

Collaborative Tools Strategy

University of California, Berkeley

Findings

Section B: What are campus IT providers doing with collaborative tools?

NOTE: Additional findings are detailed in a separate document located at: http://collab.berkeley.edu/projects/cctsd/cctsd-research_findings.pdf. This research was originally published in April 2008.

In addition to talking with campus users of technology, we talked with providers of this technology about the tools they provided and their future plans. These findings complement the user discussions but introduce a different perspective and often a different depth of detail.

In October 2007 through January 2008, we interviewed IT providers in twelve campus units, including both academic and administrative units, and spanning a wide range of IT staff sizes. They told us what collaborative tools they - and their customers - are using. They also told us:

- *Which tools they're providing*: both the collaborative tools they are directly providing to their customers, and those they are offering by means of other service providers, including IST, other campus departments, and outside providers.
- *What's working and not working*: their satisfactions and dissatisfactions with the collaborative tools they are providing or offering to their users, and their unmet needs in this area.
- *Where they're going*: which tools they are investigating, or plan to provide or use in the future. In most cases, we found that departmental IT planning around collaborative tools typically looks ahead approximately six months to a year, and this is the approximate period covered by most departments' future plans, below. This timeframe is often dictated by customer needs, to which departmental IT providers must be highly responsive, and by a lack of resources to develop longer-term strategic plans.

Much of this data is summarized in the tables below; other data from these interviews is reflected throughout the report.

Please note that this data represents a specific point in time, both for departmental IT roadmaps and for services available from IST and outside providers. These interview summaries need to be considered in the context of the fast pace of subsequent developments in departmental and campus IT. For example, several of the IT service providers mentioned IST's Cal WebFiles service, which was discontinued in late June 2008, some six months after these interviews concluded. Similarly, a couple of service providers mentioned CalMail's webmail interface, based on SquirrelMail. That service was supplemented in mid-2008 by a test webmail service based on a substantially different client, RoundCube.

1. Email

Department	Collaborative Tools Provided	Satisfaction with Tools	Future Investigations and Plans
Boalt Hall School of Law	<ul style="list-style-type: none"> Provides email via Oracle Collaboration Suite (OCS), hosted within the unit. Faculty and staff almost all using Thunderbird client; some using Outlook. Many Boalt students use IST's CalMail, most likely via its web client. 	<p>Satisfied with:</p> <ul style="list-style-type: none"> "Super" OCS web client. "Really good" spam filtering. Large user quotas, in some cases over 10 GB. Dynamically-generated mailing lists. Ability to create accounts and add users to mailing lists up to four months before they join Boalt. 	<ul style="list-style-type: none"> Needs to stem the growth of storage used on email server: 400 users using a collective 1 TB. Already using slower, tertiary storage for old messages. Asking Dean whether faculty can be asked to pay for extra storage over certain limits. Is pleased that IST is investigating a replacement for the SquirrelMail web client for CalMail.
Educational Technology Services (ETS)	<ul style="list-style-type: none"> Uses IST's CalMail. Formerly ran an in-unit mail server, in part for "ets.berkeley.edu" domain branding, and was "happy to give it up" when CalMail offered departmental domains. Uses a hosted instances of Sakai for some mailing lists. 	<p>Dissatisfied with:</p> <ul style="list-style-type: none"> Minor dissatisfactions with Thunderbird email client. Former reports that Calmail web client was slow. 	
Electrical Engineering and Computer Sciences (EECS)	<ul style="list-style-type: none"> Provides email via the Sun (formerly Netscape) Java Messaging Suite. "We mostly use it for legacy reasons; UCLink didn't even exist back when we chose it." 	<p>Satisfied with:</p> <ul style="list-style-type: none"> Ability to recharge faculty research accounts for storage use. Ability to recharge for average actual storage use during each billing period, rather than maximum or "ceiling" use. No quotas, so users don't worry about missing incoming messages in over-quota situations. 	<ul style="list-style-type: none"> Has considered a possible migration to CalMail. Sticking points currently are "transition issues and quotas." EECS's Eric Fraser says: "I personally don't think the university should make the choice to have email handled by an outside provider, but the trend is pretty clear. People use these services anyway, so the issue may be one of

		<ul style="list-style-type: none"> Allows opt-in for spam filtering and never throws away spam-filtered messages, in part for research compliance. (Some EECS researchers study spam and viruses.) <p>Dissatisfied with:</p> <ul style="list-style-type: none"> Sun JMS "lags behind many other systems." Previous version had a "terrible" web email client. However, the new version is much better and provides an interface for setting up server-side mail filters. 	<p>how best to integrate those services with campus services."</p>
<p>Graduate Division</p>	<ul style="list-style-type: none"> Uses IST's CalMail, to which the Grad Division transitioned from the unit's own email system ten years ago. Has 20-25 generic role accounts on that service. 	<p>Unmet needs:</p> <ul style="list-style-type: none"> Sending targeted, HTML email to a mix of campus affiliates and non-campus-affiliated recipients, and allowing each recipient to manage their list memberships. 	<ul style="list-style-type: none"> Looking into third-party providers for sending targeted mailings and allowing management of mailing list memberships.
<p>Haas School of Business</p>	<ul style="list-style-type: none"> Provides email to the entire school via Microsoft Exchange, to which the school migrated from CommuniGate Pro. Graduate students - MBA, MBA evening and weekend - wanted Exchange and Outlook because that's what they use most in their corporate environments, and due to the benefits of their tight integration of email and calendaring. Individual grad students can still choose to use IST's CalMail. Undergraduate students use IST's CalMail, at the request of the 	<p>Dissatisfied with:</p> <ul style="list-style-type: none"> Storage availability. Even though 400 MB quotas are provided in Exchange, Haas IT staff are "constantly barraged by questions about why you don't have the same storage as Hotmail, Google" and other outside providers. <p>Related notes:</p> <ul style="list-style-type: none"> Previously investigated Google Apps for Education, at the request of the Haas MBA Association, but found - with the assistance of campus Business Contracts and 	<ul style="list-style-type: none"> Haas' Zane Cooper: "80% of the top business schools in the US are running Exchange, and we think it will get to 100% within one to two years. The remaining schools are under extreme pressure to migrate to Exchange." Haas has indicated that it intends to sign an agreement with Microsoft to provide Windows Live @ Edu, a suite of online applications that includes email. Two key perceived benefits are larger storage quotas and "email that doesn't go away" when students leave Haas. Any

	<p>Program Office, as some take courses outside Haas.</p>	<p>Procurement - that setting up a domain for Haas would bind the entire campus to a legal contract. Due to competition, Microsoft has become much more flexible, and their contract language proved acceptable.</p>	<p>staff savings resulting from this move are expected to be redirected to research or instructional technology projects.</p>
<p>The Library</p>	<ul style="list-style-type: none"> • Uses IST's CalMail, to which The Library transitioned from the unit's own email system less than one year ago, after "running our own system for decades." "We had no reason to run our own email servers any more." <p>Previously, factors that held up that migration were the earlier instability of UCLink and CalMail, and the former lack of a CalMail departmental domains service.</p>	<p>Satisfied with:</p> <ul style="list-style-type: none"> • Smooth transition to CalMail: "would say it's gone really well." • Is glad that CalMail now offers Mailman for managing campus mailing lists. <p>Dissatisfied with:</p> <ul style="list-style-type: none"> • Glitch during the conversion to Mailman from Majordomo that inadvertently associated some 200 Library mailing lists with a single staff member. • Issues with Graphics department and others trying to send large attachments through CalMail. Worked around this issue by setting up file transfer sites on The Library's servers. 	
<p>Natural Resources, College of (CNR)</p>	<ul style="list-style-type: none"> • Provides email via open source software such as Postfix, hosted within the unit, and serving 1,500 accounts. • Provides mailing lists via Mailman, hosted within the unit. 	<p>Satisfied with:</p> <ul style="list-style-type: none"> • Spam filtering via Maia MailGuard, which provides separate Bayesian filtering for each user. • Unlimited storage with no quotas; some users with up to 10 GB. • Long forwarding periods for users who have left CNR. 	<ul style="list-style-type: none"> • College committee is investigating a possible migration to CalMail. "It's kind of attractive, in that it would take a lot off our plate." One concern is that some 20-30 users are using more storage than can be provided with CalMail accounts.

		<ul style="list-style-type: none"> • Ability to immediately create accounts for users whose campus paperwork isn't yet complete. <p>Dissatisfied with:</p> <ul style="list-style-type: none"> • Concerns over lack of administrative redundancy; one long-time IT manager mostly runs the mail service. • Future "weaning" of users off of Eudora onto Thunderbird, perceived as a less attractive client. 	
<p>Recreational Sports</p>	<ul style="list-style-type: none"> • Uses IST's CalMail. 	<p>Satisfied with:</p> <ul style="list-style-type: none"> • "There aren't many CalMail complaints. By and large we don't run into quota issues." 	
<p>Registrar, Office of the</p>	<ul style="list-style-type: none"> • Uses IST's CalMail. 	<p>Dissatisfied with:</p> <ul style="list-style-type: none"> • Challenges when trying to communicate with large numbers of students through email. There is no easy way to select the students to whom mailings are sent; each different request requires custom programming on IST's mainframe, ironwood. • Inability to ensure that students can be reached via certain mailing lists. Following the conversion to Mailman from Majordomo, school advisers in Chemistry and CED found that students could opt out from lists to which critical communications are sent. <p>Unmet needs:</p>	

		<ul style="list-style-type: none"> Easier methods for identifying "pools" of students who share common characteristics. More distinction for official email, so that it can be more readily identified as important by recipients. 	
<p>Student Systems 2012 (A joint effort initiated and contributed to by several key campus student service units.)</p>	<ul style="list-style-type: none"> Uses IST's CalMail, including webmail. 	<p>Dissatisfied with:</p> <ul style="list-style-type: none"> Encountering some issues when migration to the Thunderbird email client, from Eudora. 	
<p>University Health Services (UHS)</p>	<ul style="list-style-type: none"> Uses IST's CalMail. Has own departmental domain, uhs.berkeley.edu. 	<p>Satisfactions:</p> <ul style="list-style-type: none"> People in UHS like CalMail. <p>Dissatisfied with:</p> <ul style="list-style-type: none"> Eudora email client, used with POP, is perceived as clunky. 	<ul style="list-style-type: none"> Transitioning email client to Outlook 2007 from Eudora.
<p>University Relations (UREL)</p>	<ul style="list-style-type: none"> Uses IST's CalMail, to which UREL transitioned two years ago from the unit's own email system. "We wanted to leverage the campus's central system," and CalMail was chosen over the alternative of making the in-unit email server available for remote access. 	<p>Dissatisfied with:</p> <ul style="list-style-type: none"> Transition to CalMail encountered significant resistance due to limited storage available on that system and issues related to migrating mail folders. Had to incur extra costs to purchase 1 GB quotas for many managers and fundraisers, and to hire contractors to assist some staff in migrating folders. The CalMail webmail interface, which is "not satisfactory." 	

2. Calendaring and Scheduling

Department	Collaborative Tools Provided	Satisfaction with Tools	Future Investigations and Plans
Boalt Hall School of Law	<ul style="list-style-type: none"> • Uses IST's CalAgenda for shared calendars. • Uses Dean Evans and Associates' EMS for scheduling rooms for classes, conferences and events. EMS is licensed by a consortium of campus departments; the service is hosted in IST's Campus Data Center. 	<p>Satisfied with:</p> <ul style="list-style-type: none"> • EMS is full featured, integrates with equipment reservations, and feeds into Boalt's issue tracking system. <p>Dissatisfied with:</p> <ul style="list-style-type: none"> • EMS is complicated and requires business process changes. • Currently, EMS doesn't facilitate taking into account faculty preferences for specific rooms. 	
Educational Technology Services (ETS)	<ul style="list-style-type: none"> • Uses IST's CalAgenda for shared calendars. 	<p>Satisfied with:</p> <ul style="list-style-type: none"> • CalAgenda is "invaluable." <p>Dissatisfied with:</p> <ul style="list-style-type: none"> • CalAgenda's Macintosh client is "cranky." • Outlook is "more streamlined, and straightforward," and its integration of email with calendaring offers advantages. 	
Electrical Engineering and Computer Sciences (EECS)	<ul style="list-style-type: none"> • Uses IST's CalAgenda for shared calendars. Formerly ran an in-unit Oracle Calendar server, until migrating to CalAgenda. • College of Engineering Dean has a Microsoft Exchange server for himself and his staff, serving 20-50 people. 	<p>Dissatisfied with:</p> <ul style="list-style-type: none"> • High cost of the CalAgenda service. • Lack of full campus adoption of the CalAgenda service. "We think a central calendaring service should be ubiquitous. Maybe Oracle isn't the right answer." 	<ul style="list-style-type: none"> • Putting up flat-panel monitors to dynamically display information about events taking place in EECS's buildings.

		<ul style="list-style-type: none"> • The division between faculty who have CalAgenda access and students who don't. • Lack of integration between email and calendaring, such as is provided through Exchange and Outlook. 	
<p>Graduate Division</p>	<ul style="list-style-type: none"> • Uses IST's CalAgenda for shared calendars. Migrated from a Novell server that included calendaring features within one year after CalAgenda became available. • Uses the UCB Campus Events calendar, which is integrated into the Grad Division's website, for publishing events. 	<p>Satisfied with:</p> <ul style="list-style-type: none"> • "CalAgenda works well." <p>Dissatisfied with:</p> <ul style="list-style-type: none"> • "It's awkward" when trying to schedule meetings with people who aren't in CalAgenda. <p>Unmet needs:</p> <ul style="list-style-type: none"> • Tools for doing "calendar-based planning," such as speculatively moving dates related to the key milestones for fellowship competitions and assessing the impact of these moves. What is wanted is something less than full-blown project management and more than simple calendaring. 	
<p>Haas School of Business</p>	<ul style="list-style-type: none"> • Provides shared calendaring to the entire school via Microsoft Exchange. • Staff use IST's CalAgenda for shared calendaring. • Career Services uses MBA Focus, a .NET app running on a hosted server, to allow students to sign up for recruiting events. 	<p>Dissatisfied with:</p> <ul style="list-style-type: none"> • "Staff are the most resistant to using Exchange because they all use CalAgenda." <p>Unmet needs:</p> <ul style="list-style-type: none"> • Lack of connections between calendars: between CalAgenda and Exchange, as well as other calendaring systems such as EMS 	<ul style="list-style-type: none"> • Northwestern University's Kellogg School of Management is developing a way for MBA Focus to exchange calendar events with Exchange, and "we'll probably adopt that eventually." • Will be deploying a school-wide event management system, probably Dean Evans and Associates' EMS. This will consolidate four existing systems: an in-house reservation

		<p>and the UCB Campus Events calendar.</p> <ul style="list-style-type: none"> • A representative workaround: Haas managers and staff must invite an alias to a meeting in CalAgenda, generating an email that creates an event in Exchange. This is a one-way process, and doesn't allow for subsequent updates to events. 	<p>system, a web-based master event Calendar, some room calendars in CalAgenda, and digital kiosks.</p> <ul style="list-style-type: none"> • "We're interested in how much meaningful life on campus is left in the Oracle Collaboration Suite used for CalAgenda: perhaps one to three more years?"
The Library	<ul style="list-style-type: none"> • Uses IST's CalAgenda for shared calendars. • Uses Dean Evans and Associates' EMS for scheduling resources. EMS is licensed by a consortium of campus departments; the service is hosted in IST's Campus Data Center. • Uses the UCB Campus Events calendar for publishing events. 		
Natural Resources, College of (CNR)	<ul style="list-style-type: none"> • Uses IST's CalAgenda for shared calendars. Administrative staff have accounts, as well as some faculty. • Uses the UCB Campus Events calendar, which is integrated into the College's website, for publishing events. 	<p>Satisfied with:</p> <ul style="list-style-type: none"> • The UCB Campus Events calendar "works much better" for publishing events than a former, externally hosted events calendar. 	
Recreational Sports	<ul style="list-style-type: none"> • Uses IST's CalAgenda for shared calendars. • Uses Dean Evans and Associates' EMS for scheduling athletic facilities and other resources, and maintaining program schedules. EMS is licensed by a consortium of 		<ul style="list-style-type: none"> • "We have an intention to get online rentals and sales" running through an EMS module. • In the process of transitioning to Outlook as an email client, from Eudora.

	<p>campus departments; the service is hosted in IST's Campus Data Center.</p>		
Registrar, Office of the	<ul style="list-style-type: none"> • Uses IST's CalAgenda for shared calendars. 		
Student Systems 2012	<ul style="list-style-type: none"> • Uses IST's CalAgenda for shared calendars. 	<p>Unmet needs:</p> <ul style="list-style-type: none"> • Getting data to students about deadlines and other calendar events, that is relevant and contextual, is a huge challenge. Currently, data about student-related calendar events is split across perhaps 4-10 different calendars, and there is no mechanism to display only events relevant to an individual student. • Getting data about pertinent campus events into the appropriate places, ranging from bSpace worksites to a student's personal calendar(s). 	<ul style="list-style-type: none"> • Calendaring, scheduling, and timekeeping are all a "huge part" of Quali, a consortium-developed student system that UC Berkeley is helping build. The design work started around classroom scheduling, has grown to encompass class scheduling and optimization, and more recently has been extended to events.
University Health Services (UHS)	<ul style="list-style-type: none"> • Staff uses IST's CalAgenda for shared calendars. • Clinicians use NextGen, an in-house clinical practice system, which includes calendaring and scheduling features. 	<p>Satisfied with:</p> <ul style="list-style-type: none"> • "We're pretty happy with CalAgenda." <p>Dissatisfied with:</p> <ul style="list-style-type: none"> • CalAgenda and NextGen calendars aren't integrated; causes difficulties when trying to schedule meetings between staff and clinical employees. 	<ul style="list-style-type: none"> • Plans to add UHS events to the UCB Campus Events calendar.
University Relations (UREL)	<ul style="list-style-type: none"> • Uses IST's CalAgenda for shared calendars in nearly all UREL units. • Uses in-unit FileMaker-based system for event planning. 	<p>Satisfied with:</p> <ul style="list-style-type: none"> • "We're completely addicted to CalAgenda." 	

Dissatisfied with:

- CalAgenda is not used by the whole campus due to per-account costs, limiting its reach for scheduling meetings with others on campus.
- CalAgenda integration with Outlook isn't stable. Issues include unpredictable behavior when accepting or declining certain meetings.
- Lots of research and investment is required to sync CalAgenda calendar data with mobile devices: Blackberries and Treos.

3. Content Sharing

Department	Collaborative Tools Provided	Satisfaction with Tools	Future Investigations and Plans
Boalt Hall School of Law	<ul style="list-style-type: none"> • Heavily uses IST's Cal WebFiles. "We use WebFiles more than anyone else on campus combined. There are whole divisions of the Law School that use it for content sharing." • Doing some work and experimentation with webcasts and podcasts for sharing instructional and event content. 	<p>Satisfied with:</p> <ul style="list-style-type: none"> • Cal WebFiles "is great, we love it!" • "WebFiles is completely platform agnostic and has made it easy for our clients to connect," avoiding issues that affect other file sharing methods, such as remote ISPs blocking ports, Macintosh users, off-campus users, and Active Directory issues. • Ability to safely share restricted data, including attorney-client privileged cases, with faculty at other law schools. • Desktop software from Xythos that maps WebFiles drives to drive letters and does caching, so you can work offline. <p>Dissatisfied with:</p> <ul style="list-style-type: none"> • CalShare being presented as an alternative to Cal WebFiles; "we don't view these as the same at all." • Chevron tried to shoehorn all file sharing into SharePoint, categorizing files into teams and groups, and "it was a disaster." 	<ul style="list-style-type: none"> • "We're in the process of migrating our gigs and gigs of stuff" to Cal WebFiles. • Have recently set up a physically massive Ricoh copier/printer to scan directly to Cal WebFiles, including 500-page legal documents. Are now talking to the vendor about using OCR to generate editable text from scanned documents. • The UCB Messaging Steering Committee "is nervous because we're committed to moving to WebFiles," and it isn't yet defined what costs there will be going into the future. IST has said that they might start charging Boalt for more extensive use of WebFiles, in which case we might need to consider whether we can do this in-house at a lower cost.
Educational Technology Services (ETS)	<ul style="list-style-type: none"> • Provides and uses bSpace for sharing files. 		

	<ul style="list-style-type: none"> • Also uses a hosted instance of Sakai, provided by the Sakai Foundation, and an intranet website to share files. • Provides video sharing via webcast.berkeley.edu and YouTube. Videos include courses, campus events, and selected campus life features, such as local oral history interviews. • Some individual use of Flickr for sharing photos, del.icio.us for sharing bookmarks to URLs. 		
<p>Electrical Engineering and Computer Sciences (EECS)</p>	<ul style="list-style-type: none"> • Provides file sharing to each individual via NetApp servers, which provide access to files for users of multiple OSes; Unix, Windows, Macintosh. • Provides file sharing to groups on a recharge basis, billed monthly, based on their actual, average storage use. • Various research groups, ranging from digital library to computer graphics and computer vision, have large media collections, some shared. • One EECS group also offers streaming video of events, faculty candidate talks. 	<p>Dissatisfied with:</p> <ul style="list-style-type: none"> • Occasionally receives queries asking "Why am I being billed for storage?" Often this occurs when groups and their members change. 	<ul style="list-style-type: none"> • Investigating AFS protocol for file sharing with various staff in EECS and IST; currently offering access via CIFS and NFS. Network appliances may help provide multiple protocol access to the same storage.
<p>Graduate Division</p>	<ul style="list-style-type: none"> • Provides a Windows-based file server for sharing documents. • Provides an intranet website which lists procedures, application development roadmap. 	<p>Dissatisfied with:</p> <ul style="list-style-type: none"> • Occasional need to request that unneeded files voluntarily be removed, as there is no overall maintainer of content on the server. 	

		<ul style="list-style-type: none"> Challenges in providing access to the file server for Macintosh users. <p>Unmet needs:</p> <ul style="list-style-type: none"> "We want to support community collaboration among graduate assistants in the departments," such as sharing best practices and business processes. 	
<p>Haas School of Business</p>	<ul style="list-style-type: none"> Uses IST's CalShare. Provides a SharePoint 2007-based service, more for evaluation, prototyping and proof of concept than production. 	<p>Dissatisfied with:</p> <ul style="list-style-type: none"> Challenges in making CalShare sites available to non-students and non-employees; e.g. alumni, participants in seminars, workshops, and executive classes. 	<ul style="list-style-type: none"> Intends to greatly expand the use of CalShare in any of several use cases, once "we've found out for certain that we can do what we need." Will need to work out a recharge arrangement with IST for the extra storage required for expanded CalShare use. Alumni Relations group interested in creating CalShare- or other SharePoint-based Community Center online, working with UREL on this. Needs include file sharing, discussion forums. Exploring the potential use of iTunes U. to share multimedia; Admissions, Marketing and degree programs want to use it.
<p>The Library</p>	<ul style="list-style-type: none"> Provides a file server for Library departments to share their internal documents. Uses IST's Cal WebFiles to share files across Library units, and with people outside of The Library. 	<p>Dissatisfied with:</p> <ul style="list-style-type: none"> "The quotas offered by Cal WebFiles aren't as large as we would like." For really big files, provides some shared directories on a Unix-based server. 	

	<ul style="list-style-type: none"> • Shares vast amount of digitized materials, including photos, audio, and recently, video, via the California Digital Library (CDL). • Provides in-house developed web apps that provide search, discovery and display tools for many types of content. Examples: Bancroft Library, Engineering Research Library (ERL), Biosciences Library. • Maintains authoritative metadata around many digital objects. • Involved in a UC-wide project with Google to digitize large numbers of books. 		
<p>Natural Resources, College of (CNR)</p>	<ul style="list-style-type: none"> • Provides a file server for sharing documents, via Samba. Each department has its own share drive. 	<p>Unmet needs:</p> <ul style="list-style-type: none"> • "It would be nice to have a little waypoint to put files that are too large to send as email attachments. That's what WebFiles is for, right?" 	
<p>Recreational Sports</p>	<ul style="list-style-type: none"> • Provides file sharing on a server hosted in IST's Campus Data Center, on a NAS with 3 TB of storage. • Uses IST's CalShare for sites for IT, HR, and a joint project with other UC campuses. • Uses another shared CalShare site with other UC and Pac-10 Rec Sports Departments. • Marketing Department shares streaming video via an off-campus provider, HostMySite. 	<p>Satisfied with:</p> <ul style="list-style-type: none"> • HostMySite works fine, is stable and cheap, and comes with good customer service. <p>Dissatisfied with:</p> <ul style="list-style-type: none"> • Lack of certain modules, such as personal profiles, in CalShare, IST's implementation of SharePoint. • IST's high cost for backups. Plans to backup to NAS as disk images, but not perform tape backups. 	<ul style="list-style-type: none"> • Transition to CalShare is supplanting the use of bSpace.

Registrar, Office of the	<ul style="list-style-type: none"> Provides own file server(s), locally and in IST's Campus Data Center. 		<ul style="list-style-type: none"> The Office of the Registrar is about to lose its "technology wizard," who is also the file system administrator.
Student Systems 2012	<ul style="list-style-type: none"> Uses email to exchange files, particularly with key administrators, non-technical staff. Uses a database in MyBerkeleyApp to store Excel and Word documents, and to generate extracts of data reports. Shares photos and videos on MyBerkeleyApp. Videos are shared via CalTube (http://students.berkeley.edu/myberkeley/showcaltube.asp?todo=caltube-youtube), an annually rotated selection of 'top' YouTube videos about UC Berkeley. 	<p>Satisfied with:</p> <ul style="list-style-type: none"> CalTube has become very popular, a "wow factor" for prospective students. CalTube also offers social features, like the ability to nominate new videos. 	
University Health Services (UHS)	<ul style="list-style-type: none"> Provides a file server for sharing documents. 		<ul style="list-style-type: none"> Plans to look into IST's CalShare for sharing documents.
University Relations (UREL)	(No data obtained in this area.)		

4. Discussion and Collaborative Writing

Department	Collaborative Tools Provided	Satisfaction with Tools	Future Investigations and Plans
Boalt Hall School of Law		Unmet needs: <ul style="list-style-type: none"> Starting to get requests for blogs, but believe this is because we don't have a good web content management system (CMS). "The underlying need is to give 80 people direct access tools to quickly communicate with their audiences": sometimes via blogs and sometimes via websites. 	<ul style="list-style-type: none"> Boalt is getting Red Dot, a new CMS, and so far is happy with what we've seen of it: "a really nice workflow mechanism"; granular access; the ability to select parts of a page to submit to a workflow; and asset management for images and other content types.
Educational Technology Services (ETS)	<ul style="list-style-type: none"> Provides and uses the wiki in bSpace. Uses the Confluence wiki from Atlassian. Classroom Technology unit also uses a Plone-based intranet website, "created before we had Confluence." 	Satisfied with: <ul style="list-style-type: none"> "We think wikis are awesome, and some of our staff have said that having them has changed their lives. We spend so much time in meetings. Sometimes between meetings, however, not much was getting done. Wikis change that, by allowing others to participate during those times and to help carry their weight along the way." Related notes: <ul style="list-style-type: none"> Have observed many uses of bSpace around peer editing and peer review of papers and books. 	
Electrical Engineering and Computer Sciences (EECS)	<ul style="list-style-type: none"> At least three or four different wikis are in use by various groups. These are used to keep meeting notes, 	Dissatisfied with: <ul style="list-style-type: none"> Had three requests to set up central wikis: two were either never used or quickly abandoned, even though 	

	notes about research projects, and the like.	they had been heavily requested. Suggests setting up pilots first to make sure that user expectations meet service realities.	
Graduate Division		Unmet needs: <ul style="list-style-type: none"> • See community collaboration needs in Content Sharing, above. 	
Haas School of Business	<ul style="list-style-type: none"> • Each Haas unit is doing its own thing with respect to wikis, blogs, and podcasting. 	Unmet needs: <ul style="list-style-type: none"> • Students have requested a Haas-supplied blogging platform. 	<ul style="list-style-type: none"> • Expects that CalShare's wikis and blogs will come to meet Haas's needs.
The Library	<ul style="list-style-type: none"> • Exchanges Microsoft Word documents, using Track Changes feature. • Provides blogs through b2evolution. • Provides a wiki through PmWiki. Some people and units also use bSpace's wiki and "various wikis on the web." 	Dissatisfied with: <ul style="list-style-type: none"> • Collaborative writing via other campus's SharePoint systems, in Basecamp, and in various wikis. All have been inadequate, particularly when displaying changes across revisions. In contrast, when using Word's Track Changes, "I can actually see who made what changes when." • The downside to Word's Track Changes "is when two people accidentally" change a document at the same time. • With multiple wikis, "you have to learn each one. Although the learning curves aren't too high, that's still annoying." 	
Natural Resources, College of (CNR)	<ul style="list-style-type: none"> • Provides Moveable Type for blogs, running on a CNR server. • Provides TWiki for California Environmental Justice (CALEJ). 	Satisfied with: <ul style="list-style-type: none"> • Blog posts by new students are spotlighted on the CNR website. These "Fresh Faces" blog posts share students' experiences in the 	<ul style="list-style-type: none"> • Testing MediaWiki, which is easier to troubleshoot and has better community support than TWiki.

	<ul style="list-style-type: none"> Aware of some members of CNR using Google Docs for collaborative writing, including for research papers. 	<p>College with prospective students and their parents. CNR's "undergraduate population has gone up nicely in the last couple of years"; perhaps this may be one factor.</p>	
Recreational Sports	<ul style="list-style-type: none"> Uses IST's CalShare, especially its document libraries. 	<p>Satisfied with:</p> <ul style="list-style-type: none"> "CalShare has worked well for us for collaborative writing." Likes the document check-in/check-out capabilities, which helps keep latest document versions straight, and having documents in a single place. 	
Registrar, Office of the	<ul style="list-style-type: none"> Exchanges Microsoft Word documents, using its Track Changes feature, with multiple campus departments. Documents are sent as email attachments. 		
Student Systems 2012	<ul style="list-style-type: none"> Uses wikis on bSpace and elsewhere, such as one recently set up for a student recruitment task force. 	<p>Dissatisfied with:</p> <ul style="list-style-type: none"> About 30 minutes of hands-on training is often required before some first-time wiki users are comfortable. With multiple authors in any context - Word files, wikis, or otherwise - considerable wordsmithing can be required to bring a document to coherency with a consistent style. There is no technological substitute for the time and effort put in by a good editor. 	
University Health Services (UHS)	<ul style="list-style-type: none"> Exchanges Microsoft Word documents, using its Track Changes 		

	<p>feature, sending them as email attachments.</p> <ul style="list-style-type: none"> • Because of the clinical nature of UHS, there are no online discussions or blogs. 		
<p>University Relations (UREL)</p>	<ul style="list-style-type: none"> • Uses IST's CalShare, primarily for sharing files via document libraries. Hasn't seen any wiki or blog use within CalShare. • Provides discussion tools for alumni via email lists; discussion forums in the online @cal café. 		

5. Real-time Collaboration

Department	Collaborative Tools Provided	Satisfaction with Tools	Future Investigations and Plans
Boalt Hall School of Law	<ul style="list-style-type: none"> • Doing some experimentation with webcam-based web conferencing, instant messaging. • Has found that IM is "so interrupting," but also has specific benefits when carrying out non-interrupting discussions in a second channel during phone conversations or voice conferences. • Have looked at "some great technology for conferencing in classrooms," including cameras that automatically point at speaker. 	<p>Unmet needs:</p> <ul style="list-style-type: none"> • Many units in Boalt have moved or will be moving off-site, and "people are very frustrated by this." Need tools to help people feel more engaged across physical distance, and to help build communities. Examples: East Bay Community Law Center in Adeline area, staff of various Centers spread across offices on Center and Bancroft Streets. • Lack of sufficient physical space within Boalt for face-to-face meetings. <p>Related notes:</p> <ul style="list-style-type: none"> • In the quest for more live, synchronous tools, remember that Nils Bohr and Einstein came up with their ideas by corresponding via letter. 	<ul style="list-style-type: none"> • Many staff in Boalt are already doubled-up in crammed offices. Plan to bring in a consultant to help figure out how to make efficient use of limited space. • "We're telling our dean that when all our classrooms are upgraded," we want to put an instructional technologist in the budget.
Educational Technology Services (ETS)	<ul style="list-style-type: none"> • Uses Adobe Connect for conference calls on Sakai and Fluid projects. • Uses text messaging extensively among highly-mobile staff. • Uses instant messaging extensively among staff. • Some staff using Twitter. 		

	<ul style="list-style-type: none"> Occasional uses video conferencing equipment in any of several rooms in Dwinelle. 		
Electrical Engineering and Computer Sciences (EECS)	<ul style="list-style-type: none"> There are many ongoing research projects within EECS on the "real-time space." One of these projects, in CITRIS, is working on long distance interaction. 	<p>Related notes:</p> <ul style="list-style-type: none"> "Whole room remote conferencing is hard to do well." Adapting to individual room acoustics and echo canceling, and doing automated camera scanning with multiple speakers are some key challenges. 	
Graduate Division	<ul style="list-style-type: none"> Uses "lots of face-to-face meetings," supplemented by email. 		
Haas School of Business	<ul style="list-style-type: none"> Uses WebEx and Microsoft Live Meeting for online conferencing. Uses a variety of instant messaging clients. 	<p>Dissatisfied with:</p> <ul style="list-style-type: none"> High cost of WebEx. Can't afford paying for licenses for the necessary number of users, even following four negotiations with the vendor. Wanted to use WebEx, in part, for a Berkeley/Columbia joint program with 60 students. 	<ul style="list-style-type: none"> Will probably deploy Microsoft's Live Communications Server for instant messaging.
The Library	<ul style="list-style-type: none"> Uses voice conferencing in its many remote meetings between UC Campus libraries. 	<p>Dissatisfied with:</p> <ul style="list-style-type: none"> "We tried video conferencing between UC campus libraries," but it "seemed too artificial; we all know each other." 	<ul style="list-style-type: none"> The Library is on the fringe of using instant messaging to provide reference chat with patrons. Some UC libraries are already doing this.
Natural Resources, College of (CNR)	(No data obtained in this area.)		
Recreational Sports	<ul style="list-style-type: none"> Uses GoToMeeting for online meetings. Uses GoToWebinar for formal events. Both are used extensively 	<p>Satisfied with:</p> <ul style="list-style-type: none"> Very satisfied with the cost, functionality, and ease of account 	<ul style="list-style-type: none"> Have considered the option of hosting GoToMeeting and GoToWebinar in-house, rather than using these as a hosted service. IST

	<p>for a development partnership with several other UC campuses.</p> <ul style="list-style-type: none"> • Uses Skype for conference calling. 	<p>setup of both GoToMeeting and GoToWebinar.</p> <p>Dissatisfied with:</p> <ul style="list-style-type: none"> • Skype doesn't scale well beyond 3-6 participants; degrades to level of participant with worst equipment and slowest connection. Use of separate microphone and headphones can cause annoying feedback. 	<p>should consider hosting these services for the campus, as well.</p>
Registrar, Office of the			<ul style="list-style-type: none"> • Possible plans to use Skype to work with staff member, on the Quali team, who moved to Shanghai.
Student Systems 2012	<ul style="list-style-type: none"> • Uses Quali and Skype for phone calls and video and voice conferencing with others all over the US and Canada. • Communicates with some student staff via instant messaging. • MyBerkeleyApp offers occasional chat sessions for specific groups of students, e.g. Regents Scholars, Native American students. 	<p>Dissatisfied with:</p> <ul style="list-style-type: none"> • Skype video quality can be choppy depending on location, machine speed. <p>Related notes:</p> <ul style="list-style-type: none"> • A poll of incoming students revealed that 50% would prefer <i>not</i> to receive responses via instant messaging to their inquiries. A lack of trust in who they are actually corresponding with and difficulties around storing conversations were key concerns. 	
University Health Services (UHS)	<ul style="list-style-type: none"> • Does not use instant messaging or similar real-time communication services due to security concerns around restricted data. 		<ul style="list-style-type: none"> • As a result of some staff moving to satellite offices outside the Tang Center, "web conferencing might become more valuable for us."

<p>University Relations (UREL)</p>	<ul style="list-style-type: none"> • Occasionally rent video conferencing equipment for interview, board meetings with East Coast members. • Voice conferencing primarily with vendors, consultants, other staff around the country. • Some UREL units doing instant messaging via AIM, on their own. 	<p>Related notes:</p> <ul style="list-style-type: none"> • "Face to face is the best." • Would not want to encourage any uses of remote conferencing when strategizing around donor business issues. 	
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6. Tracking Tasks

Department	Collaborative Tools Provided	Satisfaction with Tools	Future Investigations and Plans
Boalt Hall School of Law	<ul style="list-style-type: none"> Provides Footprints, used extensively for issue tracking across ten areas in Boalt, including the Business Office, Help Desk and Media Services. 	Satisfied with: <ul style="list-style-type: none"> Easy creation of new accounts in Footprints. 	
Educational Technology Services (ETS)	<ul style="list-style-type: none"> Uses JIRA for bug and issue tracking, tied to the Confluence wiki. Classroom Technology uses an in-house developed issue tracking system at av.berkeley.edu. 	Dissatisfied with: <ul style="list-style-type: none"> Issue tracking systems don't talk to one another. 	<ul style="list-style-type: none"> Plans to do data mapping and business process analysis around the many types of requests that ETS handles: for equipment, consultation, workshops, events and more.
Electrical Engineering and Computer Sciences (EECS)	<ul style="list-style-type: none"> Some EECS groups use a locally-customized version of the Request Tracker (RT) issue tracking system. 	Dissatisfied with: <ul style="list-style-type: none"> Receiving extra notifications when two or more issue tracking systems are auto-generating email. "We were dismayed by IST's decision to select Remedy." EECS thought it was overkill: an attempt to gain theoretical flexibility at the cost of extra work and complexity, and reflecting a trend of similar past decisions made by IST. 	<ul style="list-style-type: none"> Participating with IST work around a central campus issue tracking system, based on Remedy. "We would like to deploy it through our central group here." <p>Although not pleased with the selection of Remedy, EECS – which runs its own networks – frequently exchanges security tickets with IST, and there are benefits to using the same system.</p>
Graduate Division	<ul style="list-style-type: none"> Uses Microsoft Project, Excel, and Word to maintain task lists. 		

	<ul style="list-style-type: none"> Enters bugs related to graduate admissions system in IST's JIRA bug tracking system. 		
Haas School of Business	<ul style="list-style-type: none"> Provides a .NET-based bug tracking system, presented via Haas's SharePoint instance. Provides an in-house developed help desk system, first deployed 8-9 years ago. 	<p>Dissatisfied with:</p> <ul style="list-style-type: none"> "We would love to migrate away from our in-house help desk system." 	<ul style="list-style-type: none"> Talking with IST about migrating to the central campus issue tracking system, based on Remedy. Moving to Remedy would also facilitate exchanging tickets with IST, "which happens quite often."
The Library	<ul style="list-style-type: none"> Provides Footprints, used for issue tracking in Library Systems and Acquisitions, except for Government Documents. 	<p>Unmet needs:</p> <ul style="list-style-type: none"> We have a need to work with lists of tasks, their status, and their dependencies. We've used Microsoft Project in some other ways, but haven't yet tried to use it for this. 	
Natural Resources, College of (CNR)	<ul style="list-style-type: none"> Provides hosting for bug reporting and issue tracking services used by Plant and Microbial Biology's "Our Unit" services. 		
Recreational Sports	<ul style="list-style-type: none"> Provides basic, in-house bug tracking and issue tracking systems, along with a set of other software design and coding-related tools. Help Desk uses a low-cost commercial issue tracking system for IT, maintenance, and operations. 		
Registrar, Office of the	<ul style="list-style-type: none"> Uses an in-house developed issue tracking and help desk system. An adaptation of that system is also used by 110 campus departments to 	<p>Dissatisfied with:</p> <ul style="list-style-type: none"> IST doesn't have enough programmers working on student services to complete all of our requests, and we wind up on JIRA 	

	<p>report issues with the Office of the Registrar's degree audit system.</p> <ul style="list-style-type: none"> Enters bugs related to student systems in IST's JIRA bug tracking system. 	<p>with a long list of requests that are still pending.</p> <p>Unmet needs:</p> <ul style="list-style-type: none"> Simple project management tools. Business process analysis tools. 	
Student Systems 2012			<ul style="list-style-type: none"> Needs to track and coordinate the multiple contacts that student services staff, across multiple departments, with any student or parent: both around a particular issue and over time. Bringing in vendor RightNow to demo their CRM system, with the potential to initiate a multiple department pilot in the near future. Depending on early results, may wish to evangelize the use of this (or a similar) system for use by many campus departments.
University Health Services (UHS)	<ul style="list-style-type: none"> Has a help desk but does not do issue tracking. Has around 300 devices and a "community feel," so "we can just see you in the hallway if you have a problem." 	<p>Dissatisfied with:</p> <ul style="list-style-type: none"> Lack of issue tracking records makes it difficult to spot problem trends. 	
University Relations (UREL)	<ul style="list-style-type: none"> Uses an in-house issue tracking system for desktop support, based on Microsoft Access. 	<p>Dissatisfied with:</p> <ul style="list-style-type: none"> In-house issue tracking system is "inadequate." <p>Unmet needs:</p> <ul style="list-style-type: none"> "We don't have a good timekeeping system; is there one for campus?" Needs this primarily for 	<ul style="list-style-type: none"> Plans to use the IST's campus issue tracking system, based on Remedy, for desktop support. Exploring Microsoft Project Server for helping to manage a portfolio of cross-unit and cross-campus projects; is hoping to implement this quickly. Plans to encourage partners

		<p>performance management, not for recharge purposes.</p> <ul style="list-style-type: none">• Would like to see a campus-wide view, in a single place, of enterprise-scale IT projects and major business projects with an IT component, such as the PeopleSoft upgrade. "It is difficult to plan and even more difficult to integrate campus' solutions into our plan without this information."	<p>in other departments to use this system for shared products, as well.</p>
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7. Other types of collaborative tools

Other types of collaborative tools mentioned – whether casually or extensively – during these interviews with campus IT providers are listed below, with samples of responses received for a number of these tools highlighted here:

- Clinical Practice Systems
 - University Health Services has over the last several years implemented two of the major components of NextGen, a clinical practice system.
- Collaboration Suites
 - The Office of the Registrar uses bSpace and CalShare sites.
 - University Relations uses CalShare sites for volunteers and its Advancement Operations unit.
- Content Management Systems
- Course Management Systems
 - The Boalt Hall School of Law is considering replacing its in-house course management system with either bSpace or a newly re-written version of the existing system. A related issue: Boalt and other law schools often have reciprocity agreements that allow visiting students to audit one another's classes at no cost, and it is seen as inappropriate to formally add each visiting student as a campus affiliate in the campus's human resources system, HRMS.
 - The Haas School of Business is considering replacing Catalyst, its in-house course management system, with either the Higher Education version of the SharePoint Learning Kit or ETS's bSpace.
- Customer Relationship Management Systems
- Integrated Library Systems
 - The Library is considering replacing its in-house developed system, which dates back over 20 years, with an integrated library system (ILS). The current system is written in non-mainstream programming languages which run on a venerable hardware platform from Tandem/HP. Due to industry consolidation, there are just a couple of major ILS vendors to choose from, including ExLibris and Integrated Interfaces; the latter is in use by libraries at six other UC campuses.
- Project Prioritization Tools
 - Recreational Sports uses an online tool that assists Rec Sports Directors from other UC and Pac-10 schools in choosing project priorities.
- Social Networks