Alameda Free Library

TECHNOLOGY REVIEW

June 2008

Summary:

The Library recently completed a substantial upgrade to its technology infrastructure, with the opening of a new main building. Neighborhood libraries are also undergoing some technology upgrades. In general, the Library's technology is in a good position to support current service offerings. This report lists areas in which the Library can improve existing technology and prepare for new service offerings.

Current Technology:

The Library currently has three major servers serving components of the Horizon integrated library system. There are several ancillary PC-based servers serving telephone notifications, email notifications, and SIP authentication.

The Library provides approximately 40 staff computers, 16 staff printers, 73 public thin-client stations, 21 public lab computers, five print station computers, five public printers, and four self-check stations. Library computers are organized in a Microsoft Windows workgroup and are managed by a combination of technologies, including Veicon, Envisionware, and VNC.

The Library is connected to the Internet and to City Hall via fiber (provided by Alameda Power & Telecom [APT]). Neighborhood libraries are connected to the Main building via point-to-point T1. Network devices consist of Cisco routers and switches. A Cisco firewall (PIX 515E) filters the Internet connection.

In addition to a wired local area network, the Library provides wireless network access to patrons by way of 12 wireless access points connecting to a Cisco 2950 switch. In addition, the Library provides laptops for patron use within the Library buildings.

The Library also provides a Point of Sale system (Envisionware) for collecting fines and fees, and an RFID system for inventory management.

The Library has a healthy relationship with City IT. The Library's dedicated IT staff person is funded by the Library but paid and managed by City IT. The City provides some enterprise services, as well as providing expertise and infrastructure support. The relationship currently does not provide much potential for resource and knowledge sharing.

Current Capacity:

The Library's technology is adequately resourced to support services at the current level. The Horizon ILS is able to support 200 simultaneous users at its current server configuration; the maximum simultaneous use during January 2008 was 189 users, with an average simultaneous use of 3 users. Even adjusting for peak periods, the estimated average peak simultaneous use of 19 users is well within the system limit. However, the Library should continue to monitor use on a weekly basis.

The Library's public PCs and thin clients are well used, without exceeding current capacity. However, there is significant unmet demand at the neighborhood libraries. Veicon provides a relatively low-maintenance reservation system for the thin clients, though there have been some concerns about vendor support levels. Similarly, the lab computers are equipped with reservation and configuration management via Envisionware. When current software contracts are renewed, the Library should consider reducing support and licensing costs by standardizing on one management system (i.e., Veicon or Envisionware), as well as evaluate the indirect costs of poor vendor support. In the meantime, it may be helpful to review and update the service level agreements with major vendors, including Sirsi/Dynix, Veicon, and Envisionware.

The current T1 connections between the Main building and the neighborhood libraries are adequate, but place a limit on expansion of services at the neighborhood libraries. Consider upgrading to DSL or fiber as needs increase.

The Library's fiber connection to the Internet and City Hall is more than adequate; however there should be some transition planning in case the current vendor (APT) ceases to support the fiber.

Staff PCs are up-to-date and appear to provide most of the staff's needs. However, lack of a Windows domain structure and unrestricted user security lead to inefficiency, inability to share files effectively, and the potential for expensive downtime. I highly recommend adding a domain controller server and managing staff computers through Microsoft's Active Directory.

The Library website is adequate, given the constraints of being integrated with the City website and depending on an outside provider. The ability to make the website a primary means of providing information to patrons, and in particular the ability to better integrate the website with the Library's catalog, requires bringing website management responsibilities inside the Library.

The Library's current level of technology support is insufficient. A previous technology audit had recommended 3.5 FTE of technology support, which now appears to be an overestimate since maintenance and system management is eased by use of tools such as Envisionware and Veicon. However, current technology support staff are also responsible for non-technical computer lab management, as well as other tasks. Due to current staffing levels, technology staff is largely unable to specialize, and there is insufficient

coverage during absences and vacations. In addition, technology support is less timely at the neighborhood libraries, due to the need to schedule site visits.

Technology staff need additional training, including training in library processes (e.g. check-in, check-out, point of sale, offline circulation, etc.), RFID and security, and domain management (Microsoft or Novell).

Patron Survey Responses:

The Steve Johnson Community Telephone Survey provides insight to the value patrons place on the Library's technology resources and services. The survey responses indicate that patrons are generally appreciative of the Library's technology resources. Several of the open-ended answers indicate that Library computers and computer classes are magnets for patrons who might otherwise not visit the Library.

The survey results also indicated a low awareness of online offerings other than the library catalog and website. Approximately 86% of respondents had used the catalog, and 76% had used the website. Of those who had used these resources, satisfaction was very high. However, 82% had not used subscription databases, 81% had not downloaded media, and 92% had not used IM reference. Satisfaction with these services was also lower than with the catalog and website.

These results suggest the need for better marketing of online services, and better training in their use.

Strategic Goals and Facilities Improvements

The goals selected by the Strategic Planning Committee include several which are specifically technological in nature, as well as others which will be supported by technology.

In particular, several goals require the improvement and promotion of the Library's website and online resources; several goals require an increase in the number of public computers at the neighborhood libraries; and several goals require an increase in the number and variety of computer classes offered to patrons. Other goals having to do with community space, school readiness, and literacy, for example, are less directly related to technology but will be supported by improved technology infrastructure.

Recommended facilities improvements include substantially increasing the number of public computers; substantially increasing the number of electrical drops available to laptop users; and adding a new computer lab at the neighborhood library that serves the west region of the city, once that new facility is built.

Recommendations

I have attempted to sort the recommendations into several broad categories. However, note that these recommendations are all interconnected and generally do not fall neatly into a single category.

The first set of recommendations is primarily oriented to improving the Library's ability to reliably and effectively provide services, regardless of specific service goals or facilities improvements.

- Implement an equipment replacement plan, and budget accordingly.
- Create a transition plan for wide-area network connections, in case Alameda Power & Telecom discontinues support for fiber.
- Join staff PCs to a Microsoft Windows or Novell domain, and manage them through available directory services, domain management tools, and other available tools.
- Review and update service level agreements with major vendors, including Sirsi/Dynix, Veicon, and Envisionware.
- Consider standardizing on a single public-access management system (e.g. Veicon or Envisionware) to reduce complexity and save on licensing costs.
- Implement lab management software to reduce staff time required for scheduling classes, configuring lab computers for specific types of classes, etc.
- Implement a helpdesk ticket management system to track help requests and solutions.
- Add technology support staffing levels by 1) removing non-technical responsibilities from current staff job descriptions, and 2) adding 1 FTE of additional staffing.
- Provide additional technology training to Library staff.

The second set of recommendations primarily supports the Library's goals related to online services and web presence.

- Bring responsibility for designing and maintaining the Library website fully into the Library.
- Enhance access to online resources through findability and usability projects.
- Increase staff engagement in social networking technologies, with an eye to making the Library's online resources more visible to patrons.
- Provide time and incentives to Library staff to research and develop new technology services.
- Rewrite the Internet Use Policy and Public Computer Use Policy to clarify and better communicate the Library's policies.
- Create additional documentation (pathfinders, cheatsheets, and tutorials) for patron use.

The third set of recommendations is oriented toward facilities improvements and expansion of public computer resources.

- Continue to monitor the Horizon servers' access levels with the expectation of adding resources in the event of adding additional buildings or integrating the online catalog with the Library's website.
- Replace current T1s between Main and neighborhood libraries with fiber or DSL.
- Ensure that any new neighborhood library space has adequate data and power drops to support additional workstations.
- Add customer service desks that are designed to maximize space and provide patron access to self-check stations, etc.
- Add additional public computers and laptop workstations at neighborhood libraries; expand the laptop loaning program where space limitations prevent the addition of computers.

Conclusions:

Alameda Free Library is well on the way to providing good technological support to its service responses and offerings. Emphasis should be given at this point to standardizing and organizing the technology the Library has already implemented, providing staff support and training to make the most of technology, and improving findability and usability on the Library website to maximize benefit to patrons. Building improvements and new buildings should follow the model of the new central building for infrastructure improvements that will allow and support future technology enhancements.