Orchestrating an Institution-Wide Transition to Google Calendar

Stephen G. Lewis  
Lehigh University  
EWFYM Computing Center  
8B East Packer Avenue  
Bethlehem, PA 18015  
(610) 758-3000  
sgl3@lehigh.edu

Stacey Kimmel-Smith  
Lehigh University  
EWFYM Library  
8A East Packer Avenue  
Bethlehem, PA 18015  
(610) 758-3000  
sek2@lehigh.edu

ABSTRACT
Since the late 1990s, Lehigh University utilized a group calendaring system named Oracle Calendar. Pressured by more advanced customer expectations, rising licensing costs, and an ever-increasing number of trouble reports, Lehigh University investigated the possibility of migrating to Google Calendar. Lehigh University ultimately decided to make the transition and is pleased to share its experience with other institutions. In addition to the history of Oracle Calendar, this paper will address how Google Calendar was beta-tested, how clients were trained in its use, the mechanics of the actual transition, and the feedback received from customers.

Categories and Subject Descriptors
H.4.1. Information Systems Applications: Office Automation – groupware, spreadsheets, time management (e.g. calendars, schedules), word processing.


General Terms
Management, Documentation, Economics, Experimentation, Human Factors.

Keywords
Google Calendar, Oracle Calendar, Oracle Collaboration Suite, Corporate Time, Netscape Calendar, Corporate Software & Technologies, Lexacom, Steltor, ICS, PDA.

1. INTRODUCTION

1.1 Lehigh University Overview
Lehigh University is located in Bethlehem, PA and boasts an enrollment of over 4,700 undergraduates, 2,200 graduate students, 660 faculty members, and nearly 1,000 support staff. Both library and computer services are combined in one integrated organizational unit known as Library and Technology Services (LTS). LTS owns and maintains over 600 classroom and lab PCs while also supporting nearly 2,000 departmental PCs.

1.2 History of Electronic Calendaring
In the late 1990s, Netscape Navigator was endorsed by LTS as Lehigh University’s official web browser. Navigator was part of a larger suite of software known as Netscape Communicator. Among other components, the suite included Netscape Messenger (an e-mail program), Netscape Navigator (a web browser), Netscape Composer (a WYSIWYG HTML editor), and Netscape Calendar (a group calendaring system). In 1997, LTS set up an experimental Netscape Calendar server and allowed staff members to evaluate the usability of the software. At this time, however, Netscape Calendar was not officially supported by LTS. Users were pleased with the functionality and use rapidly spread throughout campus. By 1998, there were approximately 350 trial users.

A malfunction of the experimental Netscape Calendar server caused corruption of the calendar data file; data was lost, and it quickly became evident that the vast majority of trial users had been using the system with production-level expectations. LTS later contracted with Netscape for full product support, moved the data to a production-grade server, and officially endorsed Netscape Calendar as the campus calendaring system.

Netscape licensed their calendaring technology from Corporate Software & Technologies (CST). The licensing agreement expired in December 1999 and Netscape elected not to renew it [1]. At this time, Lehigh University looked at a variety of replacement calendaring systems including Meeting Maker, Up-To-Date, and CST’s Corporate Time. Lehigh University elected to license Corporate Time, the same platform on which Netscape Calendar was based.

In June 2000, CST merged with their sister company, Lexacom, forming Steltor. By this time Lehigh University had licensed a total of 500 Corporate Time users. In June 2002, Oracle
purchased Steltor and assimilated Corporate Time into their Oracle Collaboration Suite, renaming it to Oracle Calendar.

Around this time, Lehigh University was also beta testing the Sun Java System Calendar, a component of the University’s recently acquired Campus Pipeline portal system. Testing revealed several deficiencies: a cumbersome interface, short session timeouts that were not configurable, and synchronization issues were a few problems that users reported.

In 2008, Oracle made preparations to discontinue the Oracle Collaboration Suite in favor of their new collaboration platform named Oracle Beehive. LTS found Oracle Beehive to be both difficult to administer and expensive to license. Lehigh University ultimately identified Google Calendar as a replacement for Oracle Calendar.

2. ORACLE CALENDAR
2.1 Operating Environment
Oracle Calendar consisted of a desktop client and an on-campus server. A web-based client was also available with a limited subset of features. Each licensed user had exactly one calendar. Users, with appropriate security rights, could view others’ calendars and propose meetings. E-mail and pop-up reminders could be set as required. Additional calendars, such as for rooms and equipment, could be defined as “resources” within Oracle Calendar and scheduled by users.

Faculty and staff began using Personal Digital Assistants (PDAs) as early as 1997 to have their calendars readily accessible at all times. Nearly all of the early devices were Palm Pilots. Users would connect these devices to their computers via serial, and later USB, connections. A program titled Palm Desktop was installed on each user’s PC and managed the synchronization of data. A proprietary plug-in to Palm Desktop, Oracle Calendar Sync, facilitated communication between Palm devices and Oracle Calendar.

Smartphones, especially the Palm Treo, became popular beginning in 2003. Senior leadership particularly appreciated the ability to access e-mail when away from their desks. Although e-mail could be accessed via a cellular data connection, calendar synchronization still required a hardware connection to a PC. Attempts to synchronize a Palm Treo over its 2G cellular connection would often fail due to insufficient bandwidth. For five years, the Palm Treo remained the Lehigh University recommended PDA until Palm retired the product line in 2008.

LTS evaluated several different PDAs when the Palm Treo was discontinued. Windows Mobile, BlackBerry, and iPhone devices were tested under a variety of conditions. 3G cellular technology had become increasingly widespread in the late 2000s. LTS established a strategic goal of moving away from using desktop PCs to synchronize PDA calendar data in favor of over-the-air wireless synchronization. The iPhone, unless jailbroken, was not capable of over-the-air synchronization with Oracle Calendar. The Windows Mobile platform was deemed unsatisfactory by LTS for a variety of reasons. The BlackBerry Bold 9000, AT&T’s first 3G BlackBerry device, won LTS endorsement as Lehigh University’s recommended PDA in late 2008. Lehigh University utilized Nexthaus SyncJE to wirelessly synchronize BlackBerry devices to Oracle Calendar via the SyncML protocol. Approximately one year later, iOS devices were able to synchronize wirelessly to Oracle Calendar via Synthesis AG’s ToDo+Cal+Sync. This new development allowed LTS to endorse the iPhone 3G, in addition to the BlackBerry, as recommended PDAs.

2.2 Concerns and Limitations
After using Oracle Calendar for over 10 years at Lehigh University, LTS staff were well aware of its drawbacks. The cost for end-user Oracle Calendar licenses was partially subsidized by LTS. Departments were assessed a per-user fee for each license issued. License reuse was not possible since removing a user from Oracle Calendar would delete all meetings created by that person, including those that resided on other users’ calendars. Concerns over cost/benefit fragmented the University population. Well-funded areas, particularly administrative units, had no qualms investing in Oracle Calendar licenses for their staff. Areas with lesser funding, however, often opted not to participate in using Oracle Calendar. These departments typically relied on paper calendars or stand-alone desktop software. Individual students were not eligible to use Oracle Calendar except in cases where required for student employment. Lacking a common campus calendaring system made it particularly difficult to schedule meetings for groups of people.

In 2007 and 2008, synchronization issues between Oracle Calendar and PDAs became increasingly prevalent. Users would often find themselves unable to synchronize their calendars. Other issues included individual events disappearing and entire calendars duplicating themselves post-synchronization without known reason.

At this same time, users also began to expect more from the software itself. Many were no longer content with the limitation of having just one calendar. Instead, they wanted to be able to create multiple independent calendars on the fly. Users also desired a full-featured web interface, not the limited functionality that the Oracle Calendar web interface provided.

3. GOOGLE CALENDAR TRANSITION
3.1 Initial Testing
Lehigh University created a Google Apps for Education instance in summer 2007 and immediately began investigating the feasibility of replacing Oracle Calendar with Google Calendar. The decision to partner with Google Apps came about through the work of a steering committee that included LTS leadership and front-line positions consulting with groups outside LTS as needed (e.g., the university lawyer). A member of this team was charged with promoting Google Apps and training users, and a voluntary working group formed to advance toward this goal. Among its activities were creating a Google Apps web page, developing the wording and look/feel of the landing page for Lehigh Google Apps, refining the policies and best practices of the service, and training one another on the various apps. Two members of the six-person team provided most of the Calendar training during the Google Apps transition.

Encouraged by initial findings, the entire LTS Client Services staff transitioned to Google Calendar in early 2008. In summer 2009, the Athletics Department was shifted to Google Calendar. Athletics was particularly willing to beta-test Google Calendar since the costs of Oracle Calendar allowed only a subset of their
staff to utilize the system. Google Calendar also made it possible for coaches and student athletes to share a common calendar. Feedback was very positive and LTS became confident that Google Calendar could successfully replace Oracle Calendar.

3.2 Pre-Transition Outreach & Marketing
LTS met with most departments to explain why transitioning from Oracle Calendar to Google Calendar would be beneficial to the University. Key messages reminded users that Oracle Calendar was deprecated, not fully web-based, costly, fraught with PDA synchronization problems, and a closed system that did not allow interaction with the outside world. On the contrary, Google Calendar was presented as fully web-based, free of licensing costs, reliable, more functional, and an open system. These meetings also included brief demonstrations designed to excite users by highlighting such features as Google Maps integration, SMS text message reminders, calendar layering, and the ability to embed calendars in web pages.

3.3 Departmental Transitions
Departments were transitioned one at a time over a six-month period. The transition steps were extremely labor intensive, as each user required a hands-on visit from an LTS representative. The process began with exporting data from Oracle Calendar in an ICS format. The ICS export then needed to be cleansed via a custom-written tool that removed the following fields from each event: X-ORACLE-EVENTINSTANCE-GUID, X-ORACLE-EVENTTYPE, UID, RECURRENCE-ID, ORGANIZER, X-ORACLE-CLASS, CLASS, ATTENDEE, TRIGGER, ACTION, RDATE. Without removing these fields, repeating events would not synchronize correctly to iOS devices. The cleansed data was imported to Google Calendar and LTS assisted users in setting up appropriate security permissions for their calendars. PDAs were reconfigured using the Google Sync client for BlackBerry devices and Microsoft Exchange emulation on iOS devices.

The final step was setting up a backup for clients. Oracle Calendar, since it was a locally hosted server, was backed up to tape. Google Calendar, a cloud-based solution, did not have backups accessible to the end-user. This meant that data was not recoverable in the event a user accidently deleted a calendar and/or a PDA synchronization critically failed. LTS authored a web backup utility that accesses each Google Calendar private URL and saves an ICS export to disk in the campus data center. Unless a user explicitly resets his or her private URL, it remains static even when passwords are changed. Although these backups are seldom needed, they become extremely valuable in times of crisis.

4. GOOGLE CALENDAR TRAINING
4.1 Training Timeline
November 2010 was the target date for completing the transition to Google Calendar. The optimal time for training clients, consisting mostly of non-academic staff members, was summer 2010. Twenty Google Calendar training sessions were held and 119 staff members attended. Each session, lasting approximately two hours, was held in a computer classroom so that participants could follow along with hands-on exercises. Many departments elected to attend staff training en masse. This allowed instructors to fine-tune the curriculum to individual departmental practices and needs. Each session generated follow-up calls to the instructor(s). These questions were often answered with a simple e-mail but were sometimes addressed with additional on-site training or the creation of web-based video tutorials.

4.2 Participants
Many if not most of the people affected by the Oracle Calendar migration were administrative staff—secretaries, coordinators, directors, and business managers, for example. As a group, their technical skills varied. During training, the “show of hands” method of data collection revealed that:

- about one quarter of the participants used the consumer version of Google Calendar
- most were unfamiliar with the concept of cloud computing
- many had mobile devices that they wanted to synchronize with their Lehigh Google Calendar

Participant experience with the consumer version of Google Calendar presented a challenge in training. While they had experience with Google Calendar, participants often had trouble grasping the difference between Lehigh Google Apps and consumer Google. For those who maintained a work schedule on consumer Google, the options for sharing the calendar, or importing it to Lehigh Google apps, were explained. Even though some participants used consumer Google, they were unfamiliar with the notion of cloud computing and most made use of only one or two applications (Calendar and Gmail).

Despite prior experience with Google, participants needed a general introduction to address gaps in their understanding of the service. LTS provided a summary of the suite of products offered, showed how the apps integrate, demonstrated the collaboration features, and explained the concept of cloud computing. Participants were advised that in the Google environment, new features and options appear continually, and often without notice. Trainers decided that discussion of synchronization with mobile devices was out of the scope of the training, and participants were referred to documentation and their computing consultants for assistance.

4.3 Training Materials
The training outline (see appendix A) attempts a brief introduction to Google Apps and thorough coverage of Google Calendar features such as setting customizations, creating calendars, creating and modifying events, different kinds of events, inviting others to events, and a broad range of other topics. A handout titled “Ten Tips for Using Google Calendar” (see appendix B) included features in Google Calendar that LTS trainers felt would be useful. Finally, trainers developed Camtasia or Jing-based videos for common questions and shared them on the Lehigh Google Apps Web site.

4.4 Participant Reactions
Generally, staff was comfortable in the Google environment and satisfied with the features that were offered. There were, however, some perceived shortcomings in Google Calendar:

- Viewing/managing large groups - Some coordinators need the ability to view many staff calendars one at a time. Oracle Calendar offered a columnar view that staff preferred to the overlay view that Google offered.
In 2010, the “find a time” view displayed the calendars in rows, rather than columns. This has changed, and now Google Calendar also uses a columnar view. Unfortunately, it is still not as functional as Oracle Calendar’s group view.

- Color-coding events - In 2010, Google did not support color-coding of events. This feature was rolled out in Spring 2011.
- Event view/text truncated - Participants lamented that the Google Calendar views often truncated the event details.
- Calendar printing - Google Calendar offers a print feature but the problem with views extended to the print environment. Not enough information was provided within the view (e.g., event details), and the timespan options were too limited.
- Backup/system down - For some staff, intermittent downtime, for even a few minutes, was deemed unacceptable. In 2010, Google Calendar experienced downtime system-wide of several hours duration [2], and staff found this unsettling.
- Customization - While customization is generally a positive feature, participants sometimes found individual customizations made it hard to predict others’ behavior. For example, an individual can specify whether event invitations are displayed or not. This customization impacts others (and most staff preferred their colleagues display event invitations so that potential conflicts could be seen).
- Invite versus add - In Oracle Calendar, it was possible to simply add an event to someone’s calendar. In Google Calendar, the concept of inviting a colleague to an event was new, and it was perceived (rightly) as less powerful since the calendar owner must accept the invitation.

4.5 Tough Training Concepts
Participants had difficulty grasping some key concepts in Google Calendar. In the administrative offices, the ability to keep a paper trail and to house data locally is valued. Oracle calendars are routinely printed out, and Microsoft Word documents are stored locally and sent as attachments. Google Calendar (and Google Apps in general) is intended as an online replacement for the physical paper item. It works because Google Calendar and Docs can be accessed from nearly anywhere, at any time. Yet, in Calendar training, participants really wanted to a) have a printout of the Calendar and b) store it locally. Similarly, in Google Docs training, participants ask how to send a Google Document as an attachment. The idea of a resource that is solely online, and not housed locally, can be hard for some staff to accept.

Google’s customization options are extensive, and in a shared calendar environment this can be confusing. For example, secretaries who manage their boss’s calendar typically have the highest level of permission for the boss’s primary calendar. Bosses used to delegating calendar tasks would tell their secretary, “I’m getting too much email; please turn off notifications.” Trainers had to explain that customizations are set by each individual user, even for the same calendar, so the boss should set his/her own customizations for that calendar. Staff who schedule meetings cannot always predict how individuals have customized a calendar notifications, or how/whether calendar invitations can appear.

The calendar display toggle can confuse users. Many Google Calendar users called to report that a calendar had “disappeared” from the main window. Trainers reminded users that calendars could be toggled on and off, and often it was necessary to remote into the user’s computer to show how the calendar could be displayed and hidden at will.

Clients often are tempted to create multiple calendars. While it is possible to create calendars for types of meetings, for certain projects, or for any number of reasons, this practice can make it hard for co-workers to check availability for meetings, since in most cases they won’t have access to all calendars. Trainers suggested that the primary calendar be used for scheduling purposes, or if other calendars are used, events that affect scheduling/availability should be duplicated in the primary calendar.

4.6 Follow-up and Calendar Adoption
Google Calendar statistics show that about 500-600 users access Calendar every day, and the seven-day usage is generally from 800-1000 users. About 350 people are currently backing up their calendars via the LTS-authored utility explained earlier. Every semester about eight general Google Calendar seminars are held, and about fifty users attend. Trainers are regularly contacted with specific questions about Google Calendar and specifically for help in taking it to “the next level” with more advanced features.

Most departments that formerly used Oracle Calendar appear to be using Google Calendar, and all indications are that they have the same functionality with Google’s product. Adoption of Google Apps on campus is voluntary but Google Apps are slowly appearing in academic departments. Some campus services are using Google Calendar to support unique needs. In Athletics, coaches in tennis, lacrosse, and field hockey require their student athletes to maintain and share a Google Calendar containing their class schedule and other commitments. This facilitates scheduling athletics training, practices, and events. In the College of Education, the student employee schedule is maintained in a Google Calendar that is published to a Web page. Lehigh’s Facilities Services maintains its boiler room staffing schedule (a 24/7, 365-day operation) on Google Calendar. Materials Science manages its equipment reservations (e.g., high-end microscopes) on twelve calendars that are available to members of a Google Group for reservations.

Plans for further marketing of Google Calendar are underway. The LTS newsletter will feature unique uses of Google Calendar on campus in future issues. In addition to regularly scheduled Google Calendar seminars, new training sessions such as “What’s new with Google Calendar,” will be offered periodically and video demos will be posted on the Google Calendar web site.
5. CONCLUSION
5.1 Post-Implementation Survey
Approximately one year following the Oracle Calendar to Google Calendar transition, users were solicited for feedback. LTS sent a survey inviting clients to rate various aspects of Google Calendar and how they compared to Oracle Calendar. Specifically, clients were asked to rate ease of access, reliability, feature set, and ease of use. Clients were also invited to share their own personal findings. See appendix C for full survey results.

Overall, Google Calendar was ranked higher than Oracle Calendar. The one metric that Google Calendar was not ranked highly on, however, was reliability. Clients indicated their frustration with occasional, but memorable, intervals where Google Calendar would become unresponsive for several minutes. This seems to happen about once or twice a month and is acknowledged by Google with cute error messages such as “oops, we couldn’t load details for your calendar, please try again in a few minutes.” On one occasion, Google Calendar was down for several hours in spring 2010. Other perceived drawbacks include difficulty in viewing many calendars at the same time, limited printing options, and an inability to mark events as tentative.

Clients expressed their pleasure with several aspects of Google Calendar. They particularly appreciated their ability to access the calendar from any Internet connection, their ability to create and layer multiple calendars, the ease of use, reliable over-the-air PDA synchronization, and the fact that the University now had a common calendaring system across departments.

6. REFERENCES

A. Google Calendar Training Outline
Note: This outline was prepared for Google Calendar trainers/instructors in Summer 2010 and may not reflect the most up-to-date features.

1. General Comments
   a. Lehigh Google Apps
      i. A domain-wide address book of all Lehigh University users exists
      ii. Calendars and documents can be shared within the Lehigh University domain and outside as necessary.
   b. Mobile device setup is not covered in this training seminar.
   c. Google is constantly improving their product. New features will appear without notice.

2. Google Apps Start Page
   a. Log in via http://www.lehigh.edu/google
   b. Calendar is just one part of a suite of interoperable Google applications
      i. Can be accessed from anywhere there is Internet access
   c. Password is synchronized to your Lehigh University e-mail password
   d. Cloud computing
      i. Explain the pros/cons
      ii. Reminder that Google may not be the best place for very sensitive information
   e. Gmail is not recommended at this time. Continue to use legacy campus e-mail.

3. Layout Overview
   a. General
      i. Google Calendar is part of the Google suite of applications
      ii. Personalization options and general setting in upper right corner
      iii. Most real estate devoted to the calendar/planner
      iv. Demonstrate event creation and "quick add" feature
      v. Demonstrate month calendar in left margin
   b. My Calendars
      i. These are calendars that you own or can edit
         1. Color coded
         2. Demo how to add
         3. Settings
            a. Show in list
            b. Unsubscribe
            c. Delete
      c. Navigating Calendars
         i. Create a dummy test calendar
            1. Add a calendar, choose add, choose create new calendar
      ii. Now multiple calendars exist
         1. Hide/unhide
         2. Display "this calendar only" feature
         3. Change colors
         4. Change name
         5. Settings
   d. Other Interesting Calendars
      i. US Holidays
      ii. Co-workers
         1. Search is similar to e-mail addressing auto-completions
         2. Example: Jake calls his calendar appointments
      iii. How to change the name of the calendar
1. Suggest that clients keep username
2. Name changes are per-user and not seen by anyone else
   iv. How to add, settings, etc.
e. Planner
   i. Red line indicates current time
   ii. Events are associated with calendar colors
   iii. Weather
   iv. Overlay concept
   v. Empty calendar may show view at midnight
   vi. Different views
      1. Day
      2. Week
      3. Month
      4. Four-day view (customizable setting)
      5. Agenda
   vii. Quick custom view
f. Right-hand column
   i. Users define what appears there
      1. Gadgets, tools, tasks, etc.
4. Configuring general Google Calendar settings
   a. Calendar settings, general calendar settings, apply to all calendars
   b. Country, time zone (set automatically by default)
   c. Date formatting
   d. Day of week start (Sat, Sun, or Mon)
   e. Option to show/hide weekends
   f. Default view of one week is customizable
   g. Custom view – demonstrate how to change duration
   h. Add location to view weather
   i. Show events you have declined
      i. If you can’t go, keep it on the calendar
j. Invitation options
k. Keyboard shortcuts
   i. T=today
   ii. C=create
   iii. P=previous
   iv. N=next
   v. M=month
   vi. And many more...
l. Offline calendar
   i. Works with only one calendar
   ii. Suggest to use in read-only capacity
5. Search calendar
   a. Search by keywords
   b. Searches all calendars you can add events to
   c. Searches active calendar or default one
6. Sharing
   a. Arrow, share this calendar
      i. Default is share with others within Lehigh University
   1. See free/busy status only
   ii. Can make calendar available to all others
b. Share with specific people
   i. Fine-tune permissions based on role
c. Share with non-Lehigh people
   d. Share with consumer Google accounts
7. Events
   a. Add event
      i. Multiple ways to add event
         1. Click on date/time area
         2. Click on “create event”
         3. Press “c” on keyboard
         4. Quick Add
      ii. Minimum information is event title
      iii. If more than one calendar displayed, event added to default calendar
         1. Dropdown box lets user select other calendar if desired
      iv. Assumes current date and next hour
      v. End time is one hour later by default
b. Repeating events
   i. Very flexible
   ii. Go under weekly to specify individual days of the week
   iii. Change for one, all, or future instances
   iv. Note the repeating icon
   c. Other options
      i. Where (location will populate in Google Maps)
      ii. Which calendar
      iii. Duplicate/copy
      iv. Description
      v. Attachment
      vi. Guests
   vii. Privacy
      1. Private (busy) - vs- public
   viii. Quick Add
      1. Need title at minimum
      2. Add pm to times occurring after noon
      3. If date not provided, Google Calendar will create on next valid date at specified time
      4. Enter date without time to make all day
      5. Enter guest e-mail address to invite them
      6. Multiday events, type 8/2 – 8/4
      7. Repeating events, type yearly / monthly / weekly
8. Invitations
   a. Be careful when testing/training as everyone gets invitation e-mails
   b. Create event, search by e-mail, search by last name
   c. You can usually see the calendar of the person you are inviting to an event
      i. Unless they have made their entire calendar private
      ii. Some staff may not be using Google Calendar
   d. Check guest and resource availability
   e. Resources
   f. R25 (campus classroom scheduling system) does not interact with Google Calendar
   g. How to invite lots of people
      i. Contact list/e-mail nickname file
         1. Disadvantage is that these can’t be shared with multiple users
      ii. Google Groups
         1. Flaky at best, you can try it for informal groups
      iii. Max of 500 invitees at a time

9. Notifications
   a. General Settings
      i. Automatically add invitations to my calendar
   b. Calendar-specific settings
      i. Click on arrow to right of calendar
      ii. Event reminders (pop-ups, e-mail, SMS)
         1. Minutes, hours, days
         2. As many as you want
         3. Can override for an individual event
      iii. Invite notifications
         1. Change, cancel, replies
      iv. Daily agenda e-mailed to your every morning
      v. SMS option for text messages (costs money)
     vi. Mobile devices
    vii. Shared calendars

10. Editing Events
    a. Reminder alarms
    b. Delete, edit details, copy to another calendar
    c. Delete, change for all, repeating events?
        Only this instance option.
    d. All events in series will change past events

11. Move an event
    a. Can drag/drop or change within details
    b. Copy to another calendar
    c. Change event owner
    d. Duplicate event, change/modify as needed
    e. All day events

   i. Can mark your calendar as available or busy all day

12. Printing
    a. Prints whichever view you have on-screen
    b. No way to print all details

13. Add Calendars
    a. Add by URL
    b. By searching name
    c. Import calendar (ical format)
    d. Browse interesting calendars (such as holidays)
    e. Sports calendars
    f. Lehigh resources

B. Ten Tips for Using Google Calendar

Note: This participant handout was prepared for Google Calendar training in Summer 2010 and may not reflect the most up-to-date features.

1. Add Lehigh University calendars
   a. Academic Calendar (registration deadlines, exam dates, breaks, etc)
   b. Other Lehigh calendars
      i. See the list at:
         https://sites.google.com/a/lehigh.edu/lehigh-google-apps/Home/lehigh-public-calendars
      ii. Includes sports teams, facility hours, art exhibitions, etc.

2. E-mail your daily agenda to yourself
   a. See a demo at:
      http://screencast.com/t/MGQzNzE5NDM

3. Use the Google Labs gadgets
   a. These often preview new Google Calendar features
   b. Next Meeting – is a very helpful gadget that displays a countdown to your next scheduled event

4. Popular keyboard shortcuts
   a. C = create an event
   b. / = search calendars
   c. P = previous date range
   d. N = next date range
   e. A,D,W,M = agenda, day, week, or month view
   f. S = view calendar settings
   g. T = jump to today
   h. Z = undo last action
   i. X = custom view
   j. Q = quick add

5. Use the Quick Add feature
   a. Click on Quick Add in the upper-left corner or type “q” if keyboard shortcuts available
   b. Type in title of event
   c. General guidelines
      i. Almost any date/time format is okay, e.g. 1pm May 24, 10am 4/14, Friday noon, etc.
ii. Precede dates and times with “on” or “at”
   1. Example: Meeting on Friday at 3pm
iii. For all-day events, enter date only
   1. Example: Library Conference on 8/14
iv. Multiple date ranges
   1. Example: National Conference 9/23 – 9/26 in Atlanta
v. Annual event
   1. Example: Mom’s Birthday June 19 yearly
vi. Weekly event
   1. Example: Tennis practice Tuesday 7pm to 9pm weekly
vii. Monthly event
   1. Example: Meet with boss first Tuesday of every month at 9am
viii. No date provided
   1. Quick Add will put the event at the earliest valid future date
ix. More info at - http://www.google.com/support/calendar/bin/answer.py?hl=en&answer=36604#text

6. What's the weather?
   a. Add weather information to calendar
   b. Settings -> General
      i. Enter your location
      ii. Enter preference for Fahrenheit or Celsius

7. Know event icons
   a. Question mark = event invitation requires your response
   b. Alarm clock = event has reminder set
   c. Overlapping rectangles = event repeats
   d. Padlock icon = private event
   e. Silhouette of person = multiple attendees at this event

8. Searching calendars
   a. Use consistent terms when creating events
   b. Search is performed on all calendars that are active/visible
   c. Use search options to limit by date, exclude words, etc.

9. “QuickSelect” a custom calendar view
   a. You can create a custom view of your calendar on the fly
      i. Click and swipe over mini-calendar on left selecting the days you want
      1. Main screen will change to reflect your selection

2. See a demo at - http://screencast.com/t/MzExMjY5

10. View multiple time zones
    a. Do you have clients in other time zones?
       You can add a time zone which will appear adjacent to the local time zone.
       Add via calendar settings.

C. Post-Implementation Survey Results

20% Response Rate (787 Surveys Sent, 159 Complete Responses, 12 Incomplete Responses)

Approximately one year post-transition, Clients were asked to rate Oracle Calendar (O) and Google Calendar (G) on a 4-point scale. Higher is better. Free-form commentary was also solicited.

Clients report positive experiences with:

- Ability to access Google Calendar anywhere there is an Internet connection
- Ability to create multiple calendars
- Ability to layer multiple calendars
- Ease of use
- PDA-friendly, reliable synchronization
- Scheduling with other staff members, since so many people are using Google Calendar

Clients report these concerns:

- Difficult to schedule large group meetings on behalf of others
- Difficult to view many calendars at the same time
- Event details do not display in agenda view; you must click on the individual event
- Inability to check other calendars without adding them list of "Other Calendars"
- Very poor printing options compared to Oracle Calendar
- Inability to mark events as tentative
- Access control is not as granular as Oracle Calendar (ex: private events hidden from secretary)