Declining and Emerging Technology

April 2016

1. **Declining Technology**

   a. Web Development Environment - Steve Eller

The Branch has a long history of publishing information for internal and public use. The publishing function in the Branch has been and continues to transition from traditional paper-based publications to web-based publications. With the increasing use of electronic content, the possibilities for richer functionality and more sophisticated and interactive presentation arise. In order to take advantage of these capabilities of the web, the Branch's web development environment must be modernized. This effort is a consideration for upcoming years and will be coordinated with other redevelopment projects such as the Session System Replacement.

   b. LAWS Web Pages - Steve Eller

The Branch has developed a system to process and track bills as they move through the legislative process. 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 undergone major changes. Also since 1997, web technology has moved forward significantly. These two factors combined have made the LAWS web interface not compatible (i.e. not have the same look and feel) 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. The update is currently being planned.

   c. WordPerfect and WordPerfect Perfect Script - Steve Eller

The bills, journal, and committee minutes processing part of LAWS and also some of the Branch's office processes are written in WordPerfect. The word processing part of the LAWS system was developed in 1997-98 using the WordPerfect macro language (Perfect Script). The Branch upgraded to 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 therefore 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.

d. Data Analytics - Steve Eller

Presently data is analyzed in the Branch using desktop-based tools including databases, spreadsheets, and statistical analysis tools. All three divisions use a variety of tools; however those in the Fiscal Division are most complex and compressive. The Fiscal Division tools are based on a declining set of technologies such as Lotus Approach. Furthermore, the toolset is an example where, in an effort to be responsive and innovative, the non-IT staff in the Fiscal Division created an enterprise analytical system using non-enterprise-level tools. The solution was built up incrementally over years using tools on hand rather than having been specifically designed and architected as an enterprise system.

e. Visual Basic for Applications - Steve Eller

The Branch, like many organizations, has a long history of customizing Microsoft Office for specific needs. For many years the standard for doing this was with the Visual Basic for Applications (VBA) programming language. About 10 years ago Microsoft deprecated VBA in favor of other languages, primarily VBA.net (which while similar in name is quite different fundamentally). Most of the custom VBA used in the Branch lies within the MS Access databases, but it is used in other office applications here too. The effort for replacing our VBA is a consideration for upcoming years, and will be coordinated with other redevelopment projects such as the LAWS II and website upgrade.

f. Service Management Software - Darrin McLean

Currently OLIT uses a HelpDesk software that was designed to be integrated with Novell directory services. During our migration from Novell to Microsoft services the HelpDesk software was not replaced and we continue to use it to handle service requests daily. To track IT assets such as inventory, systems, and tasks, OLIT uses the Network Information of Computer Equipment (NICE) access database-driven application that is currently a separate system than our HelpDesk software. The facilities coordinator uses a Commercial Off-the-Shelf (COTS) system called Fixed Asset Tracking Software (FATS) in another independent inventory-based system. The new service management software will be compatible with Microsoft Active directory, and incorporate asset management, change management, software compliance, facilities management, and password self-help portal in one system.

2. **Emerging Technology**

a. Enterprise Information Archiving - Darrin McLean

The Branch, as with most government agencies, strives to foster openness in government through the presentation of information. The functions of the Legislative Branch have important historical and legal consequences. Because the Branch produces information and increasingly the information of record is produced and stored entirely electronically, it must consider the retention

of this electronic information. This area is a mix of technical and business considerations that include:

- Statewide Archiving Policy
- Branch Archiving Policy
- Public Records Information versus Personal Information Segregation
- Privacy Concerns
- Security Concerns
- Historical Record Information
- Legal Holds
- Litigation Threats
- Technology Capabilities and Limitations

While the proposed projects for FY 2014-2015 included an initial solution, we expect the needs in this area to be a focus for several bienniums to come.

  b. Advanced Data Analytics - Steve Eller

There has been ongoing talk and brainstorming in areas of the Branch around the use of "Big Data" and advance analytics tools to help researchers provide better forecasting. LFD has been most active in this area, but others have asked about opportunities for using this to help research too.   Big data analytics is the process of collecting, organizing, and analyzing large sets of data (called big data) to discover patterns and other useful information. Big data analytics can help organizations to better understand the information contained within the data and will also help identify the data that is most important to the business and future business decisions. Analysts working with big data basically want the knowledge that comes from analyzing the data.

  c. Infrastructure - Mike Allen

The Legislative Branch enterprise computing environment (datacenter services) has been significantly modernized over the past 10 years. Technology such as "hot swap" blade servers, multiple redundant power supplies, server virtualization, and mass storage are used to provide maximum uptime, data integrity, and system reliability. As these devices and applications continue to evolve, the Branch must also evolve. During the 2018 interim, we are scheduled to replace hardware in our infrastructure as part of the standard replacement cycle. To ensure we remain current with emerging technology rather than simply replace components, we will be researching new technology through vendors and consulting resources. The next generation of datacenter infrastructure technology, such as hyper-convergence, is more compact, supported by a single vendor, less expensive, and still highly reliable with built-in redundancy. These and other concepts will be considered prior to hardware replacement.

CI0425 6103fhxd.