

# Inside Perspective

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## Information Lifecycle Management: It's Logical, Maybe.

Jim Fitzgerald, Chief Technology Officer

ILM. Information Lifecycle Management. These three words are rolling off storage vendor's tongues like they have existed since the beginning of written history. Well, maybe in some strange way this concept is pretty fundamental and is pretty old. ILM is all about six rights: having the right information (data) in the right place at the right time, for the right duration, with the right level of protection, and the right level of accessibility. (Take that, all you BMW camp followers. You only have five rights<sup>[1]</sup>, we storage nerds have six!)

I say "fundamental and old" because we have always needed ways to remember things. ILM began when the first Neanderthals decided they didn't want to keep finding the good hunting territory by accident and drew a map of it on a cave wall. It continued when Gutenberg printed the first Bible, empowering generations of theologians to engage in spirited debates over material which could now be shared in a common format, rather than being dependent on fragile papyrus scrolls or independent verbal recall.

ILM enters our consciousness today when a pleasant guy or gal, anxious to take you golfing, walks into your office and calmly explains that you'll need: a \$500,000 box full of jazzy fiber channel disks for your primary data, a \$300,000 box full of slightly-less-cool SATA, PATA, or FATA<sup>[2]</sup> disks for your secondary data, a \$100,000 tape library to satisfy the oops-accidents-could-still-happen crowd, and a \$250,000 NAS or CAS box for your semi-online but legally sensitive archives. I know exactly what ILM means to your storage vendor: *I Love Money*.

But do you really need to spend all that money? As always, it depends. It depends on what you are doing with enterprise data, what your concerns are regarding compliance archiving, what your risk tolerance is for impaired data availability<sup>[3]</sup> (i.e., downtime), and what advice your legal counsel is giving your board about the risk of clinical data loss. (Another potential ILM definition: *Incipient Legal Machinations*.)

As I shared at our recent Healthcare Optimization Workshop (HOW '05), the biggest pitfall with ILM is doing it before you have a plan. You need to make decisions about the "six rights" described above, and then work with your chosen collaborators to turn those decisions into an actionable plan. At the end of the day, you may need all of the interesting hardware described above—or you may only need half of it, along with a clever way to manage the data.

The key, after all, is the word *management*. In the strictest sense, management implies that we have a goal and that we are taking logical steps towards that goal. Where ILM is concerned, this is the process of making decisions about the six rights, documenting them as policy, and translating them into information management *rules*. For example: "All PACS images will remain in primary storage on the SAN until 90 days after the last access of the image, with a permanent archive in near-line storage, and a backup archive at a remote facility."

Once we agree on that, what do we do? Hire ten people to comb directories for information and then manually copy it from system to system? Not hardly—hey, this is America, not some totalitarian backwater where 14-year olds are forced to eke out a living doing data management for 75 cents an hour. Besides, all that human handling of live healthcare data is a HIPAA attorney's dream. Can you say *Incoming Legal Mess*?

So, we have an *information management rule*, and now we need a way to bring it to life. That's where a rules engine comes into play. There are a lot of them out there, but conveniently, MEDITECH's two partners for backup and recovery software, BridgeHead Software, and Legato Software (a division of EMC), both have credible product entries for this crucial tool. BridgeHead has a product called FileStore, which leverages the media manager at the heart of their backup and recovery software to act as your

“virtual parking valet” for data; Legato has a well-respected product called DiskXtender, which serves the same function. Either of these products can behave as a universal rules engine at the heart of your ILM strategy, keeping track of data from MEDITECH, PACS, e-mail, and other sources, and managing where, how, and for how long it is stored in your extended enterprise. MEDITECH’s upcoming general release of their new *Scanning and Archiving* module will treat your users to a seamlessly integrated clinical record, regardless of the age or location of the data—but it is up to you to build the underlying infrastructure that makes it possible.

Finally, you will need a place to store all that information. In the process of designing your rules, metrics will begin to emerge that will give you and your collaborators a sense of how much and what type of storage you’ll need. Maybe your primary and secondary data stores can co-exist on one SAN, with different types of disk and different levels of RAID protection. Maybe your long-term archive needs are modest, and it’s just as easy to vault off-site with a managed services provider. Or maybe you need direct control of that information so you can sleep soundly at night. In either case, let the plan drive the investment, instead of the storage technology defining (or potentially limiting) the plan.

In summary, the whole topic of ILM, as much as I enjoy making light of it, seems destined to become the next 600 lb. gorilla that takes a stroll through your IS department. As indicated by my colleague Jim Gordon’s ILM presentation at HOW ’05, JJWild is investing engineering and product development time in researching and benchmarking technologies, configurations, and best practices to meet the requirements of your MEDITECH HCIS, as well as your broader enterprise information management requirements around PACS, e-mail, and other applications.

Right now, you can start your internal planning by following some simple steps:

1. Begin thinking about and documenting a corporate Information Management Plan. Keep it simple at first—better to have something down on paper than to let “perfection” get in the way. You’ll be iterating it as you learn more. Besides, it will make you look good to your manager, and help when it’s time to set budgets.
2. Get ready to pull together a team to define your information management rules. You will probably want to get some solid clinical, legal, and financial inputs.
3. Select a rules engine/archive management tool that makes sense for your enterprise requirements.
4. Select the mixture of storage technologies that meets the goals of your plan. Implement them in logical increments.
5. Review, audit, and update your plan on a regular schedule.

Here’s one last crack at defining ILM: from here, *It Looks Manageable*.

*Jim Fitzgerald, our Chief Technology Officer, makes fun of technology on a regular basis for Inside Perspective. If you have any questions, send them to us at [editor@jjwild.com](mailto:editor@jjwild.com) and we will forward them on to him.*

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[1] If you don’t know the five rights of Bedside Medication Verification, please read this terrific article by my colleague, Cindy Willis, which you can find in our newsletter archive at [http://newsletter.jjwild.com/e\\_article000335198.cfm?x=b50BN00,bRbD3Mp,w](http://newsletter.jjwild.com/e_article000335198.cfm?x=b50BN00,bRbD3Mp,w)

[2] The first three e-mails received at [editor@jjwild.com](mailto:editor@jjwild.com) correctly identifying these 3 acronyms for (relatively) cheap disks will win a dumb prize of the author’s choice.

[3] Thanks to Skip Hubbard, CIO of Bon Secours Health System, who pointed out to me that Data Availability is an easier concept for some CEOs to grasp than Disaster Recovery.