Inside Perspective
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JJWild
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Getting into Information Lifecycle Management through MEDITECH's Scanning and Archiving

John Ebel, Product Manager, Information Lifecycle Management

The adoption rate of MEDITECH's Scanning and Archiving (SCA) is impressive, but not at all surprising. According to industry figures, at least 80% of healthcare information is still on paper or film. So there's a lot of adopting still to be done, and storage growth rates of 15% to 60% per year are resulting in missed backup windows and recovery objectives, dramatic increases in storage requirements, and severe stress on operations personnel at a time of flat or declining headcount budgets. Plus, EHR-sharing will dramatically increase the demands for scalable, highly available infrastructure and scalable, service-driven processes.

Is ILM the answer?
How can you keep up? Given your data trajectory, is your environment scalable, manageable, and affordable?

Information Lifecycle Management (ILM) provides a management framework to better align infrastructure and support with information's changing value and use patterns. In practical terms, it lets you meet data access requirements, enforce compliance, lower storage costs, improve application performance, and meet operational continuance objectives.

The "set it and forget it" paradigm of the past does not meet evolving hospital requirements at an acceptable cost. Fact is, all data is not equal. Its value changes over time, and IT needs to balance value, growth, access, and cost. The key is data classification: Data is grouped by access, retention, and protection requirements. Requirements are expressed in service level metrics across dimensions like availability (Recovery Time Objective, Recovery Point Objective), performance (end-user response time, read/write time), and compliance (retention, time to produce, proof of authenticity, protection). Primary, secondary, archival, operational continuance, and disaster recovery storage categories are described by reference architectures. Service tiers are delineated in terms of technology and support (people and process) within each of these categories. Vendor products and total cost of ownership are mapped to these tiers to determine the TCO (Total Cost of Ownership) to meet a specific service level. Ultimately, the customer determines the service level based on business needs and costs.

While *status quo* data management is not sustainable in the face of projected growth, there is still no ILM easy button. Political agendas, resource contention, sharing, and conflicting priorities will stress both the process and the processor—in this case, you.

MEDITECH SCA and ILM
SCA offers an excellent opportunity to pilot ILM on a manageable scale. At an estimated 350GB to 1TB per year of clinical data (plus back-up and disaster recovery) for a 200-bed community hospital, SCA meets the "needs management attention" threshold.

SCA data is comprised of *archived* (internal MEDITECH) and *scanned* (external to MEDITECH) data, with both manual and automatic archiving options. Automatic archiving of information is driven by MEDITECH module-specific archive parameters; SCA proactively archives MEDITECH data from within 15 different MEDITECH modules. The application effectively

defines the performance and availability characteristics of the data and SCA tags it for archival and subsequent removal from the live database to SMB (Server Message Block) -supported storage, while still enabling future access.

This integrated archiving capability can be significantly enhanced by the implementation of a scalable enterprise archiving architecture. By layering on ILM practices and enabling technologies, IT can effectively dial in the right level of data availability and compliance for MEDITECH data at the lowest TCO. ILM for SCA also provides the hospital with an opportunity to move out on the ILM experience curve with proven best practices to apply to enterprise email, PACS (Picture Archiving and Communication Systems), and other applications.

There are two proven and available ILM enabling technologies: automated storage management software and tiered storage. External to MEDITECH, two proven file system managers, EMC DiskXtender and BridgeHead HT Filestore, can extend SCA while reducing its TCO. Although different in their methodology, these “archiving engines” scan disks to identify data with user-defined attributes and act on that data based on policy. Data may be archived, copied, moved, retrieved, read, or purged across a continuum of storage architectures, balancing data requirements and costs. Architectures based on FC, ATA, SATA, SAS, CAS, VTL, and tape are supported. They’re selected based on service level requirements on the primary, archival, operational continuance, and disaster recovery architectures.

These technologies present a range of capabilities and TCOs. An example of architecture applicable to SCA data could be Advanced Technology Attachment (ATA) and/or Content Addressable Storage (CAS), with no appreciable decrease in access. SCA fixed content data can be archived to ATA drives as a lower cost alternative to a high-performance SAN. Or it might be automatically moved to CAS as a highly scalable fixed content repository that meets compliance requirements—at a fraction of the cost of high-end SAN storage.

Archiving data can have a definable ripple-effect on the storage environment. For example, by sifting data away from the primary SAN environment, the hospital may avoid an expensive SAN upgrade, relieve pressure on SAN operations, and enable more frequent SAN copy and backup for improved RPO of the hospital’s most critical data.

Summary

Data management is at the tipping point from growth in electronic medicine, and it demands immediate, creative, and bold solutions. ILM is a management framework that can provide IT with strategies and tactics to cost-effectively meet emerging requirements for data access, protection, and compliance—now and into the foreseeable future. This management approach is supported by proven data management software and a range of storage technology options.

MEDITECH Scanning and Archiving integrated with your MEDITECH modules is an excellent opportunity to pilot ILM practices with significant near-term payback in cost and compliance.

Much of the architecture work, the vetting of vendor products for MEDITECH, and the economic modeling to support ILM has been proven by JJWild across a broad range of healthcare organizations. JJWild’s Healthcare Operational Continuance framework is an excellent example of a proven, integrated MEDITECH availability solution designed to meet clinical information requirements. We are continuing to tighten our focus on this critical space, and would like to get your perspective on the data management challenges facing your particular operation. Please email me at editor@jjwild.com.

John Ebel joins JJWild as Product Manager for the Information Lifecycle Management (ILM) solution suite with extensive solution development, sales, and delivery experience in providing service-oriented solutions to healthcare executives. Email him at editor@jjwild.com.