2011-2012 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.

Summary of the Year

ICT accomplished all of its goals for the 2011-2012 fiscal year. Our top priority and most important accomplishment is our continued success in providing high quality, reliable service and collaborative support to our community. Major milestones for the year included the development of the Academic Virtual Hosting Environment, the Global Collaboratory control room refresh, the construction of a new recording studio, the collaboration with ITS to test and deploy the new Condor distributed computing system, the production server migration to the central Green Data Center, and the continued security and computing support for the FAIR Health project. These accomplishments are detailed in subsequent sections.

This year, ICT's technology initiatives included the deployment of the ISDN audio system with broadcast quality capability, classroom technology upgrades, a new desktop imaging deployment system, and the continued development in the area of web resources including new search and calendaring functions.

Strengths and Accomplishments

Infrastructure/Network

ICT continues to maintain and support an up-to-date infrastructure consisting of over 40 servers (most of them virtual), over 50TB of storage and 83 network switches. Additionally, the ICT staff maintains and supports services such as DHCP, DNS, WSUS, firewall, license server, and web services. The Maxwell community experienced a 99.99% uptime on Maxwell's network, as well as Maxwell's supported core servers and services this fiscal year.

The Maxwell production server centralization effort is near completion. This year, ICT performed the migration of key production servers such as file, print and web resources to the Green Data Center located on south campus. While the ICT staff continues to develop, support and maintain these servers, they are now located in the secure and sustainable GDC, whose infrastructure is maintained by the central computing group (ITS). The migration of the remaining production servers will be completed by fall of 2012. Our development, software packaging and network monitoring servers will remain in Maxwell.

This year, ICT implemented a new desktop imaging process for rapid deployment of our client computers; complete with a custom-coded front and back-end interfaces. This new system allows us to be able to reduce the time it takes to install the operating system to the desktops by over 50%.

ICT has also made several improvements to the tools we have developed to monitor the computers on our network. This helps us to ensure that the desktop computers are operational, secure and up to date with the latest software and security patches.

Computing/Research

This year marks the completion of three powerful and flexible high performance computing solutions on campus, all of which ICT and the Maxwell school had collaborative participation: The 96 core Matlab cluster, the Academic Virtual Hosting Environment, and the (potential) 4000 core Condor high throughput computing system. ICT partnered with the central computing group to develop and implement the campus Academic Virtual Hosting Environment. This allows faculty members to leverage the power of the Green Data Center for high performance computing rather than purchasing, managing, and disposing of physical equipment for each grant or research project. The Maxwell School also provides unused desktop computing cycles for use in the ITS supported Condor system, which is a specialized workload management system for compute-intensive jobs.

Training classes and workshops continue to be an effective way for ICT to aid in the professional development of the Maxwell community. ICT's training curriculum includes Ektron, SharePoint, Office (Word, Excel, PowerPoint, and Access), Windows 7 and Adobe Creative Suite. Over the past year, there were over 345 attendees between all classroom sessions and individual instruction

sessions. The Training mailbox processed almost 3,700 help requests this year. Additionally, ICT continues to provide student support through general and department-based orientations, and during normal and extended help desk hours throughout the year.

This year, ICT collaborated on a number of technical projects with members of the Maxwell faculty. We designed and built a wireless network for use in a remote environment without a reliable source of electricity utilizing custom built hardware and software. We collaborated on a photo cataloging project that required special hardware and software resources. We also provided guidance and planning for a research project involving several students, netbooks, encrypted media, data retrieval and analysis.

This year also saw our annual upgrade of computers that have reached their end of life. 125 computers were replaced across the Maxwell school. We have also begun replacing monitors that no longer meet the needs of our users. There were no operating system upgrades this year, however, we have begun the process of researching and testing Microsoft's next release of Windows as well as Office.

ICT coordinated the expansion of the Anthropology department in to Lyman hall. This included the installment of new computers and printers in Lyman Hall as well as coordinated computer moves, new account creation, and G drive folder restructuring coinciding with the merger of the PA and IR departments. ICT also provided a secure solution for a department's comp exams by providing secure, locked down computers to be used for their day-long exam.

This year also saw the upgrade of the computers in the ISD and GTL labs as well as remodeling projects in the following electronic classrooms: Eggers 070, Eggers 111, Eggers 113, and Eggers 100A. The electronic classroom remodels included the construction of new teaching stations, upgraded multimedia projectors, and new computers.

ICT continues to maintain an excellent reputation for service. This year we processed 9,913 support email messages sent to our service address. We also scheduled approximately 924 service appointments with various faculty, staff, and students. Wireless connectivity and account related issues remain constant as well as other various laptop and mobile device issues keeping visits consistent with last year.

There were over 300 Mobile Teaching Cart (MTC) Deployments in 2011-2012, which is a decrease from 2010-2011. Cart deployments will continue to decrease as more classrooms and conference rooms receive technology upgrades.

Web/Multimedia

This year marks the completion of ICT's multi-phase renovation and expansion of Maxwell's media production infrastructure. These systems will enable Maxwell to produce more rich-media content and open new methods of communication with external media channels – all of which can be produced efficiently in house. ICT continues to provide and support a stable and robust web publishing infrastructure. There are no notable outages or downtimes to report for this year.

Over the past year, ICT's web development team has created several new application enhancements for the Ektron content management system that helped the dean's office and departments better realize their presence on the web. Some of these include SU's Expression WordPress server, Adobe Digital Publishing Suite, YouTube and UStream. Each of these platforms will be leveraged to send the Maxwell brand and information to the widest variety of devices possible.

As computing platforms become more mobile-centric, ICT remains focused on providing mobile-friendly, flexible services wherever possible. In this spirit, ICT will be leveraging both centrally-supported SU services and secure, cloud-based services to deliver information to our mobile computing and tablet users.

ICT fills a unique role on campus, not only as a provider of service and infrastructure, but as a provider of end-user training and support. As technology evolves (such as in the recent advances with mobile computing), ICT adapts our training and internal knowledge to ensure that we can provide the highest quality end-to-end support. As such, we have defined our more complex projects as "TAP" projects (Technical Advisor Project). An example of a TAP project is the development of several WordPress web sites such as india.syr.edu and china.syr.edu sites, with several or others in progress. In a TAP project ICT eliminates the learning curve by offering greater hands-on assistance with the project. The expectation of these projects is that the end result may be reusable by other Maxwell units and may provide benefits far beyond the requesting department.   Other TAP examples include assisting faculty with procuring specialized video equipment and extra training in the editing and production of quality video.

Event Support

This year saw an overall increase in the number, type and complexity of events produced by Maxwell ICT.   We were involved in 320 events this year vs. 275 events from last year. Most notable has been the increased academic use of real-time desktop video collaboration tools such as Skype and Adobe Connect. This growth has come during a year when ICT was busy completing several renovations including the analog to high definition digital conversion of the Global Collaboratory' s Control Room; and creation of a new audio/video recording studio. All five remotely-controlled cameras in the Global Collaboratory now produce native, high-definition video. Likewise, through the new recording studio space we now have the ability to produce live (or recorded) broadcast-quality audio interviews and send them to radio stations anywhere in the world. This studio will also be used to produce video broadcasts where the person on-screen can read prepared messages with the assistance of a teleprompter.

As digital audio and video become more essential to Maxwell's communications initiatives, these renovations will enable ICT to strengthen our media production capabilities (editing, storage, student-helpers). Working in tandem with the Communications Department, ICT is also re-tooling our video delivery systems for live and archived video.   Doing this will enable our video streaming to be

more robust, delivering better quality video to more users. This will also expose the Maxwell brand and content in areas of the web outside our primary web site.

Campus Collaboration

 ICT are major contributors and partners with the central computing group on a variety of projects and initiatives. ICT 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 used by insurance companies. The final phase of this 3 year project will end in December 2012.

In addition to research, ICT staff sat on several committees and councils with the central computing group and other colleagues from across campus to provide governance on technical and policy issues. These include the Technical Leadership Council, Security Council, Dell Purchasing Group, High Performance Computing Group, Distributed Staff Group, OnBase Governance, Windows 8 and Office 15 Development group, and the Mobile Computing group, just to name a few. This participation allows the ICT staff to be involved with, and have a "seat at the table" for all technology matters on campus.

ICT Staff Recruitment and Staff Dependencies

ICT maintains a stable, well-seasoned staff. By promoting teamwork, professional development and cross-training, ICT staff is able to provide cutting edge technology, top-notch service and collaborative support to the Maxwell community. There was no attrition in the ICT staff this year. Several staff members continued their professional development by attending training sessions and conferences, as well as completing certification tests.

We presently have three individuals that maintain the core elements of our infrastructure. 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 help reduce this risk.

Goals for 2012-2013

- **Systems Assurance/Resilience**. ICT will continue to strengthen our defense against malware; 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.

- **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.

- **Windows 8 and Office 15 Deployment**. ICT will begin preparation for the testing and deployment of Windows 8 operating system and the Office 15 (likely to be released as Office 2012) sometime in 2012-2013 fiscal year, depending on Microsoft's release dates.

- **Commitment to Research**. ICT will continue to work with the Maxwell faculty and students to promote, collaborate and support research.

- **Salesforce.com**. ICT will begin development of Salesforce.com, a Customer Relationship Management (CRM) cloud solution now available on campus. ICT will also write custom applications for Salesforce using the Force.com platform.

- **Web Publishing**. ICT will continue to support stable, secure and robust web publishing platforms while assisting the Communications Office by the coding of their new web templates, as well as providing support and training for Maxwell site maintainers. In the rapidly-changing sphere of the web and social media, ICT is committed to beta testing new and promising technologies.

- **Event Support and Production**. ICT will continue to develop and upgrade the multimedia technology to offer the best possible production quality for the Maxwell school.

- **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.

- **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.

- **Aging Studies Institute Move to Lyman Hall**. ICT will oversee the technology installations, computer migration and support for the Aging Studies Institute scheduled for early 2013.

2011-2012 STATISTICS AND OPERATIONAL NOTES AND CHARTS

Advisory Committee

The role of the committee is to provide collabrative advice on a variety of technological and computing issues. This committee assists 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, just to name a few.

Mobile Teaching Carts 2011 – 2012
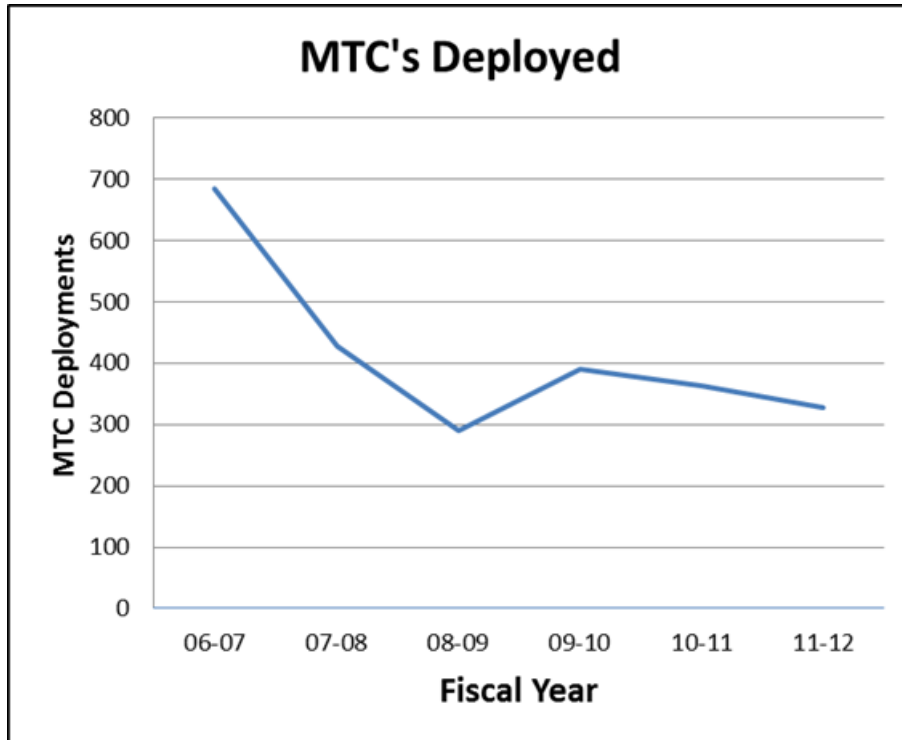
Expected Trends:

As technology becomes incorporated into more classrooms, the need for Mobile Teaching Carts will continue to wane.

Support Statics at a Glance 2011 – 2012

Support email requests handled	**9,913**
Training email requests handled	**3,692**
Support request phone calls	**615**
Service related appointments	**924**
Training Sessions (group and single)	**398**
Help desk support visits	**432**
Mobile teaching cart deployments	**328**
Mobile Skype cart deployments	**51**
Departmental orientations	**10**

Web and Media Services Data 2011 – 2012

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 – A web application for building online surveys.

Notable achievements this year include:

- The successful upgrade of our core Ektron CMS technology to the most current available version. This will allow us to better leverage new methods of searching the Maxwell's School main web content, as well as additional web content from other servers.

- Developed and delivered a new set of Maxwell web templates and related web applications to the specifications of Maxwell's Communications Department.

- The evaluation and testing of new web technologies such as SU's centrally hosted Expression WordPress hosting, SharePoint 2010 Intranet and implementation of mobile-friendly technologies (web templates and video streaming technologies).

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

	www.maxwell.syr.edu	Webhost	Combined Totals
Total Page Views	5,972,444	3,371,099	**9,343,543**
Average Page Views per Day	16,318	1,847	
Average Page Views per Visitor	3.8	1.5	
Total Visitors	1,570,602	2,199,223	**3,769,825**
Total Unique Visitors	698,195	1,310,883	**2,009,078**
Average Visitors per Day	4,291	1,204	

* Notes:

- During the past fiscal year, over 4,400 distinct web pages have been updated on our main web server (www.maxwell.syr.edu). These updates were made by 55 different Maxwell web site editors.

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

  - faculty.maxwell.syr.edu
  - classes.maxwell.syr.edu
  - staff.maxwell.syr.edu
  - student.maxwell.syr.edu
  - sites.maxwell.syr.edu
  - dfh.syr.edu
  - publicdiplomacy.syr.edu
  - streamer.syr.edu
  - project legal

- As more users look to the web as a common platform for communication and collaboration, ICT continues to provide and/or support a wide variety of web applications to meet the school's needs. These applications include:

  - Enterprise Web Content Management – *Ektron CMS400*
  - Faculty/Class web site hosting – *Webhost & WordPress*
  - Web-based survey tool - *Checkbox*
  - Video streaming - *YouTube & Ensemble*
  - Blogging - *WordPress*
  - SharePoint *Intranet*
  - Image Slideshows - *SlideShowPro*
  - Web statistics - *Google Analytics & Weblog Expert*
  - Web conferencing - *Adobe Connect & Skype*
  - Web scheduling - *Acuity*
  - Course Management - *Blackboard*