

Is Integration Cost Effective?

By Jeff Wittek

A visit to any Public Safety Answering Point (PSAP) will reveal telecommunicators using multiple computers to perform their job tasks. The growth of workstations in the PSAP has occurred because as new applications were required and added, so were new computers.

The majority of PSAPs still use dedicated computers for specialized applications. CAD, Mapping, State and Federal law enforcement information systems and radio control systems often exist on separate computers. Even the telephone itself is being replaced with a computer in this age of computer telephone integration (CTI).

Limited desktop space, training considerations and budget restrictions are now forcing PSAP managers to search for ways to stem the tide of workstation proliferation. The logical solution to this problem is the consolidations of applications onto fewer workstations. Many PSAP managers, however, are hesitant to integrate due to the perceived high cost of doing so. In order to determine whether integration is truly cost effective, we must first determine what the cost of further computer deployment will be to the PSAP.

What is Total Cost of Ownership?

The acquisition of a personal computer is like the tip of an iceberg. The most visible expenses—hardware and software costs—tend to be only a small portion of the overall picture. Lying beneath the surface are the hidden, less measurable costs that typically end up being the most expensive in the long run .

Total Cost of computer Ownership (TCO) attempts to quantify the financial impact of deployed technology. TCO cost factors can be broken into four broad categories; capital, administrative, technical support and end -user operations. Understanding the fundamentals of the TCO concept is key to a PSAP manager's ability to determine the cost effectiveness of integration.

Capital Costs (16% TCO)

Capital costs include the initial capital investment and expense involved in the purchase, rental, depreciation of hardware and software as well as the allocation of other IS infrastructure costs. While these costs are fairly easy to identify, depreciation can be somewhat more difficult. In general, most office technology equipment can be depreciated at a rate of about 27% over four years.

Another large TCO factor is power consumption. The average computer will still consume about two kilowatt-hours per day during an eight hour period. But the operating costs do not simply amount to the power used by the machine. Some studies have estimated that as much as one third of the total operating cost of a computer in an office environment can be directly attributed to cooling.

Administration Costs (12% of TCO)

Administration costs include tasks associated with security, auditability, control and legal compliance of an activity such as end-user computing and LAN connectivity. Costs in this category include asset management, formal audit, legal support, policy and procedure enforcement, purchasing, and security.

Technical Support (16% of TCO)

Technical support costs include task associated with the official provision of support services, as delivered by personnel paid to provide such services, for an activity such as end-user computing or LAN connectivity. Support costs for add, moves, and changes are included, as are costs for application consulting and training of support personnel. Hardware repairs and preventative maintenance are also included within this cost.

End User Operations Costs (56% of TCO)

End user operational costs include applications development, casual learning, formal learning, file management and peer support. Unfortunately, conditions often found in PSAPs today- such as high turnover rate and lengthy training cycles-tend to further increase the high cost of ownership.

Actual Cost of Ownership

There have been numerous studies producing extensive research on TCO, but the task of actually measuring TCO often remains difficult. A search of the worldwide web finds TCO estimates ranging from \$5000 to \$10,000 per year for a networked workstation. Therefore, over the five-year period the total cost of ownership of a single workstation will fall somewhere between \$25,000 and \$50,000.

In conclusion, with the high cost of workstation ownership in a PSAP environment, it is easy to see why application consolidation, cohabitation and integration are becoming such attractive alternatives to further computer deployment. In most cases, integration costs are easily offset by total cost of ownership savings.