Blackboard Advisory Committee: Status Report, winter 2012
JQ Johnson, 28 Feb 2012 (for meeting scheduled 5 Mar 2012)

Blackboard events and upgrades, winter 2012

Blackboard usage for winter 2012 shows the growth pattern we’ve expected from previous years. Usage is slightly below fall term, but up substantially compared to a year ago.¹

<table>
<thead>
<tr>
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<th>Win ‘11</th>
<th>Win ‘12</th>
<th>Growth</th>
</tr>
</thead>
<tbody>
<tr>
<td>Active CRN coursesites</td>
<td>2044</td>
<td>2335</td>
<td>14.2%</td>
</tr>
<tr>
<td>Student enrollments in active coursesites</td>
<td>78612</td>
<td>94807</td>
<td>20.6%</td>
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We estimate that during the period 1 Jan – 15 Feb we had about 1.2 million logins, or about 26,000 per day. This is slightly lower than what we were seeing last term, but much higher than a year ago. As we saw during fall term, visits are typically quite short, averaging slightly under 8 minutes.

This has been a moderately busy term measured by trouble tickets. In the period 1 Jan – 20 Feb we received a total of 305 Blackboard trouble tickets (295 of which were resolved as of 20 Feb), or an average of about 6 per day.

As announced at our fall meeting, we performed 2 major system upgrades during winter break:

First, Information Services upgraded the database system to Oracle RAC, which provides a fully redundant pair of database servers, one in the Computing Center and one in Oregon Hall. At any given time your browser might contact any of 4 application servers, which in turn might query either database server. If either database server fails, the other will transparently take over, and although there will be some performance loss the system will not go down.

Second, we upgraded the version of Blackboard Learn from 9.1 SP5 to 9.1 SP 7. This upgrade provided a number of stability and security fixes, but introduced only a few new features:

• Browser support – Support for recent versions of browsers, particularly Google Chrome, was improved. Blackboard now officially rates as “certified” or “compatible” recent versions of Internet Explorer, Firefox, Safari (MacOS only), and Chrome. Our experience has been similar; although all

browsers have occasional problems, most users seem to have good results running the latest versions of those browsers on Windows 7 or MacOS X 10.6 or 10.7.
• Automatic Saving of Assessment Attempts – Tests now auto-save every minute as a student takes an online quiz.
• Timed Assessment Improvements – Timed tests can now be set to autosubmit and shut off at the designated time, rather than just indicating how long the student ran over the set time period.
• Needs Grading – If an instructor marks a wiki, journal, blog, or discussion board as graded, then the grade center will indicate students whose work “needs grading”, as it already did with assignments and assessments.
• Interactive Rubrics – Creation, grading, and sharing (both with students and with instructors teaching similar courses) of rubrics was significantly revamped.
• New SCORM Engine – The SCORM (Sharable Content Object Reference Model) player was updated. This also incorporates new activity/progress reporting from the Control Panel. Softchalk and other products can save output in SCORM format for use in Blackboard.
• Publisher Integration - We installed a building block that allows instructors to integrate online textbook content from McGraw-Hill “Connect”.

We have not experienced any significant unscheduled system downtime since the last BAC meeting. However, Blackboard upgraded their SafeAssign servers to provide more capacity, and there were a few periods when SafeAssign was unavailable during winter break.

Schedule and upgrade plans for the rest of the year
The downtime schedule for the rest of this academic year has not changed since our last meeting:

| Wed.-Thurs. Mar 28-29 (spring break) | Tentative OS upgrades to Red Hat 6.2; database software patches; possible Bb app security updates and hotfixes |
| Sat. June 16 (before wk 0) | Upgrade to Blackboard 9.1 SP 8 |
| Sat. Aug 18 (after 8 wk summer; before Law Fall) | Likely upgrade date to Blackboard 9.1 SP 9 |

Additional Saturday time blocks are reserved for unforeseen needs, but are unlikely to result in substantial actual downtime. We will have a schedule for fall term downtime ready for our spring BAC meeting.

Information Services also has a number of infrastructure projects planned that potentially impact blackboard, including implementing the new “Commvault” backup system, moving VMware 4 to VMware 5 on a new host, upgrading the Netapp Metrocluster (high performance storage), Netapp Oracle storage migration, Nexus 7k migration, and installation of Oracle January security patches. At the moment, it appears that only the Metrocluster upgrade will result in noticeable blackboard downtime. That upgrade is not yet planned, but could result in an hour or more of simultaneous downtime for a large number of IS-hosted systems. IS is committed to trying to find a time (ideally during the normal early-Tuesday-morning scheduled maintenance window) that is acceptable to all of their customers, to avoiding blackboard downtime during dead or finals week, and to providing as much advance warning as possible.

Tim is as usual planning to attend BbWorld, the Blackboard users conference scheduled for July 10-12 in New Orleans. If you or any of your colleagues are interested in attending, see http://www.blackboard.com/BbWorld/Home.aspx.
Action items from fall BAC meeting – documentation updates

At the fall meeting, the committee identified a number of documentation changes that it recommended. We have made progress on some of them:

- **Item: reduce information overload on the main blackboard help page.** We completely reorganized [http://libweb.uoregon.edu/scis/blackboard/help/](http://libweb.uoregon.edu/scis/blackboard/help/), splitting the information into 3 separate pages. If members of the committee have time to visit that page and provide comments that would be very helpful. CMET Consulting is also working with CMET Interactive Media to conduct a usability test of the website, given the recent changes we've made with splitting resources into Instructor vs student help pages. We expect to conduct the test by the middle of spring term. We need input from the BAC to identify 5 to 10 questions that we would like faculty members to be able to answer using our help site, and need to recruit 5 faculty volunteers.

- **Item: provide more help with diagnosing common browser problems.** We updated the browser version/plugin detector at [http://libweb.uoregon.edu/dc/blackboard/plugin](http://libweb.uoregon.edu/dc/blackboard/plugin). That page also links to some additional information about specific browsers. We plan to add FAQ answers dealing with other common browser problems.

- **Item: expand SafeAssign help, including videos showing the posting procedure for both students and instructors, and the download procedure for instructors grading safeassignments.** Some FAQ answers have been written (e.g. [http://libweb.uoregon.edu/scis/blackboard/faq/instructors/i43.html](http://libweb.uoregon.edu/scis/blackboard/faq/instructors/i43.html)) and we will work on more.

- **Item: provide more blackboard support for students in the IS how to guides on it.uoregon.edu.** Nargas has been in contact with Patrick Chinn (Information Services), but we don’t think there have yet been any changes on it.uoregon.edu.

- **Item: "collect blackboard issues".** One of Nargas’s CMET students (Adam Marcus) compiled a list of frequent trouble ticket topics. We will circulate that list to the BAC under separate cover and will also use it to identify additional topics for FAQ answers. By far the most common types of questions are
  - Students with login problems
  - Faculty with problems adding students or course support staff to their courses
  - Coursesite visibility: students concerned that they still have old courses and don’t have their current courses, or faculty who have forgotten to make their sites available
  - Coursesite merge requests from faculty, where a single site is being used for multiple CRNs

- **Item: "calendar in own window".** The version of Blackboard that we will be installing at the beginning of summer has some improvements to the built-in Blackboard calendar. Note that you can create a link to the Blackboard Calendar tool in any content area by choosing Build Content > Tools Area and selecting “Calendar”. This effectively creates a shortcut from your content area (e.g. Course Documents) to the tool that is also accessible in the Tools area of your site. You can also create a public Google calendar and display it on a page in your blackboard site; see [http://libweb.uoregon.edu/scis/blackboard/faq/instructors/i73.html](http://libweb.uoregon.edu/scis/blackboard/faq/instructors/i73.html). We are also investigating
Google Apps for Education (see below). If we implement it then it will provide a flexible way to have group calendars that everyone in the class can update.

The library is planning a major revamp in its web server and web content management system this summer, switching from Sitellite to Drupal. We are starting to examine how this change will affect our local blackboard documentation. In the short run we’ll try to retain existing structure, though details of appearance and menus will change in ways that may affect usability. Longer term we may implement a more extensive FAQ management system or crowdsourcing of blackboard FAQs.

**Ongoing projects**

**Increasing disk space**

The UO’s blackboard system is currently disk-space constrained. When the Blackboard system was moved in 2010 from dedicated hardware in the library to shared IS hardware our usable disk space decreased from 4 TB to about 1.8 TB, which was adequate at the time. However, with normal growth we at the beginning of the term were using almost all of a total allocation of 1.8 TB. We took a number of steps to reduce our disk usage to 1.5 TB. For example, we sent a warning to all faculty using blackboard that disk space might be in short supply and that they should contact us in advance if they expected to need more than our default of 2 GB per coursesite. We also were aggressive in deleting old coursesites (we commit to keeping sites on line for 3 years, but have sometimes waited and removed old sites in a batch at the end of a year rather than the end of a term).

Tim and I have met with IS Systems staff to discuss prospects for expanding the amount of disk space available to blackboard, and IS has ordered additional storage for blackboard and other uses. The additional disk storage will likely not arrive in time to be available at the beginning of spring term. However, IS expects that we will be able to expand our total available space enough (probably about 5%) to handle expected spring requirements.

We don’t know what the demand for disk space would be if we were to relax our limits. Our default limit is 2GB per course with average usage about 60MB, but we routinely double or triple that limit on request, and have a few courses using more than 10 GB. It is plausible that instructors could easily use much more space, with a future doubling time of every 1 to 2 years, or 3 TB a year from now. More critically, instructors are increasingly requiring that students turn in large multimedia assignments (particularly video) using blackboard. A single assignment with an average size of 250 MB in a 200 student course consumes 50 GB, making such uses by far the biggest factor in overall blackboard space requirements. We could easily imagine space needs for student assignments growing to 10 TB in a year.

Blackboard storage provided by IS is in their “Tier 1” category, which is very low latency and 2-site redundant (hence highly reliable) storage. All data is replicated between SANs at the Computing Center and Oregon Hall. At presently quoted prices for their Tier 1 storage (about $2000/TB/year), significant increases in blackboard storage would be an extremely expensive proposition for the university to provide. One alternative we are exploring (see below) is a change to our retention strategy for old courses that would archive old courses to much lower cost storage but would provide an interface allowing instructors to recover the old courses when needed.

**SP 8**

Blackboard SP 8 is a change with significant user-visible components, and we want to be very careful in our planning for it. It is currently installed on our development server, bbdev.uoregon.edu. We are working on customization of appearance and on understanding the major functional issues that we are likely to face putting it into production. Tim is currently working on changing appearance (colors, etc.) and reimplementing the login page to resemble our current implementation.
So far, we observe that the most visible changes are:

- Appearance of some features (e.g. the main buttons at the tops of content areas when you are in edit mode) have changed with a goal of providing a cleaner, more rectangular, look.
- The color palette is less heavily customized for UO than what we have used in the past, resulting in somewhat subtler colors. Instructors can easily customize the palette for a particular course using the new “change course theme” pulldown menu.
- Most contextual menus (the ubiquitous chevrons, list reordering arrows ( ), and other control icons have been eliminated. This produces a much cleaner appearance for the instructor. Instead, when an instructor moves the mouse cursor over an item the controls reappear.
- If an instructor changes a test after students have taken it, the student attempts are automatically regraded.
- Some new features were added to make it easier to move between courses without returning to the My UO screen, notably a new dropdown menu on the breadcrumb bar.
- There is expected to be a revamped visual textbox editor.

We expect to install SP 8 on our bbtest test server early in spring term and to make it available for limited testing by committee members and others.

Since the appearance of a coursesite has changed substantially in SP 8, we will need to make substantial revisions to images and videos included in our local FAQs and help documentation.

We are also looking forward to SP 9, which we intend to install at end of summer. We expect SP 9 to be a primarily a maintenance release, consolidating patches that fix bugs introduced in SP 8 and improving back-end support.

iTunes U

Work on UO deployment of iTunes U is primarily being done not within blackboard but by an ad hoc group consisting of CMET streaming media staff plus Library Systems and IS Academic Services. A front end design for the storefront has been completed, and content is being uploaded. The goal is to have 100 videos available by spring term. For the initial phase, all the content will be “public” programming rather than course content. On the blackboard end we have installed the Vanderbilt University iTunes U building block on bbtest.uoregon.edu and are prepared to experiment with it as soon as appropriate. One issue for iTunes U is the same one we mentioned above – disk space needs. At some universities all or most lectures are recorded and made available within iTunes U or a similar platform. This would pose very large space needs that might be provided within blackboard or on a separate server.

Google Apps for Education

We are moving ahead with experiments using the “BBoogle” building block from Northwestern University to provide an interface between Blackboard and Google Docs/Google Calendar. Tim has
installed BBoogle on our test server (bbtest.uoregon.edu) and has set up a google domain for testing. His goal is to have enough of a working understanding of the software that we will by the end of this term be able to say what it can and can’t do. We are particularly interested in understanding how a Blackboard-specific interface to Google Apps might interact with other Google Apps use elsewhere on campus, and in whether there are privacy or other obvious legal risk issues that might discourage a full implementation of Google Apps within Blackboard. At the moment it seems likely that we will have sufficient information from our experimental implementation to provide many answers by the end of the term, but that the university will not be prepared to have us roll out a production implementation for spring term.

Currently, future use of Google Apps is in a state of uncertainty due to legal concerns. The Oregon University System signed a 3 year contract with Google to allow system-wide use of Google Apps for Education. Although several units on campus, notable CAS, have adopted Google Apps and set up google domains for sets of users, the UO General Counsel’s Office is concerned about the terms of the contract, and is comparing the terms of the OUS contract with those negotiated by other universities that are using Google Apps.

**WebWorK**

We have not made any headway on Blackboard/WebWorK integration. The developers at University of Missouri have made a few minor changes since November, but have not packaged their changes in a form where they can easily be installed at another site. Until they do so we are on hold. When we get a version from them that we can test, we will experiment with it for the remainder of the term connected to a WebWorK test server. Overall, the previous description of the functionality of this building block still seems correct: The tool offers user interface integration allowing students to access their WebWorK assignments via blackboard, and exports grades from WebWorK to the Blackboard grade center. Most importantly, it is expected to allow management of student user IDs and assignment of students to particular WebWorK groups (courses) within blackboard rather than within WebWorK, replacing a current ad hoc system in which Mathematics downloads enrollment data from Banner to create student WebWorK accounts.

**Scantron support**

Although Information Services provides a bubble sheet (“scantron”) scanning service, getting the scanned data into the Blackboard grade center has always been a significant problem, in part because the IS scantron software is very old and vendor maintenance is nearly nonexistent. CMET Consulting has developed a new Scantron Remark grade importing process for Blackboard, a collaborative project with Scranton Services. We are using an Excel Scantron Processing workbook (developed by CMET Consultants) to translate Excel-format scores from Remark (Optical Mark Recognition software) into a format Blackboard can import via the Remark Grade Import Blackboard building block.

**BB Mobile, Collaborate, Community System, etc.**

There are a number of products in the Blackboard portfolio that the UO does not currently license. My (JQ’s) current assessment is that it is not likely that in the short run we will make any changes to add new products, but Library and IS have had ongoing discussions about a number of them, and expect the conversations to continue and to involve other potential UO stakeholders as appropriate. If any rise in plausibility we will reopen discussion in the BAC.
New issues for consideration later this year

Timing of coursesite availability

We need to reexamine the schedule by which coursesites are created, made available to students, and removed from the system. Currently

- We create CRN coursesites shortly before the beginning of general registration for the term in which the course occurs. For example, for spring term 2012 registration began on 27 Feb, and we created coursesites on 14 Feb, and started receiving student enrollment data just before 27 Feb.
- We assume that instructors will make their sites available to students after having loaded content, typically just before the start of the new term (for spring, that’s 2 April).
- We expect that except in special cases a course will be over by the beginning of the following term (for spring, that’s 18 June). We will make all spring term coursesites unavailable to students late in the week of 18 June.
- We delete old coursesite content approximately 3 years after the end of the course.

This schedule raises several issues.

First, there are a very small number of courses that meet on schedules that don’t match the standard UO academic calendar. Almost all of those courses are taught in Portland in the “OEMBA” or AAA programs managed by Academic Extension. We have not been totally successful in accommodating the requirements of these programs, particularly OEMBA. Accommodating non-standard course calendars is not just a blackboard issue, but one that affects regular processes throughout the university, including Registrar’s Office, IS identity management, and the Provost’s Office.

Second, the handling of availability/unavailability confuses students. We get frequent complaints during the first week of a term from students who still see their old courses but don’t yet (because instructors haven’t made them available) see their new courses. It might be preferable for us to make old courses unavailable earlier, perhaps even on the first day of a new term. This is particularly a problem if there is a student in the class who receives an incomplete; in such cases one strategy used in some cases is to re-enable the site while the student makes up missing work, but this confuses other students who had taken the course.

Third, our handling of deletion of old courses is suboptimal. It corresponds to the UO’s officially mandated records retention policies for course content, but we get occasional complaints from faculty members that they need access to a course they taught 4 years ago. Perhaps more importantly, the 3 year deletion schedule is too long in the case of student work. The records retention policy for homework records (http://libweb.uoregon.edu/records/schedule/166-475-0110.html#8) specifies shorter retention rules for units. Homework is supposed to be retained for 1 term after the end of a course (though arguably longer for students who have received incompletes), but instructor grade books (http://libweb.uoregon.edu/records/schedule/166-475-0110.html#18) are supposed to be retained for 2 years. Blackboard makes it very difficult to separate these.

Normally our coursesite creation schedule does not create major problems for site development, since instructors have time before the beginning of a new term and in any case can request a development site where they can build course content then copy it to the production site. However, this interacts with the schedule for creating accounts for instructors, which is particularly a problem for adjunct faculty who may be hired only at the last minute.

We are exploring several possible changes, e.g.:

- We need to alert affected departments (e.g., the OEMBA program) that we cannot guarantee that students will have access to their blackboard coursesites outside of the availability window that runs
from the beginning of registration through the beginning of the next quarter. It may be that the OEMBA program would be better served by using some system other than the UO blackboard system, e.g. http://www.coursesites.com, though that could raise additional FERPA issues.

- We need to alert departments that employ large numbers of adjuncts (e.g., AEI) that it is vital that contract paperwork be signed and a payroll record created before the start of a term. New instructors then need departmental assistance obtaining a Duck ID. Until those formalities have been completed we cannot allow the future instructor to have access to the blackboard sites.

- We are considering automatically deleting all blackboard student data for a course (including gradebook info, submitted homework, roster information, etc.) 2 years after the end of the term. This would comply with records retention rules for gradebooks, and since it is not technically feasible to separate gradebooks from student work would also apply to submitted homework.

- We would like to offer retention of offline copies of instructor content for longer than the 3-year nominal retention period (see below) in cases where the old materials are not yet obsolete.

Feedback from committee members would be very useful.

**Coursesite retention and archiving**

As noted above, we have several reasons for exploring a new model for archiving old courses. Tim is investigating a building block developed by Northwestern University called “Courselife” that might allow easier management of backups. If this tool works out, we would probably move to a 2 year default online retention period. At the end of 2 years most courses would be automatically exported (without student data) to backup media, and the online copy deleted. However, the tool would provide an automated system that would allow the instructor to postpone archival to deal with special case needs such as a grade challenge (which occur very very rarely), to specify a long-term retention period (e.g. 5 years in cases where the default 3 year period was too limited), and to temporarily recover an exported course without staff assistance.

As with the more general question of course lifetimes, advice on what minimum features such a system would need will be gratefully accepted.

**Other topics**

Looking forward to the rest of the year, what topics would the committee like to address? How should the committee function to best utilize limited faculty time while improving the quality of educational technology support?