

Subject	Upgrading the Authority’s Information Technology Network Hardware, Software, and Connections
Summary of Issues	<p>In 2006, the Authority staff conducted a “technology assessment” of its internal information technology (IT) arrangements and capabilities. As a result, staff upgraded its internal network from a simple “peer to peer” configuration to a central server-based network. The assessment also recommended that Authority staff’s internet connection capacity should be expanded, as significant constraints on data flow were identified. Action on that step was deferred pending expiration of our existing phone and data (telecommunications) services contract in July 2007.</p> <p>Over the past four months, the need for further analysis and a detailed plan for systematically addressing the Authority’s IT needs has become apparent. We asked Nolte’s IT staff for assistance, and they compiled a brief report that identified further needs with regard to data and computer security, external telecommunications capacity, data backup and recovery arrangements, network server upgrades, and provision of remote access.</p>
Recommendations	Staff recommends that the Authority: (1) authorize release of a request for proposals (RFP) for upgrading the Authority’s IT network hardware and software; and (2) solicit proposals for replacing our current telecommunications connections to increase capacity (bandwidth) for internet communications.
Financial Implications	The estimated costs associated with upgrading the IT network hardware and software is estimated to not exceed \$50,000, with the majority of costs for support. A new telecommunications contract is estimated to cost \$600 to \$1,000 per month over three years, providing more capacity than the current services – for which costs are approximately \$850 to \$1,000 per month.
Options	<p>A. Decline to upgrade the IT network, or selectively update it.</p> <p>B. Renew the existing contract for telecommunications capacity.</p>
Attachments	None.
Changes from Committee	<i>None.</i>

Background

After the Authority moved to Hookston Square in the Summer of 2001, we established a “peer to peer” network for sharing information. In this configuration, computers were connected to each other directly, and a “central” computer helped manage traffic and links to multiple printers. All data files were stored on individual computers, and each had direct access to the Internet.

The Management Partners Report “Strategic Staffing Assessment” (November 2006) to the Authority included a recommendation for a technology assessment¹ to determine if our information technology (IT)

¹ Recommendation number 5: “Add consultants and/or contracts with other public agencies to address current needs in human resources, technology, and public communications/ outreach.”

systems should be upgraded. Accordingly, we retained a consultant – DecoTech Systems – who performed a technology assessment and made several recommendations, principal among them (1) upgrading our IT system to a centralized network with a Microsoft server, and (2) upgrading our external telecommunications capacity. It was apparent that the service benefits of installing a centralized network compared to the projected cost of under \$10,000 warranted a change in our configuration. We retained DecoTech to install a new HP server.

Some aspects of service that were expected from the new server were not implemented before the retirement of our previous Information Systems Specialist in February 2007. Subsequent to her departure, a number of issues have been identified with the new configuration that were interrelated to the telecommunications capacity constraints, to security, and to remote access connections – all of which had been part of the objective in moving to a centralized network server. As a result, we asked Nolte’s Director of IT to review the status of our server installation, assess issues of security and capacity, and make recommendations regarding further steps that would be necessary to maximize the capabilities of the network and address issues of data and computer security, external telecommunications capacity, data backup and recovery arrangements, network server upgrades, and provision of remote access.

Nolte’s Director of IT made a number of recommendations, principal among them:

1. Install New Server. To minimize disruption to existing users, and in recognition that the existing network server has not been configured to meet our ultimate objectives, purchase and install a new server, completely configured to meet our needs, in parallel with the existing server. Once the installation is complete and ready for operation, users would be switched over to the new server and the existing server would become the backup.
2. Standardize Individual PCs, Data Storage Mechanisms, and Connections to the Internet. At present, most committee materials, standardized documents, and archived documents are housed on the network server. However, quite a bit of information remains stored on individual PCs, with the levels varying from one user to another. A standardized framework is highly desirable, and would be done in conjunction with installation of the new server.
3. Installation of New Data Switches (Routers). The existing network and its internal configuration need to be revised to incorporate new data switches – one between the Internet and our server, and one between the first floor and the second (Finance Department) – where the current switch is limited to only 100 thousand bits per second (kilo bits, or kbs).
4. Security Upgrades. The current configuration is somewhat more vulnerable to intrusions than current security standards would provide. The switch (router) connecting to the Internet would provide an additional layer of security, and standards need to be upgraded on individual computers as well.
5. Local and Off-Site Backup. To replace the remote backup now sent to New Jersey through the Internet – which has experienced problems due to our Internet capacity constraints – it is recommended that local hard drive backup be procured, along with a tape backup unit so that tapes can be stored off-site.
6. Expand the Capacity of the Connection to the Internet. Current capacity appears to be approximately 256 kbs per second, average – although download speed of 162 kbs and an upload speed of 460 kps were measured in the field.

Nolte’s IT Director has advised staff that the cost of the first five elements could range up to \$50,000, depending on the costs of software and the installation services. Expanding the cost of the connection to the Internet is expected to have costs in the same range as our current contract -- \$600 to \$1,000 per month depending upon configuration parameters. According to legal counsel, the IT services can be procured through a typical consultant evaluation “quality-based” selection, since the majority of costs are

for professional services. For telecommunications services, because of the diversity of parameters involved relative to total capacity, flexibility, and local and long distance phone charges, staff proposes to solicit a number of proposals, and seek the best overall value given our key parameters: overall telecommunications capacity; Internet capacity; the flexibility of that capacity to dynamically handle varying demand levels and efficiently provide access; anticipated on-going telephone costs; and reliability.