

Act 213, 2007, Section 123
Report to the Legislature on Information Technology Expenditures

This report was prepared pursuant to Section 123, Act 213, SLH 2007, relating to general fund appropriation for information processing services (AGS 131), the sum of \$450,000 for fiscal year 2007–2008 for information technology expenditures. The bill requests a detailed report on the equipment purchased; provided further that this report shall include but not be limited to: a list of items purchased, cost of each item, life expectancy of each item, cost savings provided by each item, and overall space saved.

Background Information

This appropriation will be used by the Information and Communication Services Division (ICSD) to consolidate independent servers using server consolidation technology. Server consolidation will allow computing processes to be dynamically reassigned to the applications installed on the consolidated server. Because the computing resources are shared between multiple server processes on the consolidated server, efficiency is realized.

The server consolidation project was planned to start during the first quarter of Fiscal Year 2007-2008; however, the funds were not released until the second quarter. The ICSD has scheduled the equipment delivery, and will proceed with the customization and installation phase of the project. During calendar year 2008, the applications and data for the Department of Commerce and Consumer Affairs and the Department of Taxation will be migrated and tested.

Cost of Items Purchased

The information listed below identifies the equipment hardware and software purchased, discounted price offered to ICSD, and list price (to compare against the discounted price):

<u>Consolidated Server:</u>	<u>Discounted Price</u>	<u>List Price</u>
Model No. 9119-590	320,500.00	539,115.00
Software	46,073.00	83,746.00
<u>Disk Storage of 1.5 terabytes (TB):</u>		
Model No 2421-931	39,624.00	52,280.00

Life expectancy

The life expectancy of this equipment is based on the availability of spare parts, which is usually for five to seven years from the availability of the equipment. In this case, the life expectancy is to the end of 2014. However, the cost of maintenance increases over time and ICSD's experience indicate that technology upgrades should be planned when the manufacturer stops production of the equipment, which is estimated for 2010.

Cost Savings

The first source of savings was from the purchase of the server equipment and software that was discounted from the manufacturer's list price. This resulted in an approximate savings of \$256,288.

The second source of savings comes from technological improvements. Since current processors are faster, we are able to accommodate the increased demand with fewer processors. Similarly, disk space costs have decreased and ICSD was able to install more disk space at a third of the cost.

The third source of savings is associated with the efficiency of the consolidated server technology. Independent servers cannot share resources, so each independent server may need to be upgraded for future needs. In contrast, consolidation allows computer resources to be dynamically reallocated, and processes can be shared resulting in cost savings.

Overall Space Savings

An objective of server consolidation is to reduce the footprint (square footage) required for the servers. The project will initially reduce the total floor space by a factor of three, from approximately 48 square feet to 16 square feet. This space includes all necessary safety and accessibility clearances.

Additional space will be released as more servers are consolidated into the project's 16 square foot space. It is estimated that the existing consolidated server will be able to accommodate departmental processor needs for up to 16 additional processors. This would mean that no additional floor space would be needed for up to eight servers with two processors each.

Summary

The use of the general fund appropriation for Information Processing Services (AGS 131) of \$450,000 for Fiscal Year 2007-2008 will allow ICSD to implement server consolidation technology to maximize the use of computing resources. The server consolidation project will provide cost savings of over \$250,000 for the equipment purchase, provide space savings in the data center by reducing the footprint of the servers, and allow computing resources to be shared among disparate systems.

Benefits to Public

One of the major goals of the ICSD is to provide reliable and consistent service to the departments and agencies. To this end, ICSD has created a protected environment with emergency power capability that permits server operation even when commercial power is not available. The consolidated server allows more servers that provide critical services to the public to be housed in ICSD's protected environment.