



From Data Migration to Data Certainty: One Bit at a Time



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Introduction

Data migration is the silent but indispensable partner in the business of automating healthcare—a largely unseen but absolutely critical component of any successful IT initiative. The ability to migrate or convert patient data to an advanced new IT platform from an aging legacy system is a health system's first step in deriving value from the new platform. And, in the absence of intelligent data migration tools and practices, that value gets swallowed up by incomplete or error filled information, bottlenecked processes and ultimately delayed implementations, the bane of IT investment.

Secant Healthcare's Data Certainty™ Solution ensures that data migration efforts become the starting point to value realization. Data Certainty™ combines patent pending technology with smart, seasoned expertise to effectively and efficiently convert the right data at the right time for the right purpose—maintaining the integrity of the data one bit at a time. Data Certainty™ means hospitals and health systems can march into an IT enabled, customer and performance driven future.

Making data migration transparent to customer sites

Secant's patent pending technology allows for the automation of the record reconciliation process eliminating 20-50% of manual reconciliation via automation. In addition, Secant leverages advanced data migration concepts that support a client's workflow for minimal impact to the organization's operation.

Secant's strategy of pulling data directly from the legacy archive by decoding the archive storage process allows for rapid and efficient data extraction. By reading an archival tape both linearly and from beginning to end, Secant technology avoids the need for repeated tape access, reduces the need for mechanical tape retrieval and removes the potential for breakage and failure. It also eliminates tape thrashing, the process of going forward and backward looking for and retrieving data from different locations on the tape. This linear process of tape reading allows Secant to pull all the data from one tape in one reading at the fastest possible speed.

In addition, the Secant technology incorporates remote monitoring capability, automates continuous report generation during the migration process and allows clients to configure email data migration report distribution rules.

A critical component to Data Certainty™ is the continuous involvement of a project manager throughout the data migration process. The project manager is actively involved to ensure that issues are quickly identified and resolved, and the expected migration timeframe is attained

Secant's Data Certainty™ Solution does not modify or otherwise alter the original exam or patient record on the legacy archive. The solution takes a copy of the exam, corrects any discrepancies, forwards the corrected exam to the target PACS or archive and leaves the original exam intact. Any data elements in the original exam that are modified are copied and stored in their previous form within the cleansed exam. This allows for access and review of the original, uncorrected data elements for the life of the exam.

Easy on the network, too

Secant's approach optimizes the available network bandwidth by identifying peak performance hours and configuring the data migration flow accordingly, modulating it on a steady 24x7 stream or throttling back at those peak hours where clinical workflow might be impacted. In addition, the solution actively monitors the movement of data and can adjust exam movement on the fly. In effect, this becomes a custom fit technology to client's temporal workflow. The solution capitalizes on PACS' ability to "multi-thread" and allow for multiple sessions of exam movement to occur when the systems and network can handle large data movement.

Secant applies intelligence to the migration process in a way that eliminates an all-or-nothing approach. The Secant Data Certainty™ Solution allows creation of a routing list that prioritizes data according to what should be migrated first. If previous studies are required for continued care of a particular patient, for example, those studies are converted to the new PACS or archive immediately. Exams can be moved according to various demographics or date ranges as well as modality, exam type or even facility, just to name a few options. Using this "pre-fetching" technique eliminates the necessity for clinicians to wait on critical data to be transferred.

While data migration is in progress, the Secant interface to the enterprise order entry and department scheduling system allows for the scheduled procedures to be prioritized for those patients scheduled within a given time period. Organizations can define the type and number of exams to be migrated based on the site's particular requirements. For example, when scheduling a patient's CT head scan, the Secant technology can pre-fetch all prior CT Heads or all prior CTs as well as chest x-rays. Or, if desired, it offers the flexibility to migrate all prior exams for the patient before the new exam is performed.

Get the picture at the start

Organizations must evaluate the data integrity of medical records prior to moving a single bit of information, rather than trying to do so reactively after the migration has occurred, which disrupts workflow and productivity. Secant's approach never loses sight of the goal of creating client value. Through our Data Endurance™ Solution we are able to tell clients exactly how much data they're likely to have encounter issues with before the migration begins.

Secant leverages unique and patent pending technologies to automate the reconciliation process. Indeed, using the Secant Data Endurance™ Solution has allowed us to reduce the manual work of record reconciliation by 20% to 50%. This technology clearly differentiates Secant in the data migration field, allowing us to work with clients to automatically address the correction of inconsistent records.

Secant's Data Endurance™ Solution identifies all the exams that can be moved from the legacy to target PACS prior to initiation of the migration process. All exams are identified, analyzed and then matched with the original orders.

Prior to the migration of data, the solution generates a detailed report showing the exams analyzed, orders utilized, matching criteria, errors and issues with exams as well as the success rates once migration process is started. This feature allows the client to be fully aware of the resources required to reconcile the exams with data issues. This report also provides the basis for the routing rules and prioritization of exam movement. Knowing what can be moved, what needs special attention and what amount of data may not be reconcilable prior to the process initiation allows for intelligent planning and negates the need for continually adjustment throughout the project.

Conventional data migration strategies have always been viewed as a serial process, sending one study right after another. Like cars traveling along a rural two-lane blacktop, you could only go as fast as the slowest moving camper ahead of you in the queue. While that's been the case with legacy data migration solutions, Secant has designed a multi-threaded approach that allows the transmission of multiple studies simultaneously. And if a new PACS rejects a particular study for some reason, it won't hinder the streaming of other studies. The technology leverages multiple safe lanes for traffic so if one gets blocked the others continue to flow.

While data or exams that are inaccessible due to mechanical or software issues—such as a broken tape or corrupted disk drive—may not be able to be moved or are too costly to repair, all accessible data can be moved. The Data Endurance™ Solution allows identification of all the accessible data and establishes the data reconciliation success rate before the first exam is migrated. However, data not easily corrected or requiring extensive research for identification can still be moved to the target system and placed in a “reconciliation” folder for future or continued corrective action.

Exams can also be moved to a separate archive or workstation for further processing. This improves the state of the data currently in the legacy system. In typical data migration efforts, data containing a high degree of errors is usually ignored and thereby offers no clinical value in the new system. The Secant Data Endurance™ Solution clearly identifies this “lost” or unusable data and reconciles it whenever possible. Secant also uses one-of-a-kind, patent pending technology to automate the reconciliation process. Indeed, the Secant Data Endurance™ Solution has allowed us to reduce the manual work of record reconciliation by 20-50%.

Summary

Data migration properly done provides the cornerstone of any successful IT implementation. Performing data migration well, however, requires the right combination of intelligent technology, people and processes. Secant's Data Certainty™ and Data Endurance™ Solutions integrate all three of those elements into a powerful tool for efficient and effective data migration, in the process enabling the client to derive value from IT investment.