Email Evaluation Task Force Report

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Executive Summary

This task force was formed to evaluate the email service offered by Microsoft Live@EDU in comparison with our current GroupWise email system. The task force met over several months and analyzed the key components that are involved in the evaluation process. Two primary documents were developed during this evaluation: Email Evaluation Executive Summary and the Email Evaluation Task Force Full Report. This executive summary aims to provide an overview of key topics of the two email systems. The Full Report contains the details that support the content in this executive summary.

The overarching role of the task force is to determine if the college should transition our email system from GroupWise to Microsoft Live@EDU (using the Microsoft Outlook client). The task force has taken the approach of breaking this decision down into twelve sections, each denoted by a roman numeral, and then proceeding to make a conclusion for each section (Note: Cost and Functionality each have multiple evaluation sections.).

Below is a list of governance and their corresponding voting results based on the motion of approving the content in this document and transitioning to Microsoft Live@EDU from Novell GroupWise for our institutional email system.

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<th>Governance</th>
<th>Vote (Approve – Disapprove)</th>
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<td>Discussion Item</td>
</tr>
<tr>
<td>2/24/2011</td>
<td>College Council</td>
<td>Discussion Item</td>
</tr>
</tbody>
</table>

In the area of **FUNCTIONALITY**:
I. For functionality of the OUTLOOK desktop client in comparison to GROUPWISE desktop client, we find:
   a. We will lose the following main feature when switching to Outlook:
      i. Sent Item Tracking
   b. We will gain the following main features and other secondary features when switching to Outlook:
      i. Mailbox quota increases from 2 or 4GB to 10GB
      ii. Better integration with MAC O/S
      iii. Increased inbox/folder search functionality
II. For functionality of the WEB INTERFACE, we find:
   a. The Outlook web interfaces matches well with the Outlook client and compared to GroupWise has more features and would serve as an improvement over the GroupWise web client. The following are key advantages of the Outlook web interface:
      a. Aesthetically consistent user interface with the desktop client.
      b. Ability to apply custom Messiah branding (e.g. apply Messiah logo and color scheme in header and footer).
      c. Integrated chat interface

III. For functionality of the SPAM FILTER, we find:
   a. Live@EDU’s default spam filtering functionality is not as effective as our current spam filter, Spam Assassin (third party product for GroupWise). Microsoft recognizes this and is committed to implementing an updated spam filter (Forefront) in one of the next upcoming updates.

In the area of support for MOBILE DEVICES:
IV. The task force looked at support for Blackberries, iPhones, Android and Windows Mobile phones. We find that Microsoft Live@EDU does not currently offer any benefit over GroupWise’s newly released mobile device support update. Although, we believe Microsoft is better positioned than Novell to handle new devices in the future, because Novell’s synchronization mechanism is dependent on software that is owned and distributed by Microsoft.

In the area of SECURITY/PRIVACY:
V. For SECURITY, we find that Live@EDU offers the following main advantages:
   a. Mobile devices syncing with Live@EDU can be remotely erased.
   b. Users will be less likely to use fat client at home (since web interface offers more functionality the GroupWise web interface), so temporary copies of Messiah emails would be less likely stored on personal computers.
   c. Users are able to access online versions of Office (Word, Excel and PowerPoint) and would be able to edit files without requiring them to download the file to their PC.

In the area of SYSTEM INTEGRATION:
VI. For SYSTEM INTEGRATION, we find that Live@EDU offers the following main advantages:
   a. Office Live can be used without having to additionally maintain accounts. (Accounts will be already created for Live@EDU email.)
   b. Integration with Microsoft SharePoint
   c. Greater integration into Microsoft Office Applications
   d. Microsoft Live@EDU allows for more consistent aesthetic feel between its services

In the area of INNOVATIVE POTENTIAL:
VII. For INNOVATIVE POTENTIAL, we find that Microsoft Exchange (email service that runs Microsoft Live@EDU) is the industry standard and therefore gives them a very large market share. While, GroupWise market share on the other hand, is diminishing. Therefore
Microsoft Exchange, because of its greater market share, is more heavily targeted by software developers who are creating new innovative products. Below are two recent examples of innovation that integrates directly into Microsoft Live@EDU accounts.
   a. Microsoft Office for Mobile Devices.
   b. Direct integration with Wordpress blogging application.

In the area of **COST**:
The task force evaluated two components. First: the cost to convert from our current GroupWise email system to Microsoft Live@EDU. Second: the affect on annual operating costs down the road after switching to Microsoft Live@EDU.

**VIII.** For CONVERSION costs, we find:
   a. There will be capital costs of approximately $0 to complete the conversion.
   b. There will be an ITS human resource cost of approximate 480 hours to implement the conversion (if CGS Solutions provides free migration ITS human resource cost is reduced to 280 hours).
   c. All user training will be performed by ITS in house via hands on sessions and therefore will not require any capital costs.
      i. For email power users (~100), we expect them to take 2-3 hours of training; the training will include time to reimplement delivery rules, shared folders, and proxy permissions.
      ii. For email average users (~330), we expect them to take 1 hour of training; the training covers basic email and calendar functionality.
      iii. For email basic users (logs into email no more than once or twice a day) (~330), we will offer training but expect most will not use it; they might lose 30 minutes time learning the new system on their own.

**IX.** For OPERATING costs, we find:
   a. ITS operating expenses will be reduced by approximately $18,000 per year.
   b. ITS staff time will free up by approximately 170 hours per year since we no longer maintain our own email system.
   c. Some users may experience lessened efficiencies while others may experience greater efficiencies, depending on the portion of time they spend in the email system.

In the area of **ALUMNI ACCOUNT AVAILABILITY**:

**X.** Alumni email accounts would not need to be on the same system as our students and employees, but there are some benefits (in terms of cost, ITS Staff time, system integration and system consistency) of having everyone on the same system. If students/employees are on Live@EDU, then offering alumni accounts on the same system has no additional cost. Whereas if students/employees remain on GroupWise, then there is substantial cost to offering alumni accounts on GroupWise or elsewhere.

In the area of **EMAIL SUPPORT**:

**XI.** There are two types of support can be considered. Client support deals with learning how to use the functionality of the email client and/or web interface. Backend support deals with troubleshooting email delivery problems or other items deemed as server issues.
For CLIENT SUPPORT, we find the level of support that ITS can provide should stay about the same as it is with GroupWise. For BACKEND SUPPORT, we find the level of support that ITS can provide to be somewhat lessened as there are things ITS can and does do now to resolve email delivery problems and other items deemed as server issues that they will not be able to do when the system is remotely hosted.

In the area of ADDITIONAL CONSIDERATIONS:
XII. For ADDITIONAL CONSIDERATIONS, we find that Live@EDU offers the following main advantages:
   a. Disaster Recovery/Business Continuity Preparedness (email is redundantly hosted off campus).
   b. Free 5GB SkyDrive for cloud based file storage (allowing users to access, edit and share their files anywhere the internet is accessible).
   c. Offers better preparedness for our students that are entering the workforce as they will be more likely to use Microsoft Outlook in a professional environment.
   d. Allows new employees to more efficiently transition into our IT environment as most organizations utilize industry standard Microsoft Outlook as their email client.

Introduction
As the technology climate of the college continues to evolve in a way that presses for more innovative learning and administrative environments for students, employees and faculty while accelerating the ability to communicate, collaborate and facilitate, it is vital that our IT infrastructure evolve to meet not only the current needs but also the needs that are on the horizon. The initial step in evolving is to understand where we are now and then determine the foreseeable coming expectations. This report was developed to outline where we are at right now and then compare our current solution (GroupWise) to other email solutions (Microsoft Outlook via Microsoft Live@EDU and Google Apps for Education) that are currently available.

Key Terms
- Cloud-based system
  - An application or system that is hosted externally to the institution and is typically accessible anywhere that internet access is available
- Microsoft Outlook
  - Microsoft’s desktop email application
    - The desktop email application that Messiah would use as opposed Novell GroupWise
    - Would be used if we implemented Microsoft Live@EDU OR Google Apps for Education
- Microsoft Live@EDU
  - An educational suite of cloud-based applications that includes the following:
    - Microsoft Outlook Live
      - Web based email and calendar interface
    - Microsoft Office Lite
- Productivity Suite that includes Word, Excel and PowerPoint accessible via the internet
- Microsoft SkyDrive
  - Web based storage space that is available for users to upload and download documents to and from
- Microsoft Spaces
  - Website development service that allows users to quickly and fairly simple to create a website
- Microsoft Exchange
  - Email server used as a part of the Microsoft Live@EDU service
- Google Apps for Education
  - An educational suite of cloud-based applications that includes the following:
    - Gmail
      - Web based email interface
    - Google Calendar
      - Web based calendar interface
    - Google Apps
      - Productivity suite that includes Google Docs, Google Spreadsheets, and Google Presentations
    - Google Sites
      - Website development service that allows users to quickly and fairly simple to create a website

**Purpose**

The establishment of this task force is to evaluate our current email system in comparison with two cloud based (externally hosted from Messiah server’s) email systems, Microsoft Live@EDU and Google Apps for Education. The necessity of this evaluation is two-fold.

The first is rooted from a user functionality perspective as the college needs to provide a more robust feature set that includes:
- Increased mobile access to email/calendar
- Increased storage space
- More fully featured collaboration environment
- Greater account availability for alumni.

The second area of the evaluation stems from an IT/institutional perspective that includes:
- Cost Savings (Disk storage, licensing agreements, utility overhead)
- ITS needing to find ways to manage current responsibilities and outsourcing email would free ITS Staff time
- Email Retention/Archiving
- Business Continuity/Disaster Recovery
- eDiscovery
- Future innovative potential
- Greater System Integration
Goals
The three primary goals of the task force were:

1. Compile pertinent information that will enable the Task Force to make well informed recommendations;
2. Discuss the information and test the functionality within the email systems;
3. Develop a report that includes a recommendation for the college wide email system, the benefits of that system and a deployment timeframe.

Completed Action Items

Microsoft Live@EDU

- Presentations
  - Administrative Assistants
  - ITS
- Documentation
  - External Email System Implementation FAQ
  - GroupWise vs. Microsoft Live vs. Gmail Comparison
  - Comprehensive Test Plan
- Testing
  - Email Evaluation Task Force
    - Bill Strausbaugh, ITS/Provost's Office
    - Adam Richard, ITS
    - Ryan Mark, ITS
    - Jason Long, ITS
    - Wendy Starner, Business Office
    - Donna Fink, Provost’s Office
    - Sherri Wolgemuth, Admission
    - Don Lerew, HR/Payroll
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  - Gina Hale, Biblical & Religious Studies
  - Les Weand, Payroll
  - Creta Bieber, Student Affairs
  - Lisa Snyder, Operations
  - Keeri Leedy, Advancement
  - Laurie Brantner, Enrollment
- Implementation Steps
  - Developed GroupWise Rules to have mail forwarded to MS Live
  - Test users migrated all email and calendar information over to Microsoft Outlook
  - Researched and received a quote for cloud based email archive and retention
service

– Received detailed implementation plan from Live@EDU Education Consultant
– Received information about mass migration strategies

**Google Apps for Education**

- Presentations
  - ITS
  - ATC
  - Administrative Assistants

- Documentation
  - External Email System Implementation FAQ
  - GroupWise vs. Microsoft Live vs. Gmail Comparison

- Testing
  - ITS
  - ATC members
  - Administrative Assistants

- Implementation Steps
  - Enabled Single Sign On
  - Loaded all Messiah accounts into Gmail system
  - Developed GroupWise Rules to have mail forwarded to Gmail
  - Research Email Archive and Retention Solution

**Why did the Task Force not pursue Google Apps for Education as much as Microsoft Live@EDU?**

Before the formation of the Task Force Google Apps for Education was demoed and tested in both ATC and with the collective group of Administrative Assistants on campus. It was determined by these groups as well other feedback that was received from additional testers that Google Apps just had too many weaknesses to pursue it as the campus-wide solution. Here is the list of weaknesses that were mentioned throughout the testing process:

- Google Apps for Education with Outlook as the Desktop Email Interface
  - Email Sync
    - Need an additional product, Google Sync, to sync email to Outlook from web interface (Gmail)
  - Non-transferable settings
    - Settings don’t transfer from the desktop client to the web interface.
      - Delegation
      - Email Signature
      - Reading Style (Plain, HTML)
      - Numerous others
  - Additional training and support
    - Gmail web interface is much different than the Outlook desktop interface, which would require training and support or both of the interfaces
      - MS Live@EDU the web interface and desktop interface are almost identical
• Gmail uses labels to organize email, Outlook uses folder to organize email
• Google Apps for Education **without** Outlook as the Desktop Email Interface (therefore only utilizing the Gmail web interface)
  • A web interface may be seen as too limiting for our GroupWise power-users
  • Message retraction only within the first 10 seconds after sending
  • No Sent Item Tracking
  • Cannot mark item as high priority
  • Cannot mark item as confidential
  • Cannot have multiple signatures
  • Cannot Set Working Hours
  • Use of the Gmail label system (as opposed to folders) for email organization may present additional learning curve
  • Cannot mark different appointment types as different colors within the calendar
  • Rich Formatting in email signature is not available
  • Cannot delay mail delivery
• No synergy with SharePoint
  • SharePoint is a Microsoft product that enables centralized document collaboration (may be easier to think of it as a file storage system that is accessible via the web)
Partial listing of colleges/universities currently using Microsoft Live@EDU

According to the 2010 Educause Campus Computing project, “60% of schools now host student email in the cloud”. Out of the 824 Private 4 yr. colleges that participated in the project that host their email in the cloud in 55% have choose Google Apps for Education, 40% have chosen Microsoft Live@EDU and 5% have chosen Zimbra.¹

- Mansfield University
- Mitchell College
- Gordon College
- Manchester University
- James Madison University
- St. John’s University
- Washington State University
- Ball State University
- University of Pennsylvania
- Seton Hall University

More schools can be found via the Microsoft Live@EDU Case Study website or via the Educause Microsoft Live@EDU product description website.

Comparisons

This portion of the report breaks down the findings of the task force into separate sections, each delineating facts and then a recommendation based solely on that section.

Functionality

Fundamentally, GroupWise and Outlook are very similar applications. Experienced users of GroupWise will find most of the features they use in GroupWise to also exist in Outlook. There are some exceptions, though, and this will be what users focus on. The following is a feature comparison listing of Microsoft Live@EDU, GroupWise and Google Apps for Education. Features that are highlighted in Green denote that they are a distinct advantage of the product.

Comparison Listing

Detailed Feature Comparison (Attachment A)

After examining the key functionality listing above it is clear that GroupWise and Microsoft Outlook are very similar for the basic and intermediate users. As users will find almost all of the features that they use in GroupWise to also exist in Outlook as well. Overall the only feature main feature that cannot be exactly duplicated in Outlook is “Sent Item Tracking”, but as more and more students begin forwarding their email to 3rd party personal email accounts (e.g. Live Mail, Hotmail, Gmail), sent item tracking will continue becoming less and less useful as all that is shown for the status of a message that is forwarded to a third party is “Forwarded” as opposed to the “Read”, “Deleted”, “Emptied”, etc.

In the overall functionality comparison in conjunction with viewing the table above we have found that there are only 5 distinct functionality advantages within the Novell GroupWise email platform over the Microsoft Live@EDU platform and 22 distinct advantages within Microsoft Live@EDU platform over the GroupWise email platform.

**Mobile Devices**

**Summary**
Support for mobile devices has been one of GroupWise's greatest weaknesses over the past few years. It has become an increasingly urgent problem, as more and more members of the college community (Students, Faculty, Staff) acquire the latest smart phone models and then ask ITS to help them get connected to the college email system. With our email switched to Live@EDU, it will be easy for mobile devices of all sorts to connect to the college email system. However, the situation with GroupWise is about to get better too, with a new "data-sync" server which promises full connectivity with many mobile devices by using the same protocols as the predominant email system, Microsoft Exchange. ITS is currently testing the new GroupWise "data-sync" server. Early impressions are that it works as advertised, but it is a very new product so there may be bugs that still need to be ironed out. So the conclusion is that Live@EDU does not offer any benefit over GroupWise with regard to mobile devices. However, this is a very recent development; one could speculate that this is only a temporary situation. Future products may create new challenges, and Microsoft will probably respond to those new challenges more quickly than Novell.

**Background**
In recent years, we have seen increased usage of mobile devices with email and calendaring capabilities. These are quite the improvement of the PDA’s of a decade ago. These devices can receive email and calendar appointments over a cell phone provider’s network in real-time. You can truly be “always connected”, no matter where you are.

When a new product of this sort is released, it is often limited to only working with a personal email account at first, and then later on they will add support for working with an enterprise email system. (NOTE: an "enterprise email system" differs from a “personal email account” in features, such as proxy, delegation, sent item tracking, calendars, shared address books, etc. Examples of personal email accounts are Yahoo, Hotmail and Gmail. Examples of enterprise email systems are Microsoft Exchange, Novell GroupWise, and Lotus Notes.) When support for an enterprise email system is provided, it is usually only Microsoft Exchange at first, and then maybe later support for Lotus Notes or Novell GroupWise will be added. Each system has unique interfaces and therefore the manufacturer must implement support for each system separately. Microsoft Exchange is targeted first because it has the greatest market share and therefore offers the biggest return on investment.

A recent example of a product release was the Apple iPhone. When it first came out, it supported only personal email accounts. It was not until a year later that Apple released an update that added support for a Microsoft Exchange email system. Apple never added support for Novell GroupWise, instead leaving it up to Novell to try to come up with a solution for their customers. This has been consistent with the representation of our experience with Novell GroupWise here at Messiah College. When a new mobile product comes out, we have had to wait for two or three years before a solution for connecting that mobile product to our GroupWise system has become available. Sometimes that solution has an expensive price tag, priced per user, meaning we can only offer it to a select number of employees and not to students at all.
As Novell GroupWise continues to lose market share, the situation is only likely to get worse. We can continue to rely on Novell to (eventually) provide solutions to these problems, but in some sense, mobile access would be a lot easier if we were on the market-leading email system, i.e. Microsoft Exchange.

Testing Notes
There are four major product groups of smart phones we looked at.

1. **Android**-based devices (e.g. Droid) - Google’s mobile phone operating system (2007); many smart phones are based on this operating system. In fact, it has recently become the market-leader (U.S. market share is 33% and rising.).

2. **Blackberry** - since 2002 this mobile device has been very popular with company executives and travelers (market share is 28%).

3. **iPhone** (Apple iOS-based devices, also iPad) - Apple’s entry into the smart phone (2007) and tablet device (2010) market. Both devices use the same underlying software, iOS, so generally what works for one will work for the other. (iOS has market share of 22%).

4. **Windows Mobile**-based devices - Microsoft’s mobile phone operating system (market share 5% and falling). Several years ago, ITS had evaluated smart phones and recommended Windows Mobile-based phones because they worked the best with GroupWise.

**Novell GroupWise (Up until October 2010)**
First, we describe the GroupWise situation as it has been over the past couple years.

<table>
<thead>
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<th>Email Access</th>
<th>Calendar/Contacts</th>
<th>Synchronization</th>
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<tbody>
<tr>
<td>Android</td>
<td>email-only</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Blackberry</td>
<td>email-only access; full calendar/contacts synchronization available for select employees using NotifyLink service</td>
<td></td>
<td></td>
</tr>
<tr>
<td>iPhone</td>
<td>email-only access; full calendar/contacts synchronization available for select employees using NotifyLink service</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Windows Mobile</td>
<td>full access to email, synchronizes calendar and contacts</td>
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**Novell GroupWise (After October 2010)**
Now, we describe what the GroupWise situation currently is. Novell has just released an update to GroupWise which will provide full support for iPhone, Android devices and Windows Mobile devices.

<table>
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<tr>
<th></th>
<th>Email Access</th>
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<th>Synchronization</th>
</tr>
</thead>
<tbody>
<tr>
<td>Android</td>
<td>(still testing) full access to email, synchronizes calendar and contacts</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Blackberry</td>
<td>email-only access; for full synchronization we need to acquire an expensive BES server; or, there is an &quot;astrasync&quot; program we are evaluating that may help here</td>
<td></td>
<td></td>
</tr>
<tr>
<td>iPhone</td>
<td>(verified) full access to email, synchronizes calendar and contacts</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Windows Mobile</td>
<td>(verified) full access to email, synchronizes calendar and contacts</td>
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**Live@EDU**

<table>
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<th>Synchronization</th>
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<tr>
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<td></td>
<td></td>
</tr>
</tbody>
</table>
Blackberry  email-only access (for full synchronization we need to acquire an expensive BES server; or, there is an "astrasync" program we are evaluating that may help here)

iPhone  (verified) full access to email, synchronizes calendar and contacts

Windows Mobile  (verified) full access to email, synchronizes calendar and contacts

Both of the email systems currently have the same level of functionality. Although, we believe that Microsoft Live@EDU is better positioned than Novell to handle new devices in the future due to the following reasons:

1. Microsoft has been in the mobile market far longer than GroupWise and is more likely to support newer phones more quickly
2. Microsoft mail server (Microsoft Exchange) is currently the industry standard regarding mobile device sync.
3. The method that GroupWise uses to sync mobile phones is through ActiveSync which is a Microsoft Product

Security/Privacy
Both our current on campus hosted GroupWise email server and Microsoft hosted Live@EDU email server are inherently very secure systems. Since IT security (or most times the lack thereof) has ability to generate PR and possible ill well against the organization at fault, both Messiah ITS (as we currently run our own GroupWise mail server) and Microsoft understand the importance of maintaining a secure environment for their users, not only to protect their customers but also their own reputation. Below is a basic overview of the aspects relating to data security regarding these two email systems.

<table>
<thead>
<tr>
<th>Item</th>
<th>GroupWise</th>
<th>Microsoft Live@EDU</th>
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<tbody>
<tr>
<td>Hosting</td>
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<td>Data Ownership</td>
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<td>Mobile Device Erase Functionality</td>
<td>No</td>
<td>Yes</td>
</tr>
<tr>
<td>Access Authorization</td>
<td>Messiah</td>
<td>Messiah</td>
</tr>
</tbody>
</table>
Cloud based file access

- Users can work on files directly on the internet via Microsoft Live Apps (Word, Excel, PowerPoint), therefore leaving no trace of the file on the computer
  - No temporary file is created
  - File is not opened directly onto the hard drive therefore it will not save onto the hard drive but instead in the users hosted storage space (Microsoft SkyDrive)

<table>
<thead>
<tr>
<th></th>
<th>No</th>
<th>Yes</th>
</tr>
</thead>
</table>

Therefore, in light of the fact the Microsoft contractually recognizes that our data is owned and governed by the college even though it is hosted on Microsoft’s server, it is accurate to state the Messiah email access and ownership will essentially stay the same if hosted by Microsoft Live@EDU. The three other main security benefits (listed in chart above) of the Microsoft Live@EDU platform would serve as great additions as we continue to bolster our level of IT security preparedness.

**System Integration**

Since Microsoft Live@EDU is a Microsoft solution it is made to integrate with Microsoft Office applications directly. As we continue to facilitate a higher level of system integration we may be able to begin discontinuing some of the current software contracts that currently act as a patch to assimilate systems and the data they contain. Here a few examples of how the college may benefit from this integration:

1. Direct integration gives users the ability to work directly within Microsoft Word, Excel or PowerPoint on a document that is stored on the user’s SkyDrive (personal web hosted disk drive space that can be accessed anywhere there is internet access).
   a. Therefore, no need to download files and take home or with you when you travel
   b. More secure as users can edit files directly on the web without having to worry about downloading them to a personal computer (or a hotel computer when traveling) therefore alleviating the IT security risk that is posed with temporary files.

2. Microsoft Live@EDU also allows for greater integration between the Microsoft Outlook and Microsoft Office. A few examples of this integration include:
   a. Ability to perform HTML Email Merges
   b. Stationery themes when composing messages

3. Microsoft Live@EDU allows for more consistent aesthetic feel between its services
   a. More consistent look and feel between the desktop client interface and the web interface
   b. Ability to brand the email web interface

4. Integration with Microsoft SharePoint
   a. SharePoint is currently the industry for collaboration software
      i. ITS is currently is in the process of implementing a SharePoint server
b. The potential usages for SharePoint include:
   i. Intranet (i.e. Campus Portal)
   ii. Network Drive Access Point
   iii. Project Management Software
   iv. Replacement for Cumulus (Photo Archiving software)

Innovative Potential
As innovation continues to propel software and hardware to the next level, the way in which communication and collaboration “happens” will also be transformed. For the most part we can count on the idea of email communication (in its current form) to be around for years to me, but the way through which it is complimented will gradually grow. Both vendors have a commitment to product innovation and functionality, but Microsoft is currently the standard within the email industry. Although being the standard does not always correlate to being the best in every area, it is important to note that they are the industry standard for more reasons than because of their reputation. Microsoft Live@EDU is committing to two system releases per year. Novell has made no such commitment. Another key strength in implementing systems that are currently the industry standard is that other manufacturers will develop products that are compatible for the standard before they produce their products for other vendors. Therefore, allowing users of Microsoft Live@EDU to have the opportunity to take advantage of the “latest and greatest” devices and software packages geared toward email service. A few examples of items that are on the horizon for Microsoft Live@EDU are:

1. Forefront Spam Filter
   Enterprise spam filter service that will be integrated into Live@EDU free of charge

2. Office Mobile
   a. Upcoming release for Windows Mobile phones that allows users to view, edit, share and sync office documents between their phone and PC which integrate directly with Microsoft Live@EDU user accounts
   b. Access and update files directly on SharePoint 2010 via Microsoft Live@EDU user accounts

Some of key innovations they have recently released that integrate into the standard Microsoft Live@EDU accounts relate to collaboration and sharing of information:

1. Microsoft Live@EDU SkyDrive
   a. SkyDrive is a service (free to all Microsoft Live@EDU accounts) that allows the user to have 5GB storage space hosted by Microsoft. These files can be accessed via the web anywhere there is internet access.

2. Microsoft Office Apps (Lite)
   a. Free web based versions of Microsoft Word, Excel and PowerPoint
   b. Allows users to can edit, view and share your files with anyone else that has a Microsoft Live@EDU account (or a personal Hotmail.com or Live.com account)
   c. Allows users to collaborate in real time on a document, therefore allowing 2 or more people to be editing the same document at any given time without overwriting each other’s modifications.
d. Allows users to view version history of documents and revert back to an older copy if needed

3. Integration with Wordpress
   a. Wordpress is the most commonly used platform for blogging
   b. Each Live@EDU account will have the ability to create their own blog. These blogs can be utilized in many ways but here are a few of the key ones
      • Student ePortfolio
      • Interactive learning environment for Faculty and Student discussion and writing
      • Departmental Blog
      • Student Blog

Cost
There were three types of costs that were considered in this section: Implementation Costs, Operating Costs (annually) and Human Resource Costs (in annual hours). This numbers are given as an estimate (although actual amounts should be close to these figures) and are not meant to be interpreted as the actual definitive costs.

**Implementation Costs**
This section lists the capital implementation costs associated with converting to Microsoft Live@EDU.

<table>
<thead>
<tr>
<th>Item</th>
<th>Estimated Total Cost</th>
<th>GroupWise</th>
<th>MS Live@EDU</th>
</tr>
</thead>
<tbody>
<tr>
<td>End-user training</td>
<td></td>
<td>N/A</td>
<td>$0</td>
</tr>
<tr>
<td>• We already own training</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>materials for Microsoft</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Outlook as a part of our</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>agreement with Custom</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Guides</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>• All training would be</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>performed in house by ITS</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>through classroom based</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>hands-on training and</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>online video tutorials</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td></td>
<td>$0</td>
<td>$0</td>
</tr>
</tbody>
</table>

**Operating Costs**
We believe switching our email service from GroupWise to Live@EDU will reduce the college's annual operational costs by approximately $18,000 annually. This section of the report discusses operational costs, i.e. ongoing costs after the migration/conversion has been completed. In particular, we are interested in costs where we expect some sort of change.

The server, backup and storage costs that are listed below were devised by taking the cost of initial purchase of the hardware and then (in most cases) using straight line depreciation over its expected
lifespan and including an estimated amount of variable costs associated with that server, backup or storage device.²

<table>
<thead>
<tr>
<th>Item</th>
<th>Estimated Annual Cost</th>
<th>GroupWise</th>
<th>Microsoft Live@EDU</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>GROUPWISE</strong>: 8 physical servers, 3 virtual servers - 100% for GroupWise</td>
<td>$4,856</td>
<td></td>
<td>N/A</td>
</tr>
<tr>
<td>GroupWise</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>(physical: WC1, GWC2,..., GWC5, NWSNAP, MYMAIL2A, MYMAIL3A)</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>(virtual: MYMAIL1A, MYMAIL4A, GWMOBILE)</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Assumption: cost $607/year per physical server (see supporting document); $0/year per virtual server</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>GROUPWISE</strong>: 2 physical servers - 75% for SpamAssassin</td>
<td>$911</td>
<td></td>
<td>N/A</td>
</tr>
<tr>
<td>GroupWise</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>(MX1, MX2)</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Assumption: cost $607/year per physical server (same as above)</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>GROUPWISE</strong>: Storage on our SAN for GroupWise</td>
<td>$7,600</td>
<td></td>
<td>N/A</td>
</tr>
<tr>
<td>GroupWise</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>currently allocated: 2600 GB on our Frey array, 1200 GB on our Old Main array (see supporting document)</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>estimated cost per GB: $2/yr.</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>GROUPWISE</strong>: Tape backups (# tapes?) for GroupWise backups</td>
<td>$4,920</td>
<td></td>
<td>N/A</td>
</tr>
<tr>
<td>GroupWise</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>includes cost of backup disks and tapes; does not include BEX or jukebox costs; see supporting document</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>GROUPWISE</strong>: Software license costs</td>
<td>$0</td>
<td></td>
<td>N/A</td>
</tr>
<tr>
<td>GroupWise</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Note: GroupWise is currently paid for as part of a larger bundle of products; the cost of the individual products we use sans GroupWise is greater than the cost of this bundle; so we will not save any money on software licenses by dropping GroupWise until we dropped one or some of the other products as well.</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>MICROSOFT LIVE@EDU</strong>: Software license costs (Outlook client)</td>
<td>N/A</td>
<td></td>
<td>$0</td>
</tr>
<tr>
<td>GroupWise</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Note: We currently have Outlook included as part of our MS Office Bundle</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>GROUPWISE</strong>: Cost for M+ Archive Servers</td>
<td>$1,357</td>
<td></td>
<td>N/A</td>
</tr>
<tr>
<td>GroupWise</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Server Cost ($607)</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Storage Cost ($750)</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>GROUPWISE</strong>: GroupWise Archival/Retention Solution (M+)</td>
<td>$8,992</td>
<td></td>
<td>N/A</td>
</tr>
</tbody>
</table>

² For more details on the breakdown and how the estimates were computed please see the following supporting documentation listed in the “Supporting Materials” section below: Backup Costs for GroupWise, Cost per Physical Server, and Storage Costs for GroupWise.
There are some aspects of our email/calendar system hosted on site that we will need to continue to pay for and/or support because a switch to Live@EDU will not allow us to discontinue them. Or, we will need to adopt a similar system on the Live@EDU side with a similar cost. Here, for reference sake, we will document some of these.

<table>
<thead>
<tr>
<th>Archive)</th>
<th></th>
</tr>
</thead>
</table>
| **GROUPWISE:** Data Sync Server for Mobile Phones sync  
  • Virtual Server  
  • No Storage Cost | $0 | N/A |
| **MICROSOFT LIVE@EDU:** Microsoft Live@EDU Hosted Archive/Retention Solution (Unlimited Mailbox) | N/A | $9,600 |
| **MICROSOFT LIVE@EDU:** Add-on for Outlook providing Auto-date-like functionality  
  • (Note: $18.95/user @ 50 users) | N/A | $948 |
| **MICROSOFT LIVE@EDU:** Server for SSO functionality  
  • (one virtual machine; one Windows server license) | N/A | $607 |
| **Total** | $29,086 | $11,155 |

**Human Resource Costs**

To serve the college’s increasing levels of support and innovation needed ITS continues to evaluate ways to manage and also increase our workflow, we believe that by transitioning to an externally hosted email solution will free up 170 hours annually of ITS staff time. As with any major IT system change there are typically initial implementation hours associated with the change. So, therefore switching something as fundamental to the college as our email system will have normal expected upfront time investment.

<table>
<thead>
<tr>
<th>Item</th>
<th>Estimated Annual Hours</th>
<th>Estimated Conversion Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>GW</td>
<td>MS</td>
</tr>
<tr>
<td>GWFAx</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Archive system</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Email MTA</td>
<td></td>
<td></td>
</tr>
<tr>
<td>McBulmail</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Faculty Calendar Sync</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

This custom program takes faculty class schedule information from Banner and loads it into faculty's GroupWise calendars. This piece will need to be rewritten for Live@EDU but it will work similarly.
**GROUPWISE**: End-user training
- We have not performed formal training for GW in the past few years and do not have formal training materials created and there would need to be developed
- Training is all be performed in house by ITS through the use of Hands on training sessions
- Assume 100 employees receive training yearly

<table>
<thead>
<tr>
<th>Item</th>
<th>Estimated Annual Hours</th>
<th>Estimated Conversion Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>MICROSOFT LIVE@EDU</strong>: End-user training</td>
<td>GW: N/A</td>
<td>MS Live@EDU: 100</td>
</tr>
<tr>
<td></td>
<td>GW: N/A</td>
<td>MS Live@EDU: 800</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>MICROSOFT LIVE@EDU</strong>: Email migration</td>
<td>GW: N/A</td>
<td>MS Live@EDU: 80</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**MICROSOFT LIVE@EDU**: End-user training
- We already own training materials for Microsoft Outlook as a part of our agreement with Custom Guides
- Training would all be performed in house by ITS through the use of Hands on training sessions and video tutorials
- Assume not all employees will attend
- e.g. estimate 2-hour training session for 400 employees

**MICROSOFT LIVE@EDU**: Email migration
- CGS will perform migration free of charge (estimate 80-160 dedicated person-hours to pull this off)
- Assumption: ITS will still need to play a role in interacting with CGS during the migration
<table>
<thead>
<tr>
<th>Item</th>
<th>MICROSOFT LIVE@EDU: Rules migration</th>
<th>MICROSOFT LIVE@EDU: Calendar, Address Book, To-do list migration</th>
<th>MICROSOFT LIVE@EDU: Rewrite Messiah programs that interface directly with GroupWise</th>
<th>MICROSOFT LIVE@EDU: Setup SSO server</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>(end-users will have to do this themselves)</td>
<td>(varies from employee to employee, estimate average of 10 minutes)</td>
<td>e.g. faculty-class-schedule-loader</td>
<td>Assume 120 hours labor</td>
</tr>
<tr>
<td></td>
<td>Assumption: 750 employees</td>
<td>N/A</td>
<td>N/A</td>
<td>N/A</td>
</tr>
<tr>
<td></td>
<td></td>
<td>N/A</td>
<td>N/A</td>
<td>200</td>
</tr>
<tr>
<td></td>
<td></td>
<td>N/A</td>
<td>N/A</td>
<td>40</td>
</tr>
<tr>
<td></td>
<td></td>
<td>N/A</td>
<td>N/A</td>
<td>120</td>
</tr>
<tr>
<td></td>
<td></td>
<td>120</td>
<td>N/A</td>
<td>N/A</td>
</tr>
<tr>
<td>GROUPWISE: Staff time maintaining GroupWise back-end</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Includes issues like repairing servers, increasing disk space, dealing with failed backups, installing patches/upgrades;</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>do not include issues which end-user notices, e.g. email delivery problems, or requests to restore a mailbox</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Estimate: 10 hrs./mo.</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>GROUPWISE: Staff time maintaining M+ Archive Server</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>GROUPWISE: Staff time Data sync server</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>GROUPWISE: Staff time maintaining SpamAssassin back-end</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Assumption: 30 hrs.</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>MICROSOFT LIVE@EDU: Staff time maintaining Live@EDU accounts/passwords</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>(w/ AD synchronization)</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>(Note: this is necessary if we use any aspect of Live@EDU, not just email)</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>N/A</td>
<td>40</td>
<td>N/A</td>
<td>N/A</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Item</th>
<th>Estimated Annual Hours</th>
<th>Estimated Conversion Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>GW</td>
<td>MS Live@EDU</td>
<td>GW</td>
</tr>
<tr>
<td></td>
<td>GW</td>
<td>MS</td>
</tr>
</tbody>
</table>
CGS free migration (if we decide to use cloud based Email Archiving/Retention solution Unlimited Mailbox) – estimated to be a $20,000 - $30,000 value
Migration includes:
1. Email
2. Contacts
3. Calendar

Alumni Account Availability
Ever since the college has offered email addresses to students, ITS has received feedback from students stating that they would like to maintain their “@messiah.edu email accounts” after graduation. This is a feature we would have been able to (and still can) with GroupWise although it would require the college to pay for the overhead costs associated with maintaining those accounts, including extra email servers, extra email storage space and utility costs. The offering from Microsoft Live@EDU would allow the college to issue alumni their own “@messiah.edu” (aka “Email for Life”) accounts at no physical cost to the college. This ability would be helpful for students and the college in the following number of ways:

1. It allows students to maintain a stronger affiliation with the college
2. Gives the college and opportunity to stay in closer contact with the student as we will more likely have up to date email address information
3. It will resolve the issue of ITS have to go back through and reenable recent graduate’s accounts due to the fact that they want access for a short time their old messages.

Email Support
There are two types of email support that can be considered. Client support deals with learning how to use the functionality of the email client and/or web interface. Backend support deals with troubleshooting email delivery problems or other items deemed as server issues. For client support, we find the level of support that ITS can provide should stay about the same as it is with GroupWise. For backend support, we find the level of support that ITS can provide to be somewhat lessened as there are things ITS can and does do now to resolve email delivery problems and other items deemed as server issues that they will not be able to do when the system is remotely hosted.

Email Troubleshooting
Currently, when someone has a problem emailing someone else, they can open up a ticket with ITS and ITS has staff that can look at server logs to try to ascertain what happened to the missing message. In some cases, ITS discovers the message got marked as spam. In other cases, ITS discovers a routing problem affecting email between Messiah’s servers and the other institution’s servers, in this case ITS works with staff at the other institution to get those servers talking to one another.

With Live@EDU, ITS is unable to examine log files or configure/troubleshoot email routing. The best ITS can do is open a ticket with Microsoft support, and act as a liaison between the end-user and the Microsoft support team.
**Additional Considerations**

When analyzing the two email systems there are a number of other smaller, but important factors that will help facilitate a more educated outcome. They are as follows:

1. **Business Continuity/Disaster Recovery Strategy**
   - Within Microsoft Live@EDU our mail would be hosted by Microsoft at their redundant data centers. Therefore, if there does happen to any type of natural disaster or outage that prevents our on campus servers from functioning properly, access to email calendar and other services would most likely be available for our users (assumption is that there is not a wider spread issue that would affect users having access to the internet).

2. **Microsoft Outlook is currently the industry standard.** This has two major benefits:
   - It enables students who are entering into the marketplace to already be familiar with using Outlook for their email functions.
   - It curbs the learning curve of new employees who come from other institutions that use Outlook.

**Supporting Materials**

**Supporting Research**

- Email Evaluation Task Force Charter
- Email Evaluation FAQ
- Novell GroupWise vs. Google Apps for Education vs. Microsoft Live@EDU Comparison
- Comprehensive Test Plan of Microsoft Live@EDU
- Backup Costs for GroupWise
- Cost per Physical Server
- Storage Costs for GroupWise

**Supporting References**

- [Novell is Rapidly Losing GroupWise Business](#) (1/2010)
- [Another Major University Enrolls in Microsoft's Cloud](#) (7/2010)
- [Microsoft Signs Massive Cloud Apps Deal](#) (6/2010)
- [Business School Swaps out Google Apps for Microsoft Live@EDU](#) (6/2010)
- [Google Apps for Education vs. Microsoft’s Live@edu](#) (10/2009)
- [Google vs. Microsoft: Number wars, students as weapons](#) (2/2010)
- [Hands on with Outlook Live: universities choose Microsoft over Google](#) (6/2009)
- [Choosing between Microsoft’s Live@edu and Google Apps for Education](#) (10/2009)
- Partial list of schools using MS Live@EDU
Conclusion

In conclusion our role in the task force was to produce this final report in hopes that it would be used as a tool to not only analyze our current email system, but also as a tool that would facilitate a process that encourages the college to become more cognizant of our IT environment. Therefore, obtaining a better understanding of how to strategically structure it in a way that positions Messiah to be on the cusp of innovation in higher education. As with any type of decision that will instill a change in culture and/or work functionality it is important to look beyond the fact that this is a change, but instead it should be looked at as a way of reinventing our most fundamental communication tool that we use here on campus. At a recent Educause Conference (Higher Ed IT Conference) the following was mentioned regarding the paradigm between higher education innovation and governance: “Governance should be asking the question what does the data say not how does it make me feel. As change has a habit of pulling on emotions which may tend to override the facts.”