Office of Technology Services
Classroom and Computer Lab Technologies

Fiscal Year 2013 Annual Report
October 1, 2013

Contents

I. Overview

A. This report covers Fiscal Year 2013 (July 1, 2012 through June 30, 2013).

B. This fiscal year was exciting and productive. A number of planned objectives formulated in previous years, with input from colleges, departments, the Academic Committee for Technology (ACT), faculty, students, and other stakeholders, moved forward toward implementation. Towson University is now on par with—and in many cases exceeds—what other universities are doing in the classroom and computer lab arena.

C. The Classroom and Computer Lab Technologies (CCLT) team has two core missions: construction and maintenance of the campus classroom and computer lab infrastructure, and support for faculty clients who use the technology.

D. The infrastructure mission includes planning, scheduling, and overseeing both new construction and renewal activities on the main campus as well as at satellite locations. Almost all the infrastructure work focuses on academic spaces.

E. Most academic learning spaces are funded through Student Technology Fees (STF) and funds are used for instructional and audiovisual technology components, as well as computers in instructor workstations and student computer labs. A primary usage test involves whether the space is scheduled for credit coursework. For informal learning spaces, while direct STF funds are not generally used for new construction or renewal, the CCLT staff typically provides a degree of support as well as construction and maintenance oversight.

F. The support mission involves providing first-level support to faculty calling the classroom support 4TECH "hotline" established in late FY 12, preventative maintenance, onsite repairs including coordination with contractors, assisting college and department technology staff in a variety of ways, making onsite classroom and lab visits, and other activities as determined through service agreements with each college.

G. Towson University's instructional technology infrastructure now covers nearly every classroom, seminar room, and lecture hall. The campus investment is rather unique among four-year institutions in that TU has ubiquitous deployment of core classroom audiovisual technology. The sheer number of installed systems rivals most universities.

H. Why so many classrooms and computer labs at TU and the associated technology? TU has a reputation as a large university with a small-college feel. Our favorable faculty-to-student ratio and "personal" instructional approach has meant small classes—and small classes mean smaller classrooms. TU's are mostly in the 30-36 range; other large schools are often 45-60, along with more large lecture halls. Building and sustaining TU's classroom and computer lab infrastructure is very unique—something that we can be very proud of, yet something that will require continued resources, partnerships, and cooperation to maintain our investment.

II. Financials

A. Towson University is in a strong and unique position in that the funding source for classroom audiovisual technology and computers in classrooms and labs is now assured through a stable, predictable funding stream based on student technology fees. Students benefit directly from this approach; their entire fee contribution flows directly toward building, sustaining, and supporting a top-notch learning environment—an environment with which they interact with on a daily basis. Mature decision-making processes are in place and ensure fair consideration of college and department technology needs while ensuring campus-wide priorities and standards are achieved.

B. The initial STF budget for FY 2013 was $3,292,421. Of the projects approved for FY 13, 68% ($2,806,696) was spent to add or upgrade classroom audiovisual presentation systems and incorporate new instructional technology solutions strategically throughout the campus. The workload for FY 13 also included $577,354 worth of projects approved in FY 12 but reallocated to FY 13 because of purchase order processing deadlines and construction schedules.

C. Additionally, 14% ($446,717) was spent in FY 13 to achieve a three-year replacement cycle for computers in classrooms and computer labs—computers used directly by students and faculty for instructional activities. Note: the summer construction season spans fiscal years; some projects were shifted to FY 14 while others from FY 13 are in the final stages of closeout. As a result, the final FY 13 financial statement may change slightly.

D. The total numbers of computers in classrooms and computer labs has increased over the years from approximately 2,500 to the current 3,091. Additional facilities have been built or opened, accounting for most of the growth. The continued increase in need for computers will tap into the overall Student Technology Fee budget. Also, the need for multiple devices is starting to make its way into classrooms and will impact future budgets. Examples: a classroom with a standard PC and a tablet device, or a classroom with both a Mac and a PC, or a regular PC and a computer-driven interactive whiteboard.

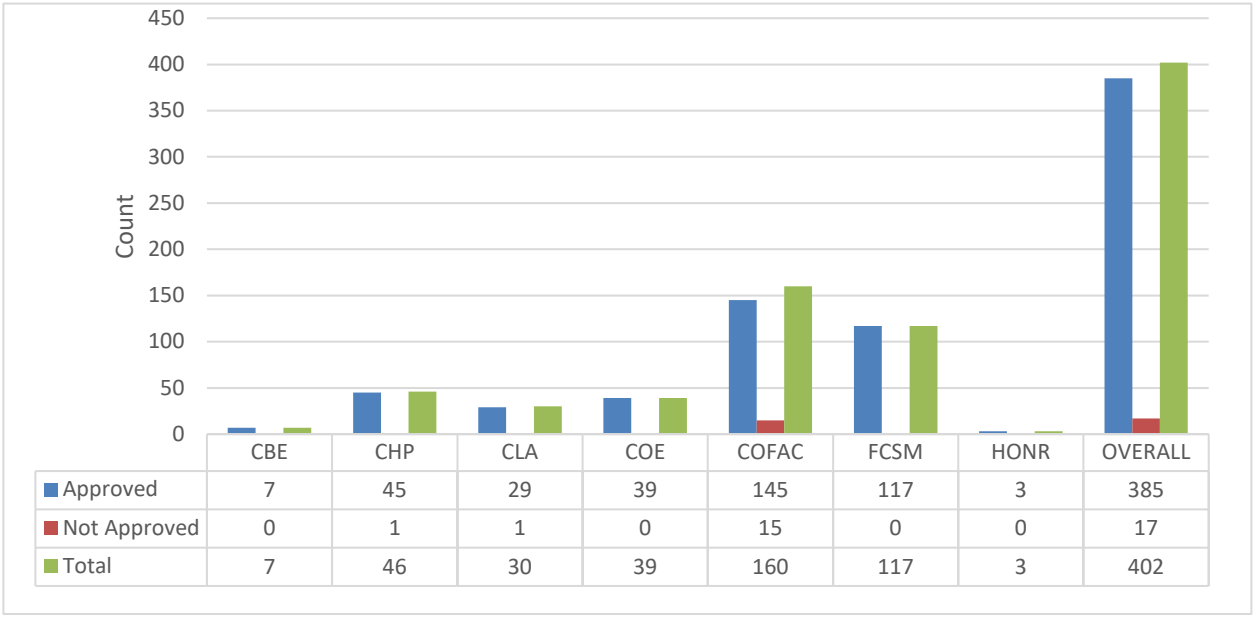
E. 385 projects (96%) submitted during FY 13 were approved, while 17 (4%) were not approved and requestors directed to other sources of funding.

F. **See Annual Report Supplement (separate document)** for a complete list of approved projects broken down by college and other supported units.

G. Charts

Chart 1

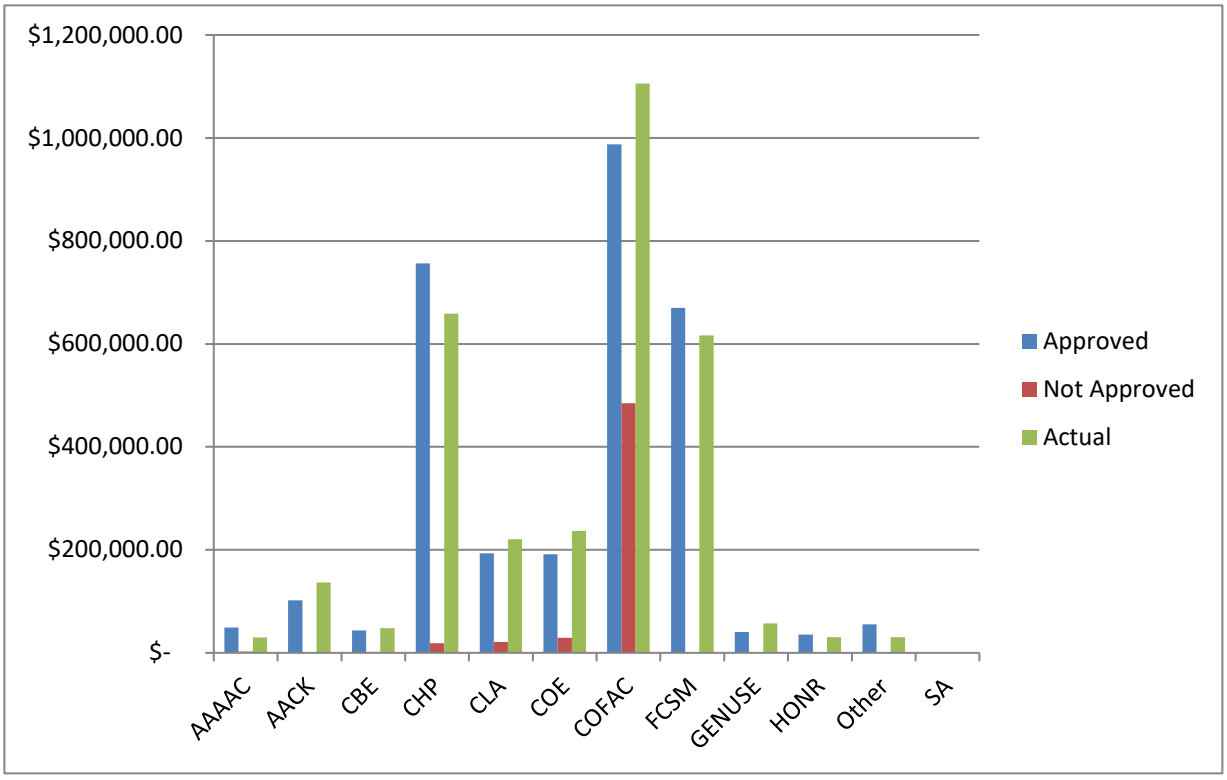
Project Requests and Approval Status by College and Overall



	CBE	CHP	CLA	COE	COFAC	FCSM	HONR	OVERALL
Approved	7	45	29	39	145	117	3	385
Not Approved	0	1	1	0	15	0	0	17
Total	7	46	30	39	160	117	3	402

Chart 2
Project Costs by College/Unit *

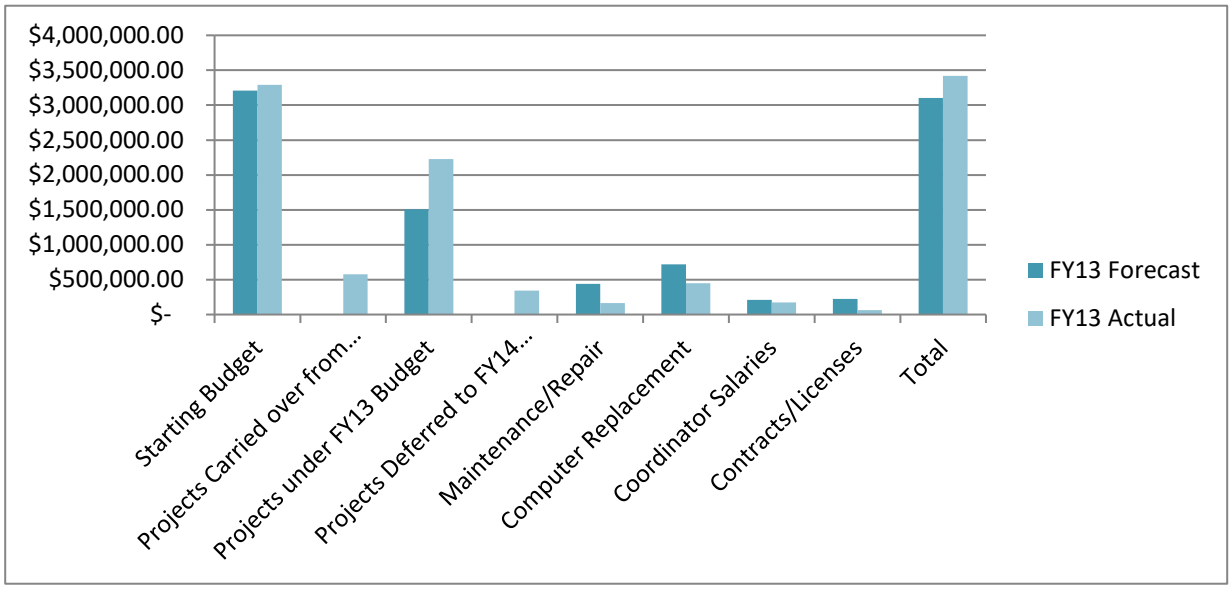
College	Approved	Not Approved	Actual
AAAAC	$49,350.00	$2,500.00	$29,835.98
AACK	$102,000.00	$0.00	$136,522.36
CBE	$43,700.00	$1,800.00	$47,619.89
CHP	$756,609.40	$18,500.00	$658,577.31
CLA	$193,420.00	$21,400.00	$220,956.78
COE	$191,200.00	$29,200.00	$236,717.87
COFAC	$987,270.00	$484,650.00	$1,105,930.91
FCSM	$670,025.00	$1,200.00	$616,367.60
GENUSE	$40,600.00	$0.00	$57,257.31
HONR	$35,500.00	$0.00	$30,183.62
Other	$55,450.00	$0.00	$30,183.62
SA	$0.00	$1,500.00	$0.00



* Note: AAAAC refers to Academic Achievement Center; AACK to Cook Library; they are not associated with a college, but have projects and needs that are supported by Student Technology Fees.

Chart 3
Student Technology Fee Expenditures: Forecast and Actual

	FY13 Forecast	FY13 Actual
Starting Budget	**$ 3,208,800.00**	**$ 3,292,421.00**
Projects Carried over from FY12 Budget	$ -	$ 577,353.57
Projects under FY13 Budget	$ 1,508,700.00	$ 2,229,341.94
Projects Deferred to FY14 Budget	$ -	$ 344,887.00
Maintenance/Repair	$ 437,200.00	$ 164,040.27
Computer Replacement	$ 720,000.00	$ 446,716.87
Coordinator Salaries	$ 210,000.00	$ 172,880.75
Contracts/Licenses	$ 226,000.00	$ 61,500.16
Total	$ 3,101,900.00	$ 3,419,366.99



III. Infrastructure and Assets

A. As of 9/30/2013, the university has 442 spaces equipped with audiovisual and/or computer lab technology. Of this total, 382 (86%) are classrooms, seminar rooms, lecture halls, specialty instructional venues, or active learning spaces used by students.

B. The 60 remaining rooms are venues like department or college conference rooms or other non-academic space with audiovisual capability. While the Office of Technology Services (OTS) assists with support, maintenance, contractor coordination, and construction and renewal, the three CCLT coordinators do not typically get involved with these venues since they are not directly used by students—thus, they are not appropriate for positions funded through the Student Technology Fee budget. Other OTS personnel handle these venues.

C. The CCLT team maintains an inventory of all known classroom and computer lab infrastructure assets. A Web-based Virtual Tour includes pictures, equipment details, usage instructions, directions, visitor information, links to support resources, and other tools. Widely used by faculty, support staff, contractors, and visitors, the Virtual Tour showcases the breadth and scope of the university's investment and is one of the best ways to understand the sheer magnitude of technology resources available to the TU community: http://wwwnew.towson.edu/classroomtechnology/virtualtour/.

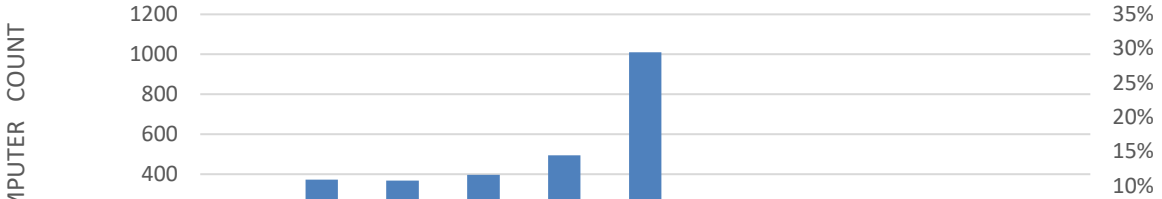
D. As of 9/30/2013, there are a total of 3,091 computers in active use in classrooms and computer labs. Our university goal is to ensure computers in these critical, highly utilized venues are refreshed approximately every three years. This is accomplished by a master campus computer inventory for classrooms and computer labs which OTS and the colleges keep up to date to ensure effective planning and budgeting.

E. In addition to computers, audiovisual equipment also becomes available at end of lifecycle. OTS is seeking opportunities to either donate or sell the equipment. If sales can be arranged, the revenue will be returned to the Student Technology Fee budget.

F. Charts

Chart D

Classroom and Computer Lab Computers Eligible for STF Renewal Funding by College/Unit *



	CBE	CHP	CLA	COE	COFAC	FCSM	HONR	AAAC	AACK	GENUSE	SADSS
COMPUTER_COUNT	246	374	369	398	495	1010	11	43	97	39	9
Percent	8%	12%	12%	13%	16%	33%	0%	1%	3%	1%	0%

* Note: AAAC is Academic Achievement Center; AACK is Cook Library; SADSS is Disability Support Services; GENUSE is General Use.

IV. Construction, Renovation, and Renewal

A. The majority of FY 13 project funds were spent to equip learning spaces with audiovisual equipment. Some venues were completely new, others were substantially renovated, and yet others had routine refreshes of end-of-lifecycle components.

B. All colleges benefited from construction, renovation, and renewal work conducted during the year, in addition to non-college units including Academic Achievement Center, Disability Support Services which conducts out-of-classroom student testing, and Cook Library. Chart A shows the distribution.

C. Major venues that opened for classes in FY 13 included Linthicum Hall, a complete renovation with all-new classroom digital audiovisual equipment being installed, plus Towson City Center's Institute for Well Being. The OTS CCLT staff, Facilities Management, and administrative staff within the College of Health Professions, plus many other campus departments cooperated to ensure these two projects were ready for use.

D. The overall audiovisual system design incorporates digital media and 16:9 format projection screens. As classrooms are refreshed, the older VGA standard is replaced with the new digital equipment and supporting infrastructure allowing faculty to connect HDMI devices such as iPads in the classroom. Venues that support HDMI are noted in the Virtual Tour.

E. The construction and renewal effort has been remarkably successful in ensuring that standards, both in hardware components, system design, and programming, is consistent across the campus. This provides faculty with a common set of core functionality and a user interface that doesn't radically change from building to building, college to college. Other institutions do not enjoy this kind of standardization, and TU is certainly a leader in this regard.

V. Service, Repairs, Maintenance, and Support

A. Preventative maintenance is a key to minimizing classroom downtime due to faulty equipment, especially projectors which have life-limited lamps. Through a preventative maintenance contract with Visual Sound, Inc., twice-a-year visits are made to each classroom to inspect and change lamps that are nearing “end of lifecycle” or are dim or discolored, as well as to check general system condition. The Liberal Arts Building is handled somewhat differently, since another approach provides comparable benefits.

B. At the beginning of each fiscal year, $1,200 per room is set aside to cover maintenance or repairs. This ensures sufficient funds are available to keep rooms in good repair and operating properly. As the fiscal year progresses, unexpended funds from this pool are reallocated to support general renewal and renovation projects, new qualifying initiatives, or other purposes. The reserves have not been exceeded, and indeed is a conservative number that ensures worst-case repair and maintenance scenarios are addressed.

C. OTS maintains a stock of the most commonly used projection lamps and is generally able to replace any lamps that do fail within several hours. In the past, this has taken several days, so the progress in FY 13 has been substantial.

D. Three Classroom and Computer Lab Coordinators were hired midway during FY 13. Each is assigned to a portfolio of colleges (two to three). They provide general support to the 4TECH classroom support telephone line, conduct repair visits, coordinate work with contractors, and assist college and department staff members with agreed-on projects. They also perform inspections and conduct quality assurance checks following installation and repairs, as well as help with deployment of new computers on request.

E. OTS as of the end of FY 13 now provides first-level telephone support for 355 classrooms and computer-equipped teaching labs. In FY 2012, the number of rooms supported was considerably less (121). This service, staffed by the coordinators plus additional OTS staff and student workers, is available from 7:30 a.m. to 8:00 p.m. Monday through Thursday, and 7:30 a.m. to 5 p.m. on Fridays.

F. Additional second-level support in the form of classroom visits for planned and unplanned work is also provided. While the three additional staff members has helped, sharing the workload with college and department staff to visit rooms for emergency outages or problems remains essential. The coordinators cannot cover the geography adequately to serve as "runners" when problems arise; however, they are able to provide a reasonable response time in many cases if coordination with a "local" provider can't be arranged quickly.

G. Some colleges have unique lab needs, and OTS will assist in whole or part, as required, to develop and deploy both Windows and Mac software images for use in classrooms and computer labs. While this is generally a college or department role, significant contributions were made to the College of Health Professions which has a large number of labs spread throughout the campus—and now at the Towson City Center.

H. Venues for which OTS provides support are noted in the Virtual Tour. Service Agreements were developed with the participating college and departments to clarify the nature and scope of each party's contribution to the overall campus support equation.

I. Almost all classrooms with Crestron control systems are now on FusionRV, the network-based application that allows real-time monitoring of the condition and status of the audiovisual system. This has resulted in faster troubleshooting, application of programming updates, and general monitoring of the equipment status.

J. OTS administers the on-call audiovisual contract with Visual Sound, Inc. which will be in effect for approximately two more years. This contract provides for installation and repair services.

K. Separate maintenance contracts, also administered by OTS, are in place for Liberal Arts Phase I and II, with Lee Hartman and Sons and Visual Sound, Inc. respectively. The contract allowances are minimal so necessary work is supplemented either through the maintenance reserve fund or through college funds in certain cases.

L. Between repairs, maintenance, and contract costs, a total of $225,540 was expended in FY 13. As noted, a reserve is established at the start of the fiscal year to cover these expenses. This year, that reserve began at approximately $500,000. The unused repair, maintenance, and contract budget was released to fund additional projects when it was clear they would not be utilized.

M. A new Web-based problem reporting and resolution system was implemented by OTS. The new system, TechHelp, powered by Web Help Desk, went live for the start of the Fall 2012 semester. OTS staff record all calls and reports of problems in classrooms so that historic patterns can be identified and preventative solutions established based on the data. Self-service problem reports requests can be made by faculty as well which helps ensure that problems are promptly reported and addressed.

N. During the fiscal year, 681 calls to the 4TECH telephone service were placed by faculty or room users. Recorded in the TechHelp system, the "Top 10" reasons for people's calls emerged. This helped shape initial planning and communications, and more time will be spent in FY 14 developing and implementing proactive solutions that will hopefully prevent these calls from happening in the first place.

O. Charts

Chart 5
Repair, Maintenance, and Contract Expenditures

Expense Category	Spent
Contract	$103,977.16
Maintenance	$116,705.10
Repairs	$4,858.17
Grand Total	**$225,540.43**

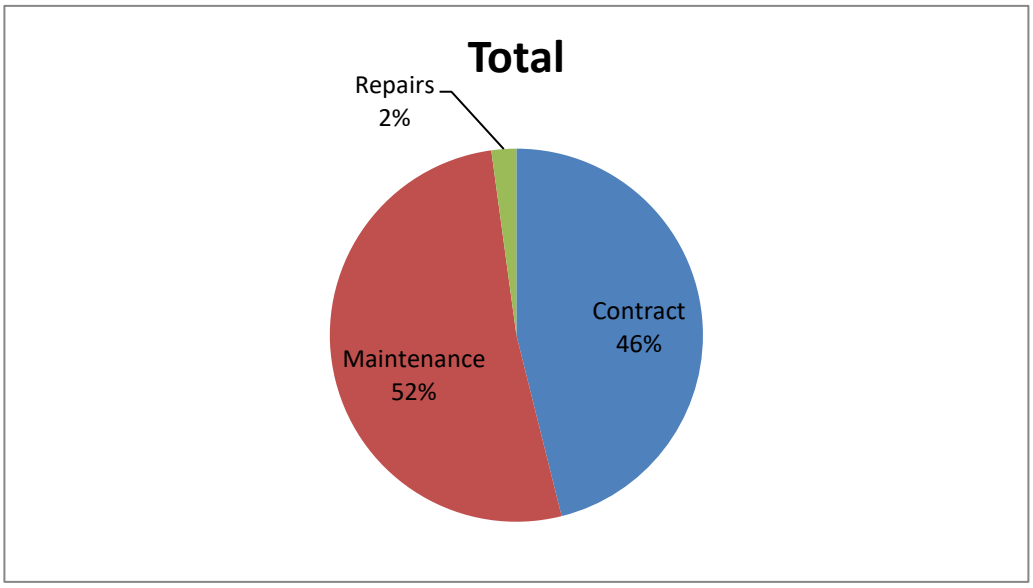
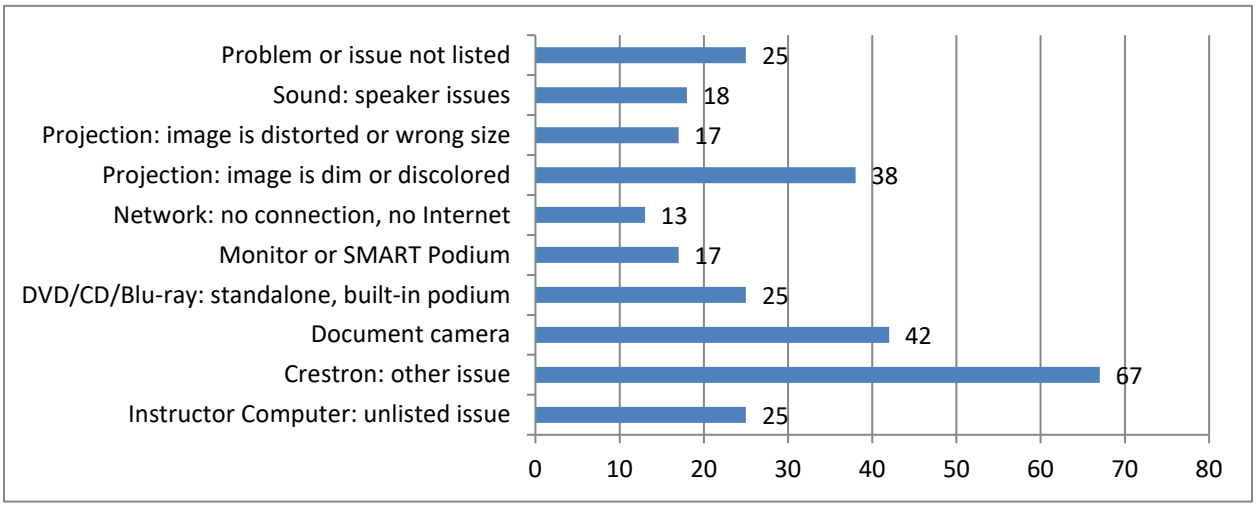


Chart 6
Top 10 Classroom Support Categories Overall



*Total number of problem reports: 681. The top 10 categories above accounted for 287 of the total (42%). It is not possible to compare support calls with previous years since TechHelp was not in place prior to FY 13.

Chart 7

Top 10 Classroom Support Categories by College

	College of Business and Economics	College of Education	College of Fine Arts and Communication	College of Health Professions	College of Liberal Arts	Fisher College of Science and Mathematics	Honors College	Office of Graduate Studies	Unassigned	Total
Instructor Computer: unlisted issue	2	1	5	2	9	4	0	0	2	25
Crestron: other issue	2	3	5	9	16	31	1	0	0	67
Document camera	2	1	1	0	22	10	0	0	6	42
DVD/CD/Blu-ray: standalone, built-in podium	0	1	1	0	21	1	0	0	1	25
Monitor or SMART Podium	1	0	0	4	5	3	0	0	4	17
Network: no connection, no Internet	0	1	0	3	6	1	0	0	2	13
Projection: image is dim or discolored	2	3	5	4	20	4	0	0	0	38
Projection: image is distorted or wrong size	2	1	4	0	1	7	0	0	2	17
Sound: speaker issues	0	0	4	3	8	0	0	0	3	18
Problem or issue not listed	1	4	1	1	6	8	0	0	4	25
Total	**12**	**15**	**26**	**26**	**114**	**69**	**1**	**0**	**24**	**287**

*This chart's top ten categories represents 287 (42%) of the 681 total support requests in the classification "Report a Problem."

VI. Communications, Collaboration, and Resource Development

A. OTS hosted monthly stakeholder meetings for department and college technology staff, with topics including: demonstrations of emerging technologies; lab imaging process; tablets in the classroom; Adobe software; Apple iOS lab management; Apple Remote Desktop; Dell and HP Roadmaps; contractor relationships with VSI and Crestron; and the CCLT computer census.

B. Classroom and lab computers continue to benefit from the campus-wide licensing arrangement for Ghost and LanSchool, both of which enable OTS, college, and department technology staff to deploy and manage the computer systems that students and faculty in classrooms depend on. The cost for each license is paid through the Student Technology Fee initiative.

C. A pilot computer reconditioning program was conducted during the summer to give new life to 700-900 computers that were retired from classrooms and computer labs. Staff from several TU departments and colleges contributed ideas, resources, and a passionate interest in not seeing still-useable computers go to waste. Clients of CHP's Hussman Center for Adults with Autism at the Towson City Center's Institute for Well Being were trained to inspect, run diagnostics, and clean computers. Those computers are now available to other TU offices at no charge to address unmet needs. A complete project proposal to continue and expand the program is slated to go before the President's Council for consideration. If adopted, the program's first priority will be meeting campus needs. Thereafter, any computers not needed within the university would be donated to local schools such as Baltimore County Public Schools.

D. The Classroom and Computer Lab Technologies team collaborated with the Computer and Information Sciences Department to host a semester-long group of students in the IT Capstone Program coordinated by Dr. Mike McGuire. The students researched and developed the reporting capabilities of the Crestron FusionRV product which provides network-based monitoring and control of audiovisual systems throughout campus. Training and reference materials were developed for staff use. Another group will be hosted for FY 14 and will work on an inventory management project to assist with keeping track of instructional technology assets.

E. Use of tablet devices in the classroom is growing among faculty. To help college and department technology staff and end users incorporate these devices, particularly iPads, an iOS resource and deployment website was launched.

F. "Bring Your Own Device" (BYOD) is proliferating on campus as more and more faculty and staff bring in personally owned laptops or purchase non-standard systems. To provide guidance, policy, and usage assistance, a comprehensive mobile device website was created this year.

G. CCLT coordinators and other OTS staff conduct one-on-one and small-group training and orientation sessions for faculty. Both formal and informal sessions were arranged and helped faculty adapt to newly installed systems. A chief example included the training of Nursing and Health Sciences faculty when they moved into newly renovated Linthicum Hall.

VII. Administration and Staffing

A. A solid investment in hardware has been accomplished over the past three years—decisively, aggressively, and rapidly. A "7-Point Plan" in 2008 coupled with solid funding through Student Technology Fees has catapulted TU from a dismal and inadequate technology campus to a national leader in record time.

B. The CCLT team within OTS has continued to evolve and now includes three fulltime support coordinators whose responsibilities include establishing relationships with each college and contributing to the overall campus classroom and computer lab support mix.

C. The coordinators are funded through STF funds, but they represent only a portion of the staffing commitment. Additional OTS staff members are allocated to the classroom and computer lab technologies effort, including four fulltime staff, three student employees, and a number of people who contribute a significant portion of their work to the CCLT effort.

D. Significant contributions come from other units within OTS ranging from the Enterprise Services group which manages the network, back-end server environment, and general engineering support to the Business and Communications Services group which assists with overall budget management, expense tracking, procurement, and other financial matters.

E. The CCLT group is only one part of the technology support equation needed to balance the complex technology on the campus. Additional staffing will be essential to ensure the technology investment is sustained and managed—and that the faculty and students who use the environment are trained and supported.

F. This will call for a team effort to keep the infrastructure up and running smoothly. 400+ rooms spread over a 328 acre main campus, plus Towson City Center and USM Hagerstown, is a challenge to manage. An increasingly important role of the CCLT team will be expanding the partnerships between central OTS staff and college and department technology staff.

VIII. Planning and Forecasting

A. A primary objective is to ensure sustainability of the university's significant instructional technology investment. Nearly all learning spaces are equipped with presentation technology—technology which continues to evolve rapidly. The lifecycle of the audiovisual core is an estimated 7-10 years, after which renewal with next-generation components is expected. The STF initiative provided the catalyst to fully equip the campus in record time, but now the attention must turn to planned lifecycle management.

B. To that end, OTS staff and our primary campus contractor, Visual Sound, Inc., met for two days this summer and painstakingly went through each classroom to assess its current status and to chart a 5-year plan for maintenance and renewal. Those recommendations will be provided to colleges and will help identify the projects that will need to be undertaken in FY 14 and beyond to ensure scheduled replacements occur. The "base" funds in the overall budget will be adjusted to ensure that sufficient funds are locked in to cover projected lifecycle management.

C. An important lesson learned in the past two years is that the room renovation, equipment replacement, and upgrade planning must occur earlier in the academic year to ensure that the work can be accomplished during the winter and summer construction windows. Classrooms are just too heavily booked to take them offline for mid-year work. As a result, there will be three major Student Technology Fee project request cycles: September, October, and February. A final cycle April will be limited to smaller equipment purchases and projects of $5,000 or less.

D. CCLT worked on three major planning, renewal, and new construction projects this fiscal year: the new Harford County facility, the Burdick Hall renovation, and the reopening of Linthicum Hall. Harford County and Burdick Hall planning and installation will continue into FY 14.

IX. Emerging Technology, Research and Development

A. CCLT staff set up and displayed a variety of instructional technology solutions at the January faculty conference. Some of the technologies featured included: Windows 8 touch-screen computers with annotation capability, instructional capture and recording, SMART Board, and wireless projection using Apple TV and iPads. The "technology sandbox" allowed faculty and administration to see what is currently installed in classrooms as well as new things that will be making their way into mainstream use.

B. 3D viewing has a lot of untapped potential as a means to better visualize complex or detailed structures such as anatomical systems, works of art such as sculpture, engineering models, and biological specimens. CCLT staff evaluated a passive-glasses Epson projector and self-developed content. The technology may have applicability in the future design of learning spaces in Smith Hall and elsewhere on campus. The passive glasses approach makes for a much more manageable solution, but the true future will be glasses-free 4K-based 3D LED panels, something we will continue to follow as the technology improves.

C. Instructional video recording, commonly called lecture capture, is a growing area of interest. In collaboration with the new Office of Academic Innovation (OAI), a six-month pilot of an industry-leading product Panopto was planned during FY 13 and will be in place for the Fall 2013 semester. The software-based solution runs on classroom and office computers, laptops, and iPads and iPhones, giving faculty enormous flexibility in developing instructional content.

D. Adobe product usage reached a threshold where it made sense to move to a campus-wide license rather than each college or department purchasing and maintaining their own. A decision to move forward was made in February 2012. OTS worked with Adobe and MEEC to renegotiate a statewide purchasing option that will permit Adobe Creative Cloud Master Collection to be installed on all campus computers in classrooms and computer labs. Funded through Student Technology Fees, this will put an outstanding collection of software tools in the hands of our students. A website was developed and full implementation will occur in FY 14.

E. An important resource for students is printing. OTS assisted Auxiliary Services with the implementation of a new campus pay-for-print solution. Self-service kiosks were installed throughout campus during the summer, with full availability for the start of the fall semester.

F. Windows 8 has a lot of potential for in-classroom use, particularly with touch screen monitors that will enable faculty to mark up and annotate documents, websites, and other materials. OTS purchased a trial unit and conducted preliminary testing; initial testing shows promise.

G. Macs in the classroom may be more common if initial testing of Mac Mini systems works out. By using Mac Minis, the native Mac operating system could be used by faculty—or for those so inclined, they could run Windows on the Mac using VMFusion. Coupled with a touch-screen monitor, this may provide a unique, versatile classroom instructional platform. Look for further developments later in FY 14.

H. CCLT staff built a base Windows 64-bit image for use in computer labs and classrooms. The base image was developed with input from lab managers and department technology staff and is typically used as a starting point to further customize to meet unique departmental needs.

I. A new Mac base image built on OS 10.8 was developed and deployed to campus computer labs.

J. Since software image development, distribution, and management is a big part of the workload for college and department technology staff and computer lab managers, OTS has been testing and evaluating other solutions to make the process easier. Examples include Altiris, Casper, and SCCM 2103. Changes and improvements are expected in FY 14.

K. Solid-state drives were tested and the results are encouraging—we expect that beginning in fall, solid-state drives will begin to replace traditional hard disk drives in computers in classrooms and other locations. The solid-state drives are a lot faster and more reliable. The time it takes to boot up and logon to a computer will be reduced, improving the classroom experience and efficiency.

X. The Road Ahead

A. The future of instructional technology in classrooms and computer labs at Towson University is bright. The stable funding stream through student fees will ensure sustainability of the existing infrastructure base while providing opportunities to innovate using new technologies. The university is a national leader in the way we have organized and developed our resources.

B. Staffing will continue to be an important issue. Central IT cannot do it alone. Continuing to build and expand cooperative relationships with college and department technology staff will be vital to efficient, effective support of the environment itself as well as the faculty and students who use it. We hope to grow those relationships in the year ahead and through a cooperative approach, work together in service to our students—students whose fees support our instructional technology environment.

C. An important objective in the year ahead will be to increase the resources available to faculty—training, documentation, how-to videos, and other tools—with the goal of empowering them as competent, proficient, wise users of technology in their teaching.

D. Support resources will continue to grow in the upcoming year. We hope to add additional coverage hours to the 4TECH telephone support service. We also hope to pilot the concept of using "embedded students" in classes to provide first-level, on-site support to faculty. A creative proposal is on the table with the Department of Mass Communication, and when funding becomes available, we hope to explore novel methods to "incentivize" student participation in the support equation.

E. Focusing on preventative maintenance has been fruitful, and we expect to do more of it in the upcoming year. By inspecting and servicing equipment and through monitoring using tools like Fusion RV, we will be able to prevent problems—and more importantly, prevent classroom downtime.

F. Having good standards for equipment and programming has had a significant payback and made it easier for faculty to teach seamlessly in classrooms throughout campus without having to learn a whole new approach. OTS will continue to research and explore available options and work with stakeholders to validate recommendations and ensure that the evolving standards meet the needs of faculty and students.

G. In FY 14, we expect to move beyond pilot-scale implementations of wireless projection as well as instructional video recording and identify the right solutions that will permit broader use in more classrooms.

H. Finally, we expect to continue to build and refine business and support processes within the CCLT team in OTS. A new manager will be hired to replace a vacancy at the end of FY 13. Additional realignment of staff and duties will better position the unit to meet new challenges and continue to provide first-rate technology and service to the campus.

XI. The Office of Technology Services Team: Key Staff Involved with Classroom and Computer Lab Technologies

A. Classroom and Computer Lab Technology Support Coordinators Funded through Student Technology Fees:

Paul Brown, CHP, CLA

Peter Morin, FCSM, COFAC, HC

Kate Scanlan, Acting, CBE, COE

B. Other OTS staff with Primary Classroom and Computer Lab Technologies Duties:

Brian Raley, Instructional Services Engineer

Jack Stark, Manager, Lab and Mac Support Teams; Administrator, Campus Technology Coalition

James Hardin, Field Support Specialist focusing solely on CCLT

C. Administration:

Cindy Davis, Manager, Classroom Technology and Planning (Starting December 4, 2013)

Carol Watts, Manager, Client Services Support Operations (currently oversees the CCLT coordinators)

D. Other Staff Supporting the CCLT Service:

Jeffrey Schmidt, Associate Vice President and Chief Information Officer

Michael Bachman, Director, Information Technology Client Services

Julie Leary, Manager, Distributed Support Services; assists with financial and project management; cross-over work and additional help through the Field Support team