Technology Corner: Let's Talk About Integration
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In review of our last issue of "Technology Corner" we discussed some of the differences between mainframe technology and distributed architectures as it relates to Y2K. In this issue, we will continue to look at these two types of systems in an attempt to answer the question posed in our last edition. "Do you spend a lot of money to upgrade and prolong the life of your existing mainframe system, or prepare for the future and make the necessary budget adjustments to invest in new systems based upon new technologies?" "Or even still, do you consider your options for integrating existing mainframe systems into a distributed architecture?"   Let's look at a term that's becoming widely referred to throughout the technology industry as businesses and agencies continue to invest in technology. This concept is especially applicable in the PSAP as 9-1-1 centers across the country are experiencing a deluge of personal computers.

It used to be years ago when a 9-1-1 operator used just a phone and a radio console alone. But, those days are long gone. Computers at the PSAP have become so pervasive that when an operator sits down at a 9-1-1 call-taking workstation surrounded by keyboards and monitors, it looks more like a position at a NASA control center.   As the growth of computer proliferation continue, PSAP managers are addressed with the task of trying to control their growth while still looking at a new applications that would benefit their operations.   Inevitably, the question becomes, "Can't we consolidate some of our applications onto a single computer?" The answer, typically, is yes. The next question, "How much will it cost?"

Integration, if handled correctly, will usually reduce the total PSAP operating costs by reducing the total cost of ownership (TCO) of computer infrastructure. Total cost of ownership attempts to quantify the financial cost impact of delayed technology. While many industry analysts and customers have developed TCO models, the most prevalent was developed by the Gartner group and is based upon four broad categories: capital, administrative, technical support, and end-user operations.

Capital costs include the initial capital investment and expense involved in the purchase, rental, or lease of hardware and software. It also includes the allocation of other IS infrastructure costs. it also includes power consumption and cooling which interestingly enough has been attributed to as much as 1/3 of the costs of running a PC. Administrative costs are associated with asset management, formal audit, legal support, policy and procedure enforcement , purchasing, and security. Technical support costs include tasks associated with support personnel. Finally, end-user operations costs are for time spent by end users for tasks such as casual and learning, file management, and the "futz" factor.

However, the task of identifying the true total cost of ownership is just the beginning.   How can we reduce that cost of ownership. Well, there are two basic ways to do this:1) reduce the operational and support costs, and 2) reduce the total number of workstations. How do we reduce the operational and support costs? One way is to

standardize on reliable hardware manufacturers and implementing standard diagnostic and support tools. Compaq leads the way in the manageable PC arena with Intelligent Manageability and Insight Manager. Hewlett Packard's Open View product is a powerful remote management tool as well. Not to mention, Microsoft has developed a complete management solution, Systems Management Server (SMS) that reduces the cost of administration and support and can lower the cost of owning a PC on a network by reducing the burden on administrators and support professionals.

Next, reduce the number of workstations. How? One way is to simply resist the addition of new computer applications at the PSAP. As public safety applications increase, this is a more difficult philosophy to adhere to. As a matter of fact, some applications may end up being mandated by the FCC as in the Phase I and Phase II wireless guidelines requiring a graphical user interface (a computer) to identify the location of cellular callers to a 9-1-1 call center.

A more realistic means in reducing the number of computers at the PSAP is to consolidate applications on the same computer. Ideally applications will be integrated on the most supported and open platform which usually means Microsoft Windows and distributed architecture client-server NT networks. The robustness of NT has steadily improved narrowing the historical performance gap between Windows and Unix as well as Mainframe applications.

However, many PSAPs are also integrating their legacy systems to simply running emulation in their PCs in order to gain access to the legacy host. At the same time, more and more of the vendors of legacy systems are migrating their applications to the NT platform, often recommending a dedicated computer for the application. Technically speaking, there is usually no reason why these systems cannot be integrated with other NT applications. Modern workstations offer ample hard drive, memory, and CPU power to drive most applications. The key for the PSAP is to identify an integrator that is willing to step up to the plate and provide support for the integration effort - something to think about.