Committee Description: The Committee on Academic Technology (CAT) is a standing committee that reports jointly to the Provost and the University Academic Senate. It is concerned with the use of technology as regards the academic mission of the university. Its membership consists of representatives of each of the colleges of the university, the Center for Teaching and Learning, the Director of Information Technology Services, The Associate Vice Provost for Educational Technology, and the Vice Provost for Undergraduate Programs and Teaching. Three subcommittees functioned during the 2011-12 academic year: Cloud Computing, Hardware/Software Infrastructure and e-Textbooks; chaired by Kathy Lang, Scott D’Urso and Jon Pray respectively.

Committee Membership: Charles Beckwith, Bruce Boyden, Lesley Boaz, Michael Class, S.J. (Co-Chair), Steven Crane, Scott D’Urso, Steven DeLonge, Kathy Lang, Patrick Loftis, Shaun Longstreet, Laura Matthew, Barrett McCormick, Gary Meyer (Co-Chair), Michelle Mynlieff, George Corliss, Jon Pray, Heidi Schweizer, Janice Welburn, Tom Wirtz

Committee Meetings: CAT scheduled monthly meetings during the academic year, and met six times: September 16, October 28, December 9, January 27, March 23 and will meet April 27. Meetings in November and February were cancelled due to busyness of calendar and lack of pressing agenda items.

University Academic Senate Charge: No charge assigned.

Committee Work and Accomplishments: CAT addressed a variety of topics this year including general trends in computing technology, technology budgeting concerns at Marquette, use of technology in the classroom, e-textbooks, and policies concerning the use of clickers in the classroom.

- Our student representative, Steven DeLonge, shared a presentation from his Management class with Professor Kate Kaiser on trends in the technology world. Dr. Kaiser joined the committee at this meeting. The presentation sparked several topics of conversation in regards to academic technology at Marquette including the challenge of mandating technology standards for students when technology changes so rapidly; the challenges ITS faces in supporting such a wide array of hardware and software platforms that are in use on campus; the wide array of technology familiarity/expertise that our students bring to campus, including basic skills such as Excel spreadsheets; and ethical issues of privacy and academic integrity.
An example of the difficulty of setting standards is perhaps best illustrated in two topics that the CAT addressed this year: e-Clickers and e-Textbooks.

- **E-Clickers** has been a topic that has refused to go away. It has come up each of the three years that this new incarnation of the CAT has existed. In its simplest form an e-clicker is a device that allows students to respond electronically to questions in class. Students operate the device like a TV remote, pushing a button(s) to send a signal that is read by a receiver and which then translates that signal into an answer that is recorded in a database. The clickers are used for everything from taking attendance to surveying students on discussion questions to giving in-class quizzes and exams. Students purchase an e-clicker like they would purchase a textbook or other class supply. One issue is that students could find themselves needing to purchase multiple clickers for their different courses because faculty members select the e-clicker system that they feel best serves their purposes, and the differing systems are proprietary and incompatible with other systems. The committee in the past mandated that faculty select one of two systems, so that students would not have to purchase more than two of these devices. Technology being dynamic, each of the systems continues to evolve and improve; offering reasons for changing to newer designs, different systems, etc. In addition to this, the vendors are now moving away from the proprietary device model to a software application model. This would allow students to add an app to their smart-phones or tablets that would serve the purpose of the clicker. While this model offers some great cost savings to students, it becomes problematic for academic integrity because this would then also mean that students would have to be using their smart-phones in a test situation making it difficult to police the classroom to ensure that students are only using the clicker app and not the texting or internet features to seek answers. At our March Meeting Jon Pray updated us on the newest developments in clickers and after discussion it was decided that Jon would gather a group of significant users of clickers and see if there is a single clicker that they could agree upon as the one standard.

- **E-Textbooks** are just coming about here at Marquette. The BookMarq reported that a year ago they only sold 25 e-texts and this past year 110. While these numbers are small, the BookMarq takes this as a sign that growth will be accelerating and that the concept is ready to expand significantly on campus. One committee member pointed out that her children are using e-books in her fourth grade classes now. Vendors such as Amazon.Com already sell more electronic titles than print titles, and academic publishers are rapidly changing their publishing model to move to a richer content electronic text. There are several issues that arise from this trend. First, there is a hardware issue: students will need to have an e-reader to make use of e-textbooks. While Amazon.com’s Kindle can be obtained for under a $100, the rich content versions of
tablets/readers run the price gamut from $200 to $800. Technology like the Apple iPad can make use of a variety of reader apps making varying proprietary content formats available on a single device, but the question is do we want to mandate a $500+ device for our students? A second issue is that the business model being put forth by publishers is for a license for access to the e-book for a period of time, unlike a paper book that can be purchased and kept and used even beyond graduation. Jon Pray made a presentation on e-Textbooks to the UAS in its April meeting.

These two issues illustrate the difficulty in mandating standards for academic technology.

- CAT discussed the Desktop Computer Replacement Program at Marquette, with particular attention paid to the capital budgeting being done in that area. The budget given to ITS for desktop replacement is insufficient to fund the approved program. Even with the decline in PC pricing, and shift away from replacing monitors unless absolutely necessary, the budget given does not allow for ITS to replace the systems scheduled each year. The need to withhold a portion of the budget for emergency replacement of systems that break down further stresses that budget.

- The Cloud Computing Subcommittee was created in the 2010 — 2011 Academic Year, and initial discussions focused on the role that such server based systems will play in the future. The cloud promises to offer a way around competing platforms by making applications and data access platform neutral. But this is in its infancy, and currently there is not much that is available to be put to use. Given that, the committee took a shift away from the topic and began looking at the results of the Faculty Technology Survey conducted last year. This investigation of the results will continue.

- Subcommittee reports are attached as appendices.

**Committee Recommendations:**

- The CAT urges that Information Technology including Educational Technology be a major focus in the up-coming strategic planning process for the university. Especially of strategic concern is the funding levels for carrying out strategic technology directives.

- The CAT did not receive a charge this year from the Senate or the Provost. Future years will benefit from such a charge to better serve them

Respectfully Submitted,

Michael Class, S.J. Co-Chair

Gary Meyer, Ph.D., Co-Chair
Appendix I: Cloud Computing Subcommittee

Membership:

Kathy Lang (ITS, Chair), Steve Crane (ECON), George Corliss (EECE), Michael Class, S.J. (CPS), Thomas Wirtz (DENT).

Meetings:

The subcommittee met three times this Academic Year, October 4, January 4 and March 12.

Subcommittee Charge:

The original charter/mission of the Cloud Computing group was to:

1. Communicate with the Cloud Computing “virtual lab” project team in Engineering and Business.
2. Identify places on campus where and how future cloud computing usage might be implemented to improve operations and offer more opportunities to faculty and students.
3. Work to identify how University resources may need to be re-tasked, added, and/or deleted to adapt to the usage of cloud computing.

Subcommittee Work and Findings:

The Virtual Lab project has already been architected and is waiting on funding. Most likely funding will come from Engineering as a start. One the main infrastructure is implemented, the plan is to expand it for use in other areas, such as the College of Business.

It has been determined that cloud computing is a strategy used to meet the needs of something else, rather than a specific strategy in and of itself. For instance, when reviewing the need for a particular service one of the options to look at is a vendor solution in the cloud. Therefore, the committee is really without a charge.

The committee then took on the analysis of the faculty survey. In particular the committee had Institutional Research do further analysis of the questions concerning D2L both from a college perspective and from a faculty teaching level. There were no significant findings that were of note after review.
Appendix II

Annual Report
eTextbook Subcommittee
Committee on Academic Technology
April 2012

Subcommittee membership:

Jon Pray (IMC, Chair), Gary Meyer (Vice Provost), Heidi Schweitzer (Education), Charlie Beckwith (MUSG), Barrett McCormick (A&S-Political Science), Bruce Boyden (Law), Janice Welburn (Library), Laura Matthew (A&S-History)

Subcommittee charge:

The e-Textbooks Subcommittee will work to ensure that Marquette University is ready to meet the rapid changes by textbook publishing companies as they shift toward electronic delivery of content. The subcommittee will investigate the various platforms and policies that are beginning to emerge and how the institution can ensure student and faculty have wide access to and/or ownership of electronic media.

Motivators:

Provide students more affordable textbook options; pursue the concept of a “library on a device” vs. overstuffed backpack; promote technology delivery and use and; take advantage of changing content models (multimedia enriched e-Textbooks).

Meetings:

The subcommittee met six times over the course of the academic year. The meetings were held on:

October 24, 2011;
November 14, 2011;
January 25, 2012;
February 16, 2012;
March 22, 2012 and;
(planned) April 25, 2012.

These meetings followed two initial subcommittee planning meetings at the end of spring semester 2011.
Subcommittee work and findings:

The group reviewed existing textbook vendor agreements (Follett Bookstore/BookMarq) and evaluated the Follett e-reader tool “CafeScribe.” Follett provided a spreadsheet of titles currently available in digital form (see attached). The listing includes titles not yet digitized, but that could be requested from a publisher. The chair and/or the members of the subcommittee also received presentations from several of the large publishers including: Cengage; Macmillan; Pearson and; McGraw Hill. We reviewed various vendor/publisher delivery mechanisms and their digital business and distribution models (own vs. rent/lease)

We received a presentation from a publishing “aggregator,” CourseSmart. CourseSmart is large joint distribution venture supported by Pearson, McGraw-Hill Education, Cengage Learning, John Wiley & Sons, and Bedford, Freeman & Worth Publishing Group (Macmillan). In addition, they also distribute content for 13 other publishers in a sort of “portal” model.

The group also considered a variety of other e-text custom creation models and vendors including Flatworld Knowledge (free, modifiable), XanEdu and AcademicPub (digital coursepacks and copyright clearance).

The committee leaned toward a common distribution form that allows content to work on a variety of devices regardless of form factor or operating system. These range from laptops, to tablets, to smart phones and provide a viewing experience that is “device agnostic” and compliant with emerging standards. As a result, the design, multimedia content, and interactivity can be somewhat “flat” and includes at a minimum, searchable text file, highlighting and (usually) the opportunity to take notes. Device specific content (such as iPad iBooks) has the capacity for additional features including rich-media and higher levels of interactivity. The subcommittee endorsed the enhanced level of engagement with this rich media content while recognizing its device limitations.

There are pockets of electronic textbook activity happening across campus. Some of it is known; some of it is probably a function of student creativity with shopping. The BookMarq has seen an increase in the sale (lease) of digital content over last academic year. Nevertheless, their sales figures are quite low (around 100 units). Other publishers report slightly higher levels of activity through direct online sales. This modest level of activity reflects the preference of current students for printed texts – a tendency confirmed in the literature. We can expect this student preference to change fairly quickly in the next several years as K-12 students, who are used to working with digital texts, come to higher education.

The subcommittee’s next steps are to pursue some informal survey data from several courses where e-textbook use is known (computer science, biology, English, business). Our intention is to glean more data from a larger pilot effort in the fall semester of 2012. The subcommittee acknowledged the need for some more rigorous research of the impact of electronic text delivery on such things as student success, subject matter comprehension and information retention.
Finally, we created a website to chronicle a variety of e-textbook articles from the popular and trade presses. This work can be found at www.muetextbook.tumblr.com.
Appendix III

Hardware/Software/Infrastructure Subcommittee

Subcommittee Membership:

Lesley Boaz (NURS), Scott D’Urso (Chair, COMM), Steven DeLonge (Graduate Student Organization), Patrick Loftis (PHAS), Shaun Longstreet (Center for Teaching and Learning), Michelle Mynlieff (BSCI)

Subcommittee Charge:

We began our first full year as a subcommittee in the 2011-12 school year. Our goal was to address the Topics/Issues for exploration as we were able over the coming year. Below is our mission and a list of those topics/ issues.

Mission - The Hardware/Software/Infrastructure Subcommittee will work to ensure that Marquette University coordinates with the use of technology in the classrooms so that we can provide a superior learning environment without placing additional costs on the students and University to purchase redundant equipment and software.

Topics/Issues for Exploration:

- Smart classrooms and related technologies (such as the possible addition of webconferencing equipment such as Skype)
- Examining other universities practices regarding any HW/SW requirements
- Research/Recap current research on technology in university settings
- Determine a list of the pros and cons of HW/SW requirements
- Identify the potential cost issues for both students and faculty as well as ways to resolve them
- Coordinate activities with other subgroups

In our first major meeting, we set out to plan our approach for the coming year and to prioritize our goals for 2011-12. From there we decided to examine both student and faculty perspectives regarding the use of technology in the academic setting.

First, we set out to study, via student focus groups, the types of technologies students are currently utilizing, their evaluation of faculty use of technology in the classroom and teaching in general (particularly the use of D2L), as well as their thoughts on the future of e-textbook use on campus. We spent several meetings and e-mails developing a set of questions and planning out
when and how we would conduct the focus groups. The plan was to conduct them in late spring, but time constraints and availability of committee members was limited. We hope to conduct the focus groups at the beginning of the 2012-13 school years.

The second focus of the committee was to collect and eventually analyze some data regarding best practices in teaching utilizing technology in the classroom. We sought to survey faculty, nominated by the deans of the individual colleges at Marquette, on a variety of topics related to their teaching, use of technology, and unique ways of engaging the students. We completed the draft survey in the early part of the Spring 2012 semester. A request was sent out to all of the deans requesting the names of three or four faculty who represented best practices with teaching with technology. Seven deans replied with a total of 48 names. The survey along with a description of our goals for the study were sent out to all of the nominated faculty following Spring Break. Over the two week period, 17 provided responses. Over the summer, these responses will be compiled and made available for the committee to discuss in the upcoming school year.

It is hoped that with the information gathered from the faculty survey as well as the proposed focus groups, the committee will have a better understanding of the future needs and possibilities for both teaching and learning with technology at Marquette.