

“Digital Data Storage: Design Characteristics and Performance”

The designer of Digital Data Storage servers for the medical industry faces many challenges.

On the input side, the storage server must provide responsive solutions that effectively manage the acceptance and accurate storage of digital data. We will see that the amount of data produced per examination continues to increase as acquisition devices increase resolution and medical procedures become more intricate and longer in duration.

On the output side, a different set of equally challenging issues is identified. The use of digital information is increasing inside of the imaging department as well as, perhaps at a faster rate, outside of the imaging department.

The requirements of the data manager itself are evolving. Retention requirements from regulatory and industry groups result in an ever-increasing amount of data that must be managed. Customers demand higher availability and reliability, as they become more dependant upon digital information.

All of these factors play a role in the design of the today's image management systems and in the determination of the applications performance and behavioral characteristics. Today's trend toward “everything online” strategy is one manifestation of those forces. It is important to understand that storage, network, and processing capacities are finite.

Tomorrow's Digital Media Storage servers will need to employ increasingly sophisticated data management techniques and performance oriented strategies to meet all quality of service requirements demanded by users. The techniques involve adapting to and managing the inherent limitations of resources including storage, network, and processing capacities.