Declining and Emerging Technology
in the Legislative Branch
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Declining or Obsolete Technology

- Legislative Audit Division SABHRS

The Executive Branch uses PeopleSoft software for SABHRS. PeopleSoft was recently purchased by Oracle. Oracle already has and markets a financial and human resources software system similar to PeopleSoft. Even though Oracle says that it will support PeopleSoft for some time, there is speculation that PeopleSoft was purchased to put it out of business and capture its market.

The Legislative Branch has a system called Legislative Audit Division SABHRS (LAD SABHRS) that was developed by the Legislative Branch over 2 bienniums. This system is used by the LAD in the audits of state agencies. The system is highly reliant on PeopleSoft software. If the PeopleSoft system is replaced, it will require a lot of work for the Legislative Branch to replace the functionality in the current system.

In discussions with the Executive Branch about this issue, the Executive Branch says that it thinks the PeopleSoft system will still be available for several more years because there are several organizations nationwide that have PeopleSoft and they have refused to change to another product regardless of the pressure put on them by Oracle. The Branch will continue to monitor this situation and take the appropriate action when necessary.

- Mainframe TextDBMS System

The Branch uses a mainframe system called TextDBMS to update and maintain the MCA. The Branch has extensively used the programming language for TextDBMS to enhance the process used. The Branch has a significant investment in this system, which it has used for the last 19 years. The system currently meets all of the needs of the Branch and requires very little maintenance. However, the original owners of TextDBMS are no longer involved in the legislative market. About 10 years ago, the original owner sold the rights to TextDBMS to a small company (two to three employees), which the Branch currently contracts with for support. Additionally, since mainframes are a declining technology, it becomes more and more difficult to hire mainframe programmers. This system is in the declining stage and is being monitored for potential replacement. The estimated cost of replacement is approximately $2,000,000 to $3,000,000 in current dollars.

- LAWS Web Pages

The Branch has developed a system to process and track legislative bills as they move

through the Legislature. This system is called the Legislative Automated Workflow System or LAWS and was originally developed in 1997-98. LAWS has a web interface to all of its data. Since the LAWS web interface was developed in 1997, the Branch website has been redesigned and improved significantly. Also since 1997, web technology has moved forward significantly. These two factors combined have made the LAWS web interface somewhat obsolete and not compatible with the rest of the Branch website. At some point in the near future, the web interface to LAWS will need redesigning to bring it up to date with current web technology and the rest of the Branch website.

- WordPerfect and WordPerfect Macros

The bills, journal, and committee minutes processing part of the LAWS and also some of the Branch's office processes are written in WordPerfect macros. The word processing part of the LAWS system was developed in 1997-98 using the WordPerfect macro language. The Branch upgraded to the release 12 of WordPerfect during the 2006-07 biennium and is currently on a supported release of WordPerfect. WordPerfect has a small percentage of the market share for word processors. WordPerfect was recently sold to a private investor and thus the company that owns WordPerfect is no longer publicly traded. Thus it is difficult to determine the financial status of the company—i.e., whether or not they are on the verge of going out of business. The Branch needs to continually evaluate this product and the company's performance in order to be prepared to replace it if necessary. Replacing all of the WordPerfect macros in the Branch and retraining staff on a new word processing package are estimated to cost approximately $1,000,000 to $2,000,000 and would require at least 2 years of effort.

- Lotus Approach

The Branch uses Lotus Approach for accessing and manipulating SABHRS data and for tracking financial aspects of fiscal notes. Lotus Approach is a low-end database package that runs on the PC. Lotus Approach has been dropped from the list of supported Executive Branch software. However, the company (IBM) that sells and supports Lotus Approach has no plans to phase it out. The Branch requires very little support for Lotus Approach. The Branch has discontinued new development in Lotus Approach but will continue to use and support the current systems that are using it. The Branch will consider converting these Lotus Approach applications to supported software sometime in the next 4 to 6 years.

- Microsoft Office Suite (MS Office)

The MS Office Suite is a word processing, spreadsheet, presentation, and database package that runs on the PC. MS Office is the current Executive Branch and Legislative Branch standard in these areas. The Branch uses MS Office extensively for both word processing and spreadsheet applications. Additionally, SABHRS and MBARS require

MS Word and Excel. The Branch is highly reliant on SABHRS and MBARS. During the 2006-07 biennium, the Branch upgraded to MS Office 2003. Although there wasn't much additional functionality in MS Office 2003 that the Branch needed, the Branch felt compelled to upgrade to be able to communicate effectively with SABHRS and MBARS.

Because Microsoft has about 95% of the market share of the Office Suite business, it can set the purchase price almost as high as it wants. Based on the high price and the fact that there is little new functionality in the MS Office 2007 suite that is necessary for the Branch to continue to conduct its business, the Branch needs to continue to monitor the status of this technology and consider whether and when it needs to be replaced.

- Montana Budget Analysis and Reporting System (MBARS)

MBARS is a system used by both the Executive and Legislative Branches. It is used before the legislative session to prepare the executive budget recommendations. During the session, the system is used to track budget decisions as the Legislature establishes appropriations policy. Upon completion of the session, the system is used to load the state accounting system with legislatively approved budget information. MBARS was developed for the state by a private contractor in 1997-98. It was first used for the 1999 legislative session. The vendor that supports MBARS has indicated that the software platform used to develop the system is difficult to support because the tools are no longer current technology and thus it is difficult to find people knowledgeable in their use. For this reason, both the Executive and Legislative Branches need to monitor the status of this system and determine when it is appropriate to replace it. It is estimated that a system with similar functionality would cost approximately $3,000,000.

- Desktop Operating System

The Branch currently uses Microsoft Windows XP as its desktop operating system (OS). Microsoft released the next upgrade to Windows XP in January of 2007. This OS was called MS Vista. Not very many organizations have implemented Vista. Three of the main reasons for this are: 1) it is very costly to upgrade to it because of increased hardware; 2) there is little new functionality that is of benefit; and 3) much of the current software that runs on Windows XP will not run on Vista. Some industry analysts are saying that the desktop OS market is a mature market and thus customers do not see a need to upgrade their desktop OS as quickly as they have in the past. The Branch plans to stay on Windows XP through the 2011 legislative session and will make a decision after that on the desktop OS to upgrade/convert to at that point. Options are Windows, Linux, or Apple.

- Network Operating System

The Branch currently uses Novell Netware as its network operating system. Novell has

indicated that it intends to phase out Netware within the next 2 to 4 years. Novell has provided a migration path for Netware users to their new product, SuSe Linux Open Enterprise Server. The Branch plans to upgrade to SuSe Linux Open Enterprise Server during the 2010-11 biennium.

Emerging Technology

The Branch has been investigating the following emerging technology. If the investigation proves successful, it should result in more efficiency to the Branch and possibly cost savings.

- Server Virtualization

In the past, one server software operating system ran on one hardware server. Virtualization is software and hardware that allows multiple server operating systems to run on one hardware server. This provides for better usage of the hardware. Virtualization also provides the capability to quickly configure a server and place it into service. Virtualization is being used successfully by several IT organization nationwide. The Branch will probably implement virtualization over the next 1 to 2 years.

- Blade Servers

Recent improvements in hardware servers have allowed the entire server (minus the hard drive) to be placed on a small circuit board (blade). Server designers have come up with a Blade Center, which is a device that has the capacity to hold about 10 blade servers. This configuration has the capability to add new servers quickly if additional capacity is needed quickly and it also reduces the amount of space needed in the server rack for new servers. Another benefit of Blade Centers/Servers is that the power needed to run the server(s) is much less than traditional servers. In July of 2008 the Branch brought up its first Blade Center and is working toward putting it online.

- Linux

Linux is an emerging PC and server operating system. It is currently very popular as a server operating system, and within the next few years, it is predicted that it will have a major impact on the market for server operating systems. Linux's strong points are that it is typically cheaper, more stable, and more robust than other operating systems. Potential savings can be achieved in initial purchase price and reduced long-term maintenance. On the downside, network administrators experience a steep learning curve regarding Linux implementation.

In the long run, the benefits of Linux far outweigh the detractions, and thus the Branch sees much potential for Linux. The Branch is currently testing Linux as a web server and eventually wants to implement it as an audio streaming server, a file and print server, and possibly a PC operating system.

- Open Office

Open Office is an office suite similar to Microsoft Office. It offers a word processor, spreadsheet, database, and presentation package. It reads and writes Microsoft Office documents and it can be downloaded and used free of charge. It can perform 90% of the functionality offered by Microsoft Office. The Branch is investigating this software to determine if it can be used to replace Microsoft Office and thus reduce the upgrade costs associated with that product.

• Apache/MySQL/PHP

For several years, Apache has been the most used web server software on the Internet and is open source software. MySQL is also an emerging open source database package. PHP is an emerging open source web serve programming language. Apache, MySQL and PHP all run on multiple operating systems and thus offer flexibility from that standpoint. The Branch continues to test and in some cases implement pieces of these software packages.