

The Launch of Google™ Apps at USC: Determinants, Decisions, and Deterrents

Brendan Bellina

Identity Services Architect

Mgr, Enterprise Middleware Development

University of Southern California

Fall **2008**
Internet2 Member Meeting

New Orleans, Louisiana

October 13-16, 2008



Initial Google Apps use at USC

- Gould School of Law
 - Adopted Sept, 2007
 - 620 students
 - Used as email replacement - @lawmail.usc.edu
- Viterbi School of Engineering Distance Education Network (DEN)
 - Adopted Oct, 2007
 - 1300 DEN Students + 2500 USC students taking DEN courses
 - Used primarily for collaboration/calendar



2gigs of

(and it's about time!)



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GREAT INTERFACE
SEARCHABLE
CONVERSATIONS
FORWARDING
SPAM FILTERING

INTRODUCING LAWMAIL

powered by **Google™**



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ORGANIZED!

CREATE AND SHARE SCHEDULES, MANAGE
ITINERARIES, EMAIL ALERTS & MORE!

INTRODUCING PERSONAL CALENDARS



FIND YOUR WORK
WHEREVER YOU ARE

ONLINE DOUMENT & SPREADSHEET EDITING
WORD AND EXCEL COMPATIBLE
SHARE AND COLLABORATE

INTRODUCING DOCS & SPREADSHEETS

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Summer 2007

- Initial Statement of Goals:
 - Google mail for Students
- Justification:
 - “Better” web mail client
 - Increased storage (2 GB > 75 MB)
 - Not purged after 12 months (University legal requirement to purge local email at 12 months of age)



Email Usage, Summer 2007

- 38,000 students
- 75 MG storage per student account
- ~30% of students forwarding email
- ~15% of students already forwarding email to Google



Determining Factors

- May help to “save” email storage costs by reducing requirement to add additional storage per person.
- May simplify something a high percentage of students are doing anyway.
- Google says it is quick, easy, and free.
- Leading edge. “SaaS” - Software as a Service.
- Successfully used by departments at USC.



Initial Security Decisions

- Would not provide enterprise passwords to Google
- Use Shibboleth 2.0 IdP w/SAML 2.0 (anticipated release Fall 2007, actual release Spring 2008)
- Forward email rather than change DNS
 - Reduced risk of transmission of privileged/sensitive data outside USC
 - Ability to prevent delivery of USC email without breaking non-mail services
 - Compatible with other Email SaaS solutions



Initial Privacy Decisions

- Use Opt-in rather than cliff event
 - Allow students to decide for themselves



Initial Privacy Decisions

- Need initial Registrar-approved Privacy Policy Agreement because ...
 - Name, email address, Google password released to Google.
 - Name and email address visible within Google Apps at USC domain.
 - Name and email address visible outside USC domain (standard Gmail users) if a document is shared with individuals who have standard Gmail accounts.



Initial Usability Decisions

- Access to web applications only
 - Not many students using email clients
 - Google did not offer IMAP access in Summer 2007
- No automatic migration of email
- All student account holders are eligible
- Base Google account on student account name
- Integrate with University change password application
- Web-based activation application



November 2007

Google Mail for students ...

morphs into ...

Google Apps for students



Eleventh Hour Expectations

- Lifelong Google account/email
- Access to all Google Apps applications, including non-web apps like GoogleTalk
- Automatic email migration (Google Email API released November 15)
- IMAP and POP support
- Compatible with future unannounced non-web based Google Applications
- Available early January 2008



Password Challenge

- How to support non-Web:
 - IMAP
 - POP
 - Google Talk (XMPP/Jabber)
 - “Known only to Google” apps

Without giving Google our enterprise passwords???



Google-specific Password

- In Google Account Activation student creates a Google-specific password.
 - Unencrypted password transmitted to Google
 - Encrypted (SHA-1) in USC Directory
 - Tested against USC enterprise password to ensure different
 - Tested for password strength
- Password Change for Google and USC Enterprise Accounts validates to ensure they remain different





USC



Password

Web Apps

USC Email

USC Enterprise Apps

Google



Password

Google Mail IMAP

Google Mail POP

GoogleTalk

Non-web Google Apps



Google Apps @ USC Project

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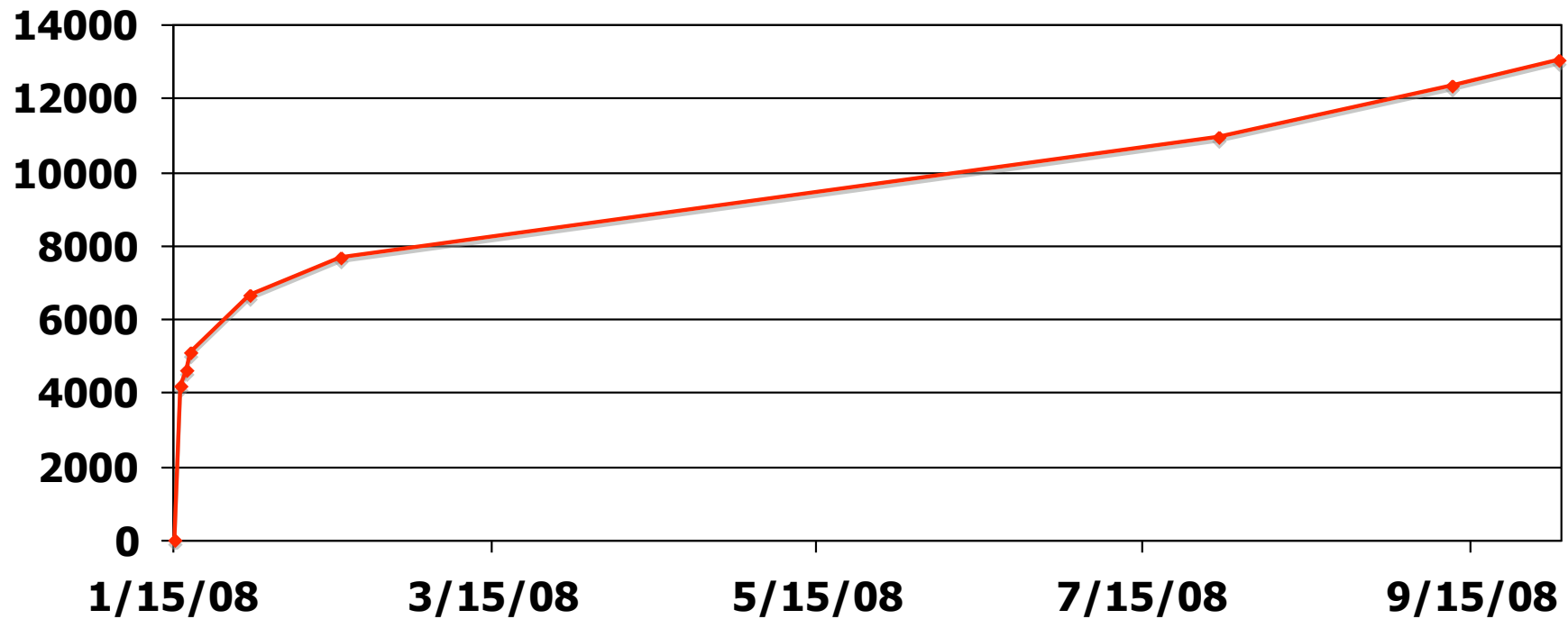


Project Plan Facts

- 150 tasks defined in phase one
- Phase one consumed 4000 hours
- Project team included 30+ staff
- “Just make it happen” attitude
- Many policy decisions pushed into phase two
- Phase two remains unfinished



Google Apps @ USC Adoption



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Limitations Discovered

- Google offers no means of renaming an account
 - An issue because USC does 200+ account renames each year.
- Google requires everyone to have both first name and last name
 - An issue because some students do not report both first and last names.
- Google mail migration not as simple or secure as first thought
 - Initial Google solution required full access to our mail server
 - Migration utility must be multi-threaded



Limitations Discovered

- Deactivating a Google account bounces email
 - An issue when security requires temporarily disabling a student's access to email
- No means of restoring a mistakenly deleted Google account
 - An issue if an account is mistakenly deleted by admin
- 5 Days to create an account with the same name as a deleted account
 - An issue if an account is mistakenly deleted by admin
- No means of migrating a user between domains
 - An issue if implementing an alumni domain



Limitations Discovered

- Google Talk implementation becomes institutional Jabber service
- Google will implement new services and new functions without advanced notice
 - Possible to prevent new services from being available
 - Not possible to prevent new functions within implemented services
- No mechanism to communicate to Google when someone is no longer a student



What Critical Work Remains

- Determining appropriate Google account lifecycle
- Automatic email migration
- Access for alumni???
- Transitioning of accounts from student (no ads) to former-student (with ads) status
- Improving support model with dedicated Google Apps administrators/experts
- Staying ahead of new Google Apps services
- Test System/Domain



Lessons Learned

- Was it quick? 8+ months to implement.
- Was it easy? No. Other projects impacted.
- Was it free? No. 4000 hours consumed.
- What has this enabled?
- Have we painted ourselves into a corner?
 - Flexibility due to forwarding, opt-in, extending student accounts
 - Have not given away enterprise passwords
 - Have limited ourselves to Google as Jabber server
 - But unable to deactivate student accounts
 - And unable to rename student accounts



Key Decisions to Consider

- What applications are included?
- What features of those applications?
- Is Single Sign-On required or desired?
- Redirect all enterprise email to Google or not?
- Are you willing to give Google enterprise passwords?
- Cliff-event or opt-in approach?
- Extension of account or replacement?
- What is the Google Account Lifecycle?
- What needs to be done to support Google Apps?



Resources and Links

- Google Apps At USC - <http://google.usc.edu/>
- Google Apps At USC Support - <http://www.usc.edu/its/google/>
- Brendan Bellina - bbellina@usc.edu



Questions

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