University of California, Los Angeles

Student and Alumni E-mail Outsourcing Task Force (ETF) Report

April, 2011
# Project Contacts

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<th>Department</th>
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<th>Contact Name</th>
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# Student Contributors

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<tr>
<th>Contact Name</th>
<th>University Affiliation</th>
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Executive Summary

In July 2009, as the campus was developing a variety of cost-saving measures to counteract a significant decrease in state funding, the Office of Information Technology initiated an Email Outsourcing Task Force to research opportunities for, and make recommendations about, outsourcing student, alumni and retiree email provisioning. In so doing, the Task Force was asked to be mindful of the future possibility of outsourcing faculty and staff email. The Task Force has operated on the assumption that there would be intent to proceed if outsourcing provided cost savings for the university and/or enhanced or additional services to our students, alumni and retirees.

This Executive Summary briefly covers (1) the Task Force’s scope of activity, (2) its recommendations for the most viable email options for UCLA student, alumni and retiree email and (3) the results of its analyses as per the specific items in its charge. Considerable detail behind the results of the Task Force’s numerous inquiries, analyses and other activities, upon which this summary is based, follow in subsequent sections.

The Task Force would like to acknowledge the students who gave up their lunch times and evenings to provide honest feedback that has informed this report and will help shape these important services.

Scope of Analysis

With respect to students, alumni and retirees, the university comprises three distinct communities, each with a different set of technological, operational, and communications requirements: (1) the institution, which must communicate with its students while also considering financial, operational and strategic issues; (2) instructors, who also need to communicate with their students; and (3) students, the end users in terms of this initiative, who are highly collaborative and want to take advantage of the latest tools available to communicate with classmates, instructors, and others. The clear trend for student communication has moved away from email to other vehicles such as texting and Facebook. The needs of these three groups don’t always align and are sometimes in conflict with each other, and any decision about outsourcing must take this disparity complexity into account.

The institution’s requirement for communicating with students was already established so all that was needed was a review of the current system to establish the effect outsourcing would have. The Task Force also surveyed instructors (both faculty and teaching assistants) in order to understand how they communicate with students. Finally, a subgroup of students was formed which provided detailed and specific student requirements and expectations.

With respect to students, the Task Force determined that the requirements differ depending on student role. Specifically, the requirements of students working on campus align more closely with those of employees, and differ from the requirements of students when they are not working on campus. Although it is common for students to perform both roles, we use the term “student” to refer to both undergraduate and graduate students in their non-working roles. The Task Force only addressed the issue of outsourcing email as a student function and not an employee function.

Primary Recommendations

Email and collaboration tools are a rapidly evolving area. As these tools evolve, UCLA needs to be flexible and prepared to take advantage of services (such as outsourced email) that will enable us to offer more to the campus community while freeing up our own resources to work on UCLA-specific services. Thus, independent of any decision to outsource email, the Task Force believes it is crucial that
UCLA establish the appropriate framework and provide a consistent methodology to ensure that the campus can easily and consistently adapt to changes and new demands in and related services.

After carefully considering the discussions with students, student and instructor surveys, RFI responses, and other analysis, the Task Force makes the following recommendations:

a. Undergraduate, alumni, and retiree email be should be outsourced to Google. (See Table I.)
b. Provisioning of graduate student email should continue to be a local decision, since the academic units have a detailed understanding of the type of data their students work with. These decisions should follow guidelines set by UCLA IT governance policies.
c. At the discretion of the department, student employees may be required to use a separate email account on a staff system to perform their work-related duties.

If the campus follows the first recommendation to outsource student, alumni and retiree email, the Task Force further believes the following will be critical to success:

- UCLA must retain control over the flow of email. Technically, this means MX records for campus email will remain routed through the campus and department (if applicable) SMTP service. UCLA.EDU email cannot be routed any other way without having faculty and staff email diverted to the outsourced service as well.
- Maintaining campus MX routing also offers students the possibility of opting out of the outsourced service for reasons of privacy, etc., and as a side-effect could make migration easier. Diagram 1 provides a visual of representation of mail flow.
- Students should still retain the option to choose which email account they would like to have as their “official” email address and to forward their email to another account.
- Instructors should be notified of the current disability limitations of Google apps.
- A campus-negotiated contract with an outsourced vendor should be established.

Diagram 1:
Table 1: Summary of primary factors used to arrive at recommendation (a). Green and red shading indicate the primary positive and negative differentiators between options. It is important to note that in formulating its recommendations, the Task Force also considered many secondary factors not reflected in this table, as well as additional options that did not make the “short list”. These details can be found subsequently in this document.

<table>
<thead>
<tr>
<th>Short-listed Options</th>
<th>Student Email Preference</th>
<th>UCLA Branding</th>
<th>Influence Over Provider</th>
<th>Hardware Costs(^1)</th>
<th>Staff Costs(^1)</th>
<th>Collaboration Tools</th>
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<td>Enhance BOL</td>
<td>30.1% ugrads</td>
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<td>Yes</td>
<td>↑</td>
<td>↑</td>
<td>would have to be developed</td>
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<td></td>
<td>31.6% grads(^2)</td>
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<td></td>
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<td>Yes</td>
<td>↓(^3)</td>
<td>↓(^3)</td>
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<td></td>
<td>59.9% grads</td>
<td></td>
<td></td>
<td></td>
<td></td>
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<tr>
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<td>Yes</td>
<td>↓</td>
<td>↓(^3)</td>
<td>yes</td>
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<tr>
<td></td>
<td>2.0% grads</td>
<td></td>
<td></td>
<td></td>
<td></td>
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\(^1\) Costs are relative to retaining the existing BOL system.

\(^2\) Opt-out could be made possible if the campus should choose to allow this. See Task Force Charge #6.

\(^3\) Some decrease in systems administrators’ time.

Task Force Charge Analysis

- **The analysis should include a scan of what the other UC campuses and peer universities across the country are planning, doing or have done.**

To date, the following UC campuses have chosen to outsource email for at least one segment of the campus population (in most cases, students): UC Davis, UC Irvine, UC San Diego (Engineering School), UCLA School of Law, UC Santa Cruz, and the Lawrence Berkeley National Laboratory. In February of 2010, University Counsel Cynthia Vroom stated that the Office of the General Counsel (OGC) saw no legal impediment for a campus to outsource email to Google, though there could be risks in doing so (that is, a campus is legally allowed to outsource, but whether it should outsource is a local question).

EDUCAUSE and other reports were reviewed. In addition, the task force kept abreast of email outsourcing trends as reported in the IT community via printed or electronic news, articles, and webinars. Section 2.2 of this report provides additional details of the analysis.

Finally, feeder schools who supply the majority of the applications to UCLA were reviewed (with the intent of providing a seamless transition for students entering UCLA) to determine what type of email and collaboration tools they require for their students. Approximately half the feeder schools contacted do not provide email; among those that do, some provided email locally via Exchange, while others used free email services such as Google.

From our review of this information and at the same time taking into account how rapidly the information changed for some of the universities, the Task Force was able to extract some basic commonalities.

1. Universities want to provide communication and social networking tools to their students but are concerned with the costs, and how privacy/security is handled.
2. The universities who carefully weighed the decision to outsource had a much smoother transition since the constituents were involved in the decision making process.

- The review should include universities that have already outsourced services—their starting points, decision-making process, services that were outsourced, deployment process, savings, and overall reception on campus.

A review of other universities was conducted, both electronically via email, or by scanning websites and through telephone interviews with IT staff. Of the fifteen universities contacted, eight provided a response (including Lawrence Berkeley National Laboratory). A list of universities interviewed can be found in section 2.10. The questions consisted of: 1) are you considering outsourcing; 2) what process are you using (RFI, RFP, sole source); 3) what vendors are you considering; 4) if you have already outsourced what was the population; 5) was it successful; 6) were there any difficulties involved in the process; and 7) what, if any, cost savings have you seen.

Of the eight universities responding to the task force’s inquiry:

1. All eight were considering outsourcing email.
2. Some universities were able to outsource by taking advantage of a system-wide agreement while others used an RFI or RFP. The standard contracts offered by outsourcing vendors were generally modified in order to meet the concerns of the university.
3. Both Google and Microsoft were the front-runners. The Task Force felt it important to note that some data acquired on outsourcing university email included Zimbra. However, Zimbra is an open source email application that is fee-based for specific services or email hosting. Therefore, although the task force did review Zimbra, we did not consider it to be an outsourcing solution.
4. The universities that have decided to outsource email have migrated their students and alumni. Some have then expanded the outsourcing question to include faculty and staff but no decisive action was reported in that regard. The one exception was Berkeley National Laboratory which have migrated laboratory staff to Google. They allow staff to “opt-out” by forwarding their email to another account.
5. Those that have migrated have said either that their students and alumni are happy with the move, or that it is too soon to tell whether they are happy.
6. The primary difficulty with the process was the migration of existing email. Tools to assist with the migration process are available, but the Task Force recommends a more flexible migration for outsourcing, should UCLA decide to proceed. New students admitted to UCLA would be on the outsourced solution while existing students would have the option to move.
7. Ascertaining cost savings was the most difficult for the respondents. The universities who responded provided some basic cost assumptions, but hard numbers were not as forthcoming. Not surprisingly, the results on cost savings were also dependent on the local IT environment. For example, the University of Washington stated that money had not been saved by outsourcing email since the cost of hardware and storage had simply been moved to other areas. Instead, they believed the real benefit of outsourcing to be the robust collaboration tools and applications available.
• **The analysis should include service, support and cost options reflecting different possible models.**

To obtain this information, the Task Force developed an extensive RFI. At the same time, UCOP was performing a similar survey regarding outsourcing UC email services and requested that the UCLA RFI be placed through the UCOP Strategic Sourcing department. All answers were evaluated by members of both groups. UCOP short-listed five vendors and the Task Force short-listed two vendors out of those five: Microsoft and Google. Based on vendor responses, the Task Force determined which solution would add value for students, alumni, and retirees, while potentially lowering costs for the university. Section 2.2 has additional information about the RFI process.

From this RFI process, the Task Force felt it important to highlight the following:

1. UCLA currently offers email, calendaring, and mobile support for students, which is the same as Google and Microsoft.
2. Email storage for UCLA (1GB) is not as large as Google (7+GB) or Microsoft (10GB).
3. The biggest difference between UCLA’s and the vendors’ services are the web-based applications and real-time collaboration tools. The Task Force believes that, while UCLA does currently offer some online collaboration tools, the effort to duplicate services already available through Google or Microsoft’s outsourced services would not be cost effective.
4. The Task Force also believes that it will be difficult to measure costs, if any were to accrue, by outsourcing student email. While some helpdesk staff will likely see a drop in email-related questions (Law has seen this happen with their pilot), others might not. Moreover, email system administrators in the academic units have additional tasks unrelated to email services. These staff would likely be shifted to other important projects. Lastly, hardware costs associated with provisioning local email are minor, except when an upgrade or refresh of the system is required. Although it only happens every few years, the staff hours needed to research, test and deploy is extensive.
5. The Task Force noted that the technical expertise of the end user and the type of service they are familiar with can also affect costs to UCLA.
6. While costs will be difficult to measure, outsourcing can provide opportunities for savings.

• **The analysis should include review and input by undergraduate and graduate students, especially the student representatives on the Information Technology Planning Board.**

The Task Force took a multi-layered approach in getting student input. A simple survey was sent out to all students through the UCLA Registrar’s Office. From that survey, a subgroup of student representatives who had expressed interest to their CCC IT directors in contributing to the Task Force was formed. (This group also included the graduate student representative on ITPB - the undergraduate student representative did not respond to our inquiries for participation.) A special meeting was held at the request of the UCLA student Google representatives, and the VP Public Relations at the UCLA Panhellenic Council. The student representatives for Google were asked to provide us their input as students. All student participants offered a broad range of perspectives, with majors in student affairs, cognitive science, computer science, business, education and comparative literature.

The student survey asked the students two questions: 1) what email service do you currently use, and 2) the service they would like to use if UCLA were to outsource. Graduate students responded at a rate of 17.4% and undergraduate students at 12.7%. Highlights of the results include:

1. About half (48-55%) were already using Gmail and would prefer that the campus outsource to Google. Approximately one-third (34-35%) were using a campus provided account and would
prefer to stay with this. A small percentage, (10-15%) were using Yahoo, Hotmail, AOL or another service with a preference towards outsourcing to what they currently use.

2. As we started discussions with the subgroup, it became clear that the students may not have understood from the survey that outsourcing meant retaining UCLA branding in their email address. It is very possible that some students chose the UCLA provided account to ensure that they retained the branding, since association with UCLA was of significant importance to the students (either for life or until they establish a professional career).

3. A surprising topic raised in the student subgroup was related the importance of privacy. The students were aware of privacy issues and understood the implications, yet they would choose to prioritize ease of use, convenience, and cost over privacy.

4. Finally, the students were adamant that UCLA should not implement an email service that increases costs, whether institutionally or passed on to the students. Student input is described more fully in Section 2.7.

- **Recommendations should include input from campus alumni relations areas.**
  
  Campus alumni relations officials identified three key areas that would be of benefit:
  
  1. Provide the ability to add a new service for some units
  2. Provide the ability to add lifetime email, not just forwarding
  3. Retain ability to contact alumni by discipline, degree, etc.

IT Directors for those academic units currently offering lifetime email accounts or lifetime email forwarding (Engineering, Law and Anderson) were asked to speak with their units External Affairs department to gather their input. Engineering has received specific requests from alumni requesting lifetime email accounts (vs. the current lifetime email forwarding) so outsourcing at no cost would offer a solution. Law already provides lifetime email accounts for their alumni through Google in order to meet the demands of their students without adding additional costs. Anderson felt that either lifetime email accounts or lifetime email forwarding would be acceptable. However, it was extremely important for that their students and alumni be given the same solution because, in the current scenario, their School loses touch with many of their graduates due to the transition from student to alumni email accounts.

- **Recommendations should take into account services and applications related to, or typically combined with, email services.**

The report provides detailed information about the technology required, account management needs, and social networking benefits in sections 2.5, 2.6 and 2.8 respectively. Highlights include the following:

1. The MX record for UCLA.EDU must continue to be routed through UCLA’s SMTP service for operational reasons related to security, reporting abuse, and other policy violations. Moving the MX record would outsource institutional functions for which UCLA could incur liability if email is lost, delayed, or otherwise misdirected. Retaining the MX record will also allow UCLA to customize and control mail flow.

2. Although all RFI responses were reviewed, the Task Force decided to review in detail only Google and Microsoft, since it seemed these two vendors had the greatest potential to lower costs for UCLA. In comparing these two vendors’ technology, the Task Force found that Microsoft would require changes in the handling of email and policy. Additionally, there are potential problems with Microsoft, such as the dropping of legitimate email, the requirement to install a web browser plug-in, and the limit on the type of browser that can be used with the service.
3. The Task Force recommends that a tiered help desk model be implemented to support student email outsourcing. The need to outsource separately is because neither outsourced service currently provides support for a tiered level environment. This is something that Google said they were working on. There are two options for consideration: (1) decentralize primary (tier 1) support to the federated academic departments; and (2) consolidate all tier 1 support within BOL.

4. Some account management recommendations include:
   a. The ability to “classify” an account as belonging to a student, alumnus or retiree and their “home” department,
   b. Adherence to campus password-level security requirements,
   c. Supporting aliases,
   d. Providing utilities to monitor mail delivery, server transactions, mailbox content and delivery in the event an account is compromised or misused. (Microsoft’s solution drops messages after receipt so not all server transactions could be monitored.)

5. Both Google and Microsoft outsourcing services also provide online collaboration and social networking tools. Students we spoke to did not just want to see a new email service. Instead, they wanted email plus collaboration tools. Some of the more popular tools are an online calendar, the ability to share and edit documents online, instant messaging, and the ability to work in groups. Some of these tools have accessibility issues that will need to be resolved.

   • Although faculty and staff email will not be outsourced at this time, consideration should be given to how faculty and staff email would be provided if, in the future, outsourcing is pursued.

The question of privacy is at the forefront of the decision to outsource faculty and staff email. Section 2.4 provides a statement from the Office of the General Counsel on the subject of outsourcing faculty and staff email. Although the Task Force did not discuss outsourcing faculty and staff email in great detail, we included this in our research and did have discussions with various faculty, both as a group and individually. The faculty we spoke to were aware of privacy issues. However, some felt that their specific discipline didn’t require a privacy-intense solution, while others were extremely concerned about the privacy surrounding the work they are doing.

It should be noted that some faculty are already using an outside vendor for their email. The ability to forward email and create multiple accounts for specific needs can be done in a matter of seconds. Faculty and graduate student instructors were surveyed regarding how they communicate with their students electronically. Although the survey does not speak specifically to this particular issue, the results of the survey (section 2.3.3 and 2.3.4) indicate those faculty rely on electronic communication for instruction.

   • Recommendations should include an analysis of each vendor/option in terms of service quality or experience, savings, cost and policy implications, and how various approaches interface with the campus directory and authentication system.

The detailed analysis is included in sections 2.2, 2.3, 2.5 and 2.6. There do not appear to be any significant differences between Google and Microsoft with regard to accessing e-mail using standard access technologies, such as HTTPS, IMAP, and POP. Google does support Shibboleth for secure single sign-on integration with campus authentication systems, but since this would be limited to webmail services only, its utility is probably of limited value. In comparing these two vendor’s answers to the 65 questions included in the RFI, many similarities were seen. Each vendor would provide an SLA.
guaranteeing 99.9% uptime and both vendors would advertise to alumni and retirees (but not to students). The differences are critical:

1. Google stores data on servers outside of the US; a limit of 2,000 external messages can be sent per day; and maximum message size cannot be adjusted by campus (current size is 25MB).
2. Microsoft requires deployment of Microsoft Identity Lifecycle Manager for the purpose of account and password synchronization of a local user directory and SharePoint if public folder service is offered; Microsoft maintains a limited amount of system information and logs for troubleshooting email problems; Microsoft’s anti-spam service does not allow for whitelists and blacklists; only POP/IMAP is supported on non-ActiveSync mobile devices; message size limit – the same as Google – and non-negotiable; Microsoft has no immediate plans to support IPv6; but Microsoft will limit storage to the U.S. by contract. Both vendors evaluated in detail are offered at no cost; but services can be added for an additional fee.

Should the UCLA IT governance process decide to move forward with outsourcing, modifications will be needed on certain campus systems such as the mail gateways.

- **Recommendations should include how to proceed in terms of testing, communications, migration, and other deployment issues.**

It is clear from the analysis of the Task Force that UCLA branded email is important, and that some academic constituents (depending on discipline) expect a School branded email. Therefore, the Task Force recommends that the campus negotiate a contract that can be used by any unit wishing to outsource email immediately. Since neither vendor currently has a tiered service-provisioning tool, units wishing to outsource immediately should be actively involved in the implementation process in order to prevent unnecessary duplication of services. We are recommending that a detailed transition plan be developed. Units should not proceed independently.

A testing environment should be established along with a couple of meeting times and listserv for disseminating information to the technical staff in units making the change. Once the testing environment is established and sustainable, a pilot program can be initiated. The Task Force does not recommend accounts be moved all at once. Rather, a tiered approach is recommended whereby newly admitted students would be given accounts on the new system, and students with existing accounts would have the option to migrate or stay with what they've been using. This will continue as long as the current system can be sustained.

A detailed communication plan is outlined in section 2.9.

- **Recommendations should be completed for review by the Common Systems Group (CSG), the Campus Computing Council (CCC), the Committee on IT Infrastructure (CITI), the Information Technology Planning Board (ITPB) and the Deans Council.**

This Executive Summary and detailed report has been compiled to advance the project for review by the UCLA IT governance structure. Should the project be approved, the immediate next steps should include negotiation and establishment of a campus-wide email outsourcing contract and concurrently, the creation of an implementation team comprised of CTS, BOL and academic units. This implementation team will be responsible for establishing the framework and methodology for outsourcing email. At the same time, the Communications Plan (outlined in Section 2.9) can proceed.