to be more productive in their work. We have a wide variety of classes and workshops available for the Maxwell community to learn everything from style sheets to databases. On a broader level, ICT is working with the departments to develop collaborative work environments using Microsoft's SharePoint 2010 server; which allows departments to share a common workspace, improving productivity and security.

ICT regularly collaborates with Information Technology and Services, as well as other distributed IT support units on campus to share knowledge and create a better IT environment across campus. ICT Staff members participate in several projects and committees on campus including Security Council, identity management, OnBase, Closed Captioning Committee, software packaging, Technical Leadership Council, DSP committee, sustainability, and software licensing, to name a few. We also assist the central purchasing group with negotiating high volume purchases for the campus from companies such as Dell and Lenovo.

The Information and Computing Technology group enjoys a very close, collaborative relationship with the Maxwell community. In addition to the high level of support and service we offer, ICT works shoulder to shoulder with the departments to promote the Maxwell school through research grant development, web presence, intra- and inter-department work productivity, mobile computing and much more. We are committed to using every resource and skill available to help the Maxwell community use technology to achieve their goals.

Summary of the Year

ICT accomplished all of its goals for the 2010-2011 fiscal year. Our top priority and most important accomplishment is the continued success in providing high quality, reliable service and support to our community. Major work for this year included the development of the new central research computing cluster, the completion of the Windows 7 migration, the Office 2010 upgrade, continued security and computing support for the FAIR Health project, ICT staff reorganization, and the Maxwell website redesign. These accomplishments are detailed in subsequent sections.

This year, ICT's technology initiatives include the deployment of the new wireless network, the Global Collaboratory upgrade, the implementation of the laptop encryption standard, new digital signage system deployment, and the development of a new disaster recovery plan.

Strengths and Accomplishments

Maxwell continues to maintain an up-to-date infrastructure. ICT maintains and supports over 40 servers (most of them virtual), over 50TB of storage and 83 network switches. By eliminating 4 physical servers this year, we were able to continue the downsizing effort of our physical infrastructure.

ICT worked with the central computing group and the School or Engineering to develop a high powered computing cluster for research computing. While Maxwell and Engineering are the founding stakeholders, eventually the cluster will be available to everyone at Syracuse University. The cluster went live in April and is currently in the testing phase. Our goal is to work with the central computing group (ITS) and the Office of Sponsored Accounts to develop a way to write computer cycles into grants rather than physical hardware. This is a more cost effective, sustainable solution than buying, managing, and disposing of physical equipment for each grant.

The Windows 7 upgrade was completed this year. After a year of testing and preparation, ICT started the migration of approximately 600 computers in the Maxwell community to the 64-bit version of Windows 7. The project was completed in October with resounding success. Also this year, Office 2007 was upgraded to Office 2010 on all the desktops. We provided extensive advanced training sessions on the new features to allow for a smooth transition.

To accommodate the growth in the use of wireless devices such as smart phones and tablets, ICT petitioned the central computer group to upgrade the wireless network in Maxwell and Eggers Halls. The previous system was almost 10 years old and had marginal coverage in many areas. The new wireless network features the latest 5GHz wireless N technology and is downward compatible with older systems. This upgrade provides 100% wireless coverage in Maxwell and Eggers Halls.

Training classes and workshops continue to be an effective way to aid in the professional development of the Maxwell community. ICT's training curriculum includes Ektron, SharePoint, Office, Windows 7 and Adobe Creative Suite. Over the past year, there were over 325 attendees between all sessions and individual instruction of which 52% were unique faculty, staff and students. Additionally, ICT continues to provide student support through general and department-based orientations, and during normal and extended help desk hours throughout the year.

ICT continues to support the Communications Office with the school's development of our primary web site (http://www.maxwell.syr.edu/) using the Ektron Content Management System (CMS). The current Maxwell School website includes 26 distinct sections and over 140 active site editors. ICT's role in this collaboration has been to integrate the Communication Department's website visual page designs and feature requests into the Ektron framework. This year, the Communications Office hired an outside consultant to improve the

visual aspects and navigational structure of the department's websites. Now that the consultant's work is complete, ICT is writing the code to convert these ideas into templates that will be used to redesign the home pages.

The ICT staff continues to collaborate with central computing group to provide security and computing support to both Maxwell faculty researchers and researches from other universities on the FAIR Health Project. FAIR health is a nonprofit company formed to calculate the "usual and customary" medical charges which is used by insurance companies.

ICT continues to provide a wide variety of event production services to the Maxwell Community. These services include live webcasting, video recording/archiving, podcasting, video streaming, audio and video conferencing, web conferencing, video production and editing, and DVD/Blu-Ray authoring. Each service is tailored to the specific needs of our units/departments. ICT has supported over 275 multimedia events this year including such high profile events as the National Security Management Course, a panel recording for WRVO Radio's Community Forum, and a visit from Prince Turki bin Faisal Al Saud of Saudi Arabia. Almost 200 events took place in the Global Collaboratory this year alone.

The equipment in the Global Collaboratory was refreshed this year. Three of the original (17-year-old) video cameras were replaced with Panasonic High-Definition cameras. 25 devices required for the room's original analog video signal routing were replaced with a single digital device (Tricaster 850) enabling full HD digital (wide-screen) video workflow. Over 1500 feet of camera cables and 300 Control Room video cables became unnecessary and were removed in this transition to a digital-workflow. As a result of the reduction of installed video hardware, the GC Control Room is using approximately 75% less electricity thus reducing heat production and the related room cooling costs. Additionally, two of the room's three rear-projectors were refurbished and the Control Room's main video switcher was repaired. The work done during the upgrade did not hinder the production or support of any Maxwell events.

ICT worked with the central computing group and colleges across campus to implement a new digital signage system. This new system offers more flexibility in the way information is organized on the screen. The new system is tied into the Department of Public Safety allowing DPS to instantly broadcast emergency messages to all displays on campus.

In March, 2011, the central security group introduced a new laptop encryption standard that requires all university owned laptops to be encrypted by August 2011. As of this report, Maxwell leads the campus with over 75 laptops encrypted, with approximately 80 remaining,

ICT maintains a stable, well-seasoned staff. By promoting teamwork, professional development and cross-training, ICT staff is able to provide both cutting edge technology and top-notch service to the Maxwell community. This year we were able to promote three people in ICT to positions of greater responsibility. One of our service techs was promoted to data system administrator, replacing someone

who sought an exciting opportunity with ITS ; a very talented part time service tech was promoted to a full time position as technology specialist, working on web programing and system administration; and our administrative specialist now spends half her week as a service technician. Additionally, a full time service technician was hired from Auxiliary Services on campus to fill the vacancy due to the promotions.

There were no significant security incidents on our network this year. While ICT continues to be vigilant, there are no means, technologically or other otherwise, to guarantee the absolute security of our systems.

Other key accomplishments this year include:

• Maintained 99.99% uptime for Maxwell's network and Maxwell supported core servers

• The ICT staff continues to maintain and support core services such as DHCP, DNS, WSUS, firewall, license server, web services and over 80 network switches.

• The machine room cameras and DVRs were upgraded which enhances our physical security.

• Installation of multimedia technology in the PA conference room in Eggers 209 (multimedia projector and a presentation computer).

• Successfully implemented several TAP (Technical Advisory Project) programs such as a specialized website for department conferences, SharePoint department work sites, training and orientation for programs such as Leaders for Democracy Fellows and the Post-Graduate Program in Public Policy and Management. The TAP program has been an effective way for ICT to manage technical projects.

• Moved our printers, switches and IP security cameras to a private IP space for greater security.

Challenges

Centralizing Computing Resources ICT will continue to seek opportunities to save money and promote sustainability through resource centralization while maintaining the quality and integrity of the Maxwell computing environment. As components of the computing infrastructure housed in Maxwell (servers and storage) come to "end of life", ICT will explore ways to leverage resources provided by the central computing environment thereby minimizing the need to purchase and maintain equipment outside the Green Data Center.

Staff recruitment and staff dependencies – we presently have three individuals that maintain the core elements of our infrastructure. This is an increase of one from last year. These staff members would be difficult to replace. ICT tries to reduce this threat by growing talent internally and by maintaining a network from which to pull talented staff. The centralization of core services will also reduce this risk.

Goals for 2011-2012

- *Systems Assurance/Resilience.* ICT will continue to strengthen our defense against viruses and worms; to educate our community on threats and how to protect themselves from them, and will strive to maintain our reliability of 99.99% uptime for our network and all production systems.

- *Windows 8 Testing.* ICT will begin testing the Windows 8 operating system, once the beta is released this year, with the deployment planned for some time in 2012-2013.

- *Student Focus Groups.* ICT will continue to host student focus groups to explore how we can use technology to better serve the Maxwell student community.

- *SharePoint 2010.* ICT is preparing for the migration from SharePoint 2007 to SharePoint 2010 later this year.

- *High quality of service.* ICT will continue to maintain the superior quality of service that the Maxwell faculty, staff, and students have come to expect.

- *Faculty, Staff and Student Training and Orientation.* Training opportunities will continue to increase over the next academic year. Our training staff is developing new workshops, including a new training site where faculty and staff can access video tutorials, submit homework and questions, and sign up for training workshops.

- *OnBase.* ICT will continue to leverage the OnBase framework by working with the departments in Maxwell to develop projects that will save paper and increase workflow.

- *Campus Technology Collaboration.* ICT continues to work collaboratively with Information Technology and Services, as well as other distributed IT support units on campus.

- *Classroom and Conference Room upgrades.* ICT will continue to upgrade the technology in the classrooms and conference rooms and look for opportunities to address classrooms that are currently lacking in technology.

- *Desktop Imagining.* ICT will complete the development of a new desktop imaging system which will save time and efficiency when deploying new desktop and laptop clients.

2010-2011 STATISTICS AND OPERATIONAL NOTES AND CHARTS

Service

Over the course of the last year, ICT support staff has processed more than 8000 electronic mail messages, telephone calls, and voice mail messages in addition to almost 750 service related appointments with faculty staff and students in 2010-2011.

Help Desk

The ICT Help Desk is the primary avenue for in-person assistance for Maxwell graduate students. A significant percentage of students coming to the Help Desk are seeking assistance with questions related to their laptop. These requests are consistently focused on wireless connectivity, data access and printing. ICT staff handled approximately 500 visits to the help desk, including over 250 students with laptop related issues. ICT continues to support the Macintosh community by providing tutorials and utilities that help automate the process of connecting Macintosh laptops to university resources.

Advisory Committee

The role of the committee is to provide advice on a variety of technological and computing issues which assist in helping ICT to think about trade-offs between requests for new services and the support of existing ones. Some of the issues discussed are the development of policies, procedures, and standards; user interface and support issues; the planning and implementation process of migration to new systems; and the development of programs which contribute to the School's leadership in research and teaching. The committee also assists ICT by helping to keep the community informed about IT related issues and initiatives, facilitating relevant communication between ICT and those who use our computing system and by providing ICT with information about faculty, staff, and student concerns and ideas.

Newsletter

The ICT newsletter is published once a semester and features IT related events in the Maxwell community, a faculty focus section where we feature faculty who do interesting things with technology, personal updates from ICT staff, as well as useful tips and tricks.

Student Focus Groups

ICT meets with the Maxwell student groups during the semster to demonstrate and promote the use of technology at Maxwell. This meeting also provides an opportunity to learn how ICT can best serve the students.

TAP Program

The Technical Advisor Project program assigns one of the ICT staff members to serve as a single point of contact for a defined faculty project. Such project tasks include assistance with grant writing, hardware and software specification and purchasing, project planning, application support, SharePoint development and multimedia support, to name a few.

Moblie Teaching Cart Usage
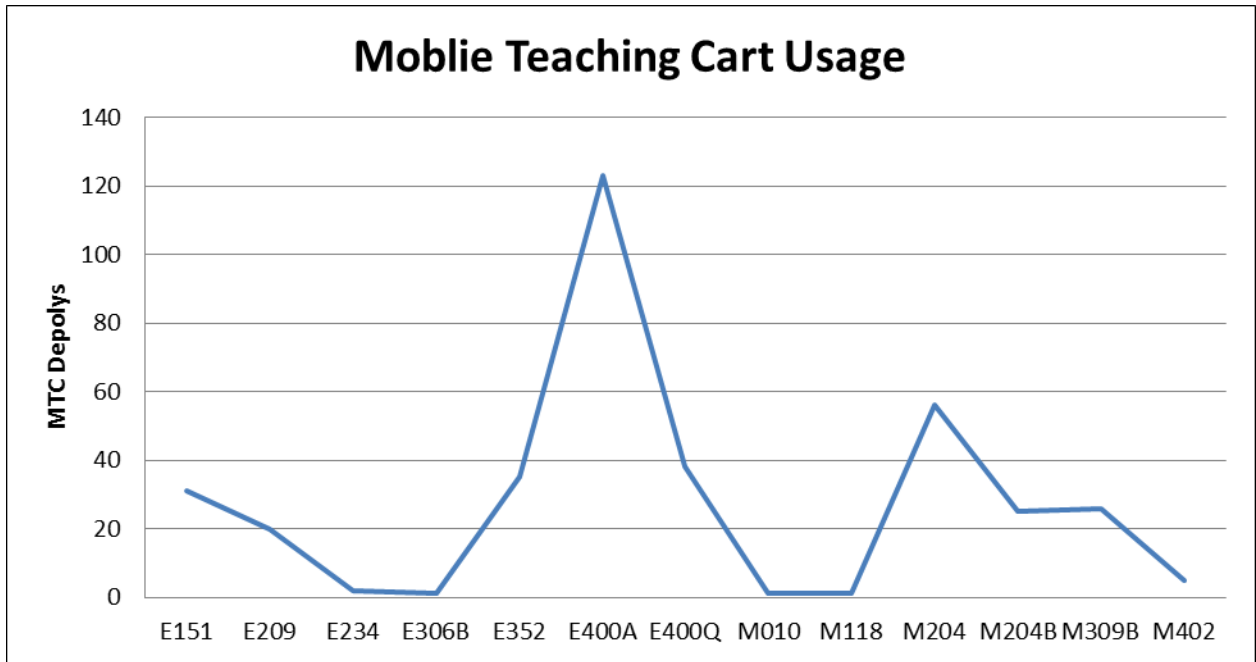
Mobile Teaching Carts

Percent of Year-to-Year Change	% (+/-)
From 2010 to 2011	-6.9%
From 2009 to 2010	+134.36%
From 2008 to 2009	-32.01%
From 2007 to 2008	-37.52%
From 2006 to 2007	+122.54%
From 2005 to 2006	+111.68%
From 2004 to 2005	+109.40%
From 2003 to 2004	+145.75%
From 2002 to 2003	+138.26%
From 2001 to 2002	N/A

*N/A = Not enough Data

Web data for ICT Annual Report 2010 – 2011

ICT maintains three principal web servers that are public facing. Each web server houses thousands of *web pages* and hundreds of distinct *web sites*. These servers meet markedly different needs for the school:

1) www.maxwell.syr.edu – Maxwell's primary web site.

2) Webhost –Maxwell's academic and personal web site server.

3) Survey.maxwell.syr.edu – Web-application for building online surveys.

This past year we completed the migration of all web site content from our school's primary web site (www.maxwell.syr.edu) into the Ektron Content Management System. This step was primarily a *lateral* move of page information into a new web publishing system.

This spring and summer we are undertaking a significant change in the site's architecture and design. This will enhance the site's usability, provide greater variety in web page layouts, improve the sharing of data across the site and improve the presentation of the programs, degrees, etc. Maxwell offers.

Combined traffic for www.maxwell.syr.edu and Webhost servers

	www.maxwell.syr.edu	Webhost	Combined Totals
Total Page Views	4,744,656	6,882,289	**11,626,945**
Average Page Views per Day	24,711	18,801	
Average Page Views per Visitor	4.47	10.12	
Total Visitors	1,061,500	2,928,010	**3,989,510**
Total Unique Visitors	376,253	1,315,084	**1,691,337**
Average Visitors per Day	5,528	7,998	

Notes:

- During the past fiscal year, over 3500 distinct web pages have been updated on our main web server (www.maxwell.syr.edu). These updates were made by 112 different Maxwell web site editors.

- The Webhost server serves the following five top-level web sites:

  - faculty.maxwell.syr.edu
  - classes.maxwell.syr.edu
  - staff.maxwell.syr.edu
  - student.maxwell.syr.edu
  - sites.maxwell.syr.edu

  These five sites contain over 150 distinct sub-sites which have been updated in the past year.

- Maxwell's survey web site (survey.maxwell.syr.edu) is being omitted from the following reports due to its specialized nature.