

Editor's Letter: IT Spurs New Flow?

by Bruce D. Hicks, CPCU, CLU



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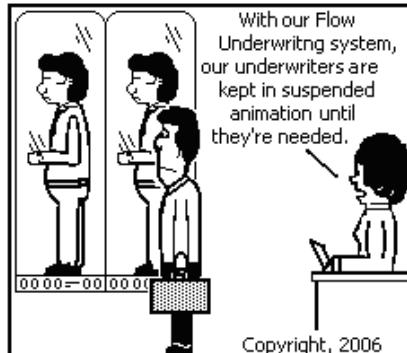
Many of us share a wonderful perspective about insurance and the impact of technology. Those of us who started their careers in the late '70s to early '80s arrived on the scene when computer technology was just beginning to substantially alter the industry. I had just started training as a personal lines underwriter for a regional insurer. At the time, the company was, like many of its peers, making a lot of changes. Traditional offices and general department areas were replaced by modular cubicles. Secretaries and policy typists were losing ground (and eventually replaced) by individual word processing and automated policy distribution.

Since I was in personal lines, where the bulk of all business was seen as, essentially, a commodity; I was among those that bore the brunt of changing underwriting practices. Close to 30 years later, it's commercial lines' turn.

Earlier in the year, Infosys Technologies (a global IT consultant firm) distributed a study on a change being made by commercial property casualty insurers. The study, performed by TowerGroup, indicated that insurers are switching to

Liten Up!

by B.D. Hicks



"low" or "no-touch" underwriting. The latest term being used for the heavy use of automated decision support is "flow underwriting."

The underwriting study included the following highlights:

- Almost half of the respondents reported that business process management and modernizing legacy as their company's biggest IT priorities.
- Well under one-fifth of the respondents mentioned IT cost reduction as a priority.

Continued on page 2

What's In This Issue

Editor's Letter:	
IT Spurs New Flow?.....	1
Geek, Suit . . . Or Both?	3
Got Cyberslackers?.....	5
High-Tech Tools:	
How's the ROI?.....	7
Merits of a Document Repository....	9
IT Events Calendar.....	10
What Is a Requirement?	11
Slacking for Professionals	13
Eliminating Waste and	
Improving Business Software	
Value the Agile Way.....	14

Editor's Letter: IT Spurs New Flow?

Continued from page 1

- About half of the respondents had plans to use BPM and flow underwriting in the near future (within 18 months at the time the responses were given).

Infosys was quite encouraged by the results and touted the flow approach as one that would end up saving insurers time and money as well as allow underwriters to focus on their more challenging submissions.

While I don't doubt that advancing technology has the capability to improve the way things are done, I'm always on the skeptical side. If your operation is one that is exploring the use of flow underwriting, be certain to implement it in a way that respects all the affected parties.

Years ago, after switching underwriting jobs, I found myself with a carrier that used exception underwriting. Of course, it was not an automated process. However, the heart of the approach is the same. In our low-tech process, "routine" underwriting items were reviewed and handled by underwriting assistants. The danger is how such a process affects your regular underwriting staff. I didn't particularly enjoy being an underwriter for that carrier. I, eventually, discovered the reason. The exception approach created a skewed opinion of the agents I worked with.

With exception (now flow) underwriting, all of the most challenging items are filtered upwards. In my case, no matter what agency's business I handled, it all consisted of submissions that

gave me different levels of headaches. While, intellectually, I knew that I was just handling a small percentage of a given agent's submissions; it made me feel negative towards them all. That unintended result is just the type of non-technology item that can pop up and makes a mess out of technical strategies. To me, the experience is a reminder that one has to be careful about studying all of the ramifications for making a change. It also illustrates the need to avoid assuming that a particular method to accomplish an objective is the best method or even whether it is a good method. Having the best people and the best technology are great starts, but only if they are used to their best advantage. ■

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Geek, Suit ... Or Both?

by W. Thomas Mellor, CPCU, CLU, ChFC,



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I've written about emerging agile development techniques, which demand close and persistent interaction and collaboration between the customer (typically the "business side") and the technical team in software product development. This alliance is integral for construction of an optimal product. This cooperative relationship is more easily described than achieved because IT and business exist as cultures that couldn't likely be more polarized. In fact, this dichotomy was recently examined in a series of online articles in eWEEK.com, "Geeks Versus Suits: The Great Boardroom Schism." These articles discuss the cultural differences between the business people and technical people and how the schism can be reduced. We sometimes refer to these groups as the "IT world" and the "business world," and at times they seem to be as far apart as Mercury is from Pluto.

Some years ago, while at an establishment in Portland, OR, I observed several younger men at the end of a workday. They were dressed in cargo shorts and sandals (no socks), as well as white dress shirts and ties—quite a combination. I asked one of them what the occasion was and he said they were the "executive leadership" at an Internet startup and had just walked over from work. "We are all business people and IT people, so we dress for both parts," he said. "We sometimes work on design and code of an application and then we may have to meet with potential customers on the spur of the moment, so we keep our dress pants, socks, and shoes ready at the office for that. But, it's a pain to change from t-shirts to dress shirts and ties, so we just leave the dress shirts and ties on all day. It's a bit like being like a fireman and hopping into your outfit and boots when the fire alarm rings." It seemed to me that they had the perspectives of both worlds well in hand.

The ideal IT/business relationship is almost symbiotic in nature. As a scuba instructor, before ocean dives I brief my

students about the biological symbiosis between marine life as exemplified by the anemone and clown fish or the cleaner shrimp and grouper. Without the trust, tolerance, and satisfaction of needs evolved over eons, these relationships would be fatal to one of the parties. Instead, both parties benefit from their cooperative efforts. While IT and business people don't share a biological synergy, they do benefit from an intellectual/innovative one when their relationship is mutually supportive and positive. But, it is often this very fundamental foundation for success that is missing. This situation seems, at the least, profoundly illogical.

The IT world is daunting, even for those who live in it. It is dynamic, and staying up to date is a persistent challenge. Technical skills pertinent today can be archaic tomorrow, and the latest technology is circumspect until it moves beyond the fad stage and into mainstream use. It is no wonder that business people often shrug their shoulders and state something to the effect "that's for the geeks" when it comes to IT aptitude. But, in this age, neither side can really afford to be ignorant about the other. Such ignorance can cause costly mistakes, create misconceptions, and may place individuals in both worlds in the peril of dispensability—especially at lower levels of the workforce.

In another eWEEK online article, "Building the Perfect IT Person," author Deborah Rothberg advises technical people on ways to protect themselves against the hazards of downsizing and outsourcing. In the following portion from her article, she makes an important point involving the need for IT workers to possess what she terms the "B-gene:"

Really want to become outsourcing-proof? Know your business—inside and out—and understand terms such as "internal rate of return," "hurdle rate" and "operating

Continued on page 4

Geek, Suit ... Or Both?

Continued from page 3

margin." "The other thing that you typically can't outsource is a good internal knowledge of an organization," said (Stephen Pickett, CIO of Penske in Reading, PA, and president of the Society of Information Management, or SIM, an organization of IT managers in Chicago).

Of course to know your business, it helps to know about business. Business skills, once considered the sole jurisdiction of the bean counters, are now downright essential for technology professionals. "There's a change happening. You used to need a stronger base of technical skills, and now you need to understand business skills. The more you understand the company where you work, from its customers to its employees, the better off you'll be," said (Kate Kaiser, professor of IT at Milwaukee-based Marquette University and head researcher at SIM).

Acquiring the B-gene can pretty much ensure IT survival. In fact, an evolved technology worker often has a business degree. "The tech is sometimes the easiest part. Depending on what the technology is, it's not very hard to find someone with (whatever) aspect you are looking for. But to find someone who understands the business aspects and what needs to be worked through is rare. It's much harder to change business processes than to create technology solutions. Technology for the sake of technology is not the answer," said Ingle.

According to CIOs, companies comprise two types of individuals—those who know business and those who know technology. Few know both. But if you're the bridge between the two, suddenly you're valuable. "A lot of times, IT does a lot of really good things for business,

but nothing gets communicated to the business side. On the business side, there's often not a deep understanding of technology, and IT needs to bridge the chasm and be able to explain how it moves the business forward. Nobody really cares that you put in a really cool, super-fast LAN, but you're going to get funding for new technologies by explaining the business savings of the one before," said (Steve Novak, CIO, at Kirkland & Ellis, a Chicago-based law firm).

Rothberg's advice is sound for IT workers, for sure, but what about the business side's understanding (or lack of it) about the technical side? Frustrations abound in the IT world about the business side's reluctance or outright refusal to attempt to understand even the nuances of technical work. IT workers do not expect business people to know the intricacies of coding or application design, but they should at least be conversant in technology terms. No technical person wants to see the "glassy-eyed" look while trying to explain why a desired feature is difficult in terms of technical complexity.

I was forced to come to terms with my technical ignorance or face a complete loss of credibility from my project team members. I spent a great deal of time on the Webopedia web site (and still do) and I took an introductory java programming class at a local community college. So, when my object-oriented programmers talk about "objects" and "classes," I am at least tuned in to what the terms mean. I can talk with them while having at least a fundamental understanding of the concepts. I once feared that technical people would not have the patience to accommodate my lack of technical knowledge. But, I learned early that technical workers love to talk about their work and its concepts and that they were quite willing to educate me.

The advice that Rothberg gives to IT workers can certainly be turned around

to business people from a technical perspective. When the technical worker says she needs a new schema for the XML payload, the businessperson will gain a lot of respect if he understands what XML and a schema is. As well, the person can ask intelligent and pertinent questions about it. My advice to the willing: familiarize yourself with the "other world" and abandon that adage that the other world is not important or relevant to you. Both you and people in the other world will be better for it. ■

Liten Up!

by B.D.Hicks

Yes, we can cover you for adding living space for your mother-in-law. What? No sir, that isn't a form of Catastrophe Insurance.



Got Cyberslackers?

Policies, Technology, and Monitoring Help Agencies Reduce Risks from Employee Internet Abuse

by John Chivvis

John Chivvis is a Texas-based writer who specializes in topics of technology implementation. His work has appeared in a number of national and regional publications.

Editor's Note: This article originally appeared in the September 2006 issue of *Rough Notes* magazine. It is reprinted here with its permission. For more information on iPrevision go to www.iprecision.net.

Does your agency take risks? If your employees have access to the Internet, then you may be risking a whole lot more than you think.

"According to a number of studies, more and more employees are using the Internet at work for personal business," says Craig Fuher, president of iPrevision™, an Internet security solutions provider. "So whether it's the 50 percent of employees who receive and circulate inappropriate material using the office network, the 10 percent who use the network to download illegal music and other media, or the 26 percent of IT employees who have admitted to distributing confidential information outside the company, you're seeing a new set of risks that agencies need to protect themselves from."

That being the case, more and more agencies—including Nulty Insurance in Kalamazoo, Michigan—are turning to Internet usage policies, enforced and backed up by Internet monitoring technology.

"Porn"ucopia of Problems

Like many agency principals, Nulty Insurance President Dana Nulty-Beals admits that implementing an Internet usage policy was difficult. "It's one of those things you wish you didn't have to do because you want to trust people,"

she says. "It goes back to not needing something like this—in this case a usage policy—until you really have a problem."

The problem for Nulty-Beals was two different employees using the agency Internet connection for downloading pornographic material. Before implementing the policy, she says that it was hard to catch the employees because when she or another employee would stop by their offices, the employees would just "click and close."

What made it even harder was that one employee would come in on the weekend to use the system, and the other set up his system to automatically purge his browser history to hide his tracks. Ultimately Nulty-Beals and her IT person were able to provide proof of the employees' activities and eventually terminate their employment.

"It was after the second incident that we started looking at monitoring our employees' Internet usage," says Nulty-Beals.

IM, P2P, and Webmail Threats

The problem with monitoring, though, is that so much of Internet usage goes beyond the basic browser window. It's the applications that use the Internet to transfer information and communications.

"Instant messaging (IM) is the perfect tool for a cyberslacker," says Pat Kellner, a business development executive for iPrevision. "That's because IM can be used to transfer files and information in a way that's instant and untraceable." He adds that IM is a "tool of the trade" for a number of identity theft rings for quickly transmitting sensitive data including Social Security numbers, credit card information, and maiden names.

That stuns Nulty-Beals. "We put an Instant Messaging client on our systems for our receptionist as a way for her to let us know we had a call on hold, and we also use it for some intra-office communication," she says. "While employees can't access client lists or P&L information, they do have access to customer SSNs and driver's license numbers. Wow!"

Besides the identity theft risk, IM is also becoming a target of virus-developers and spammers (called SPIM). "Right now, over 40 percent of the top viruses can propagate through an instant messaging client," adds Fuher.

Peer-to-peer file transfer programs like LimeWire and Kazaa are another avenue for viruses. "Fortunately for us, nobody downloads any files any more," says Nulty-Beals. "We're now all scared to death to do so because the last time someone downloaded a file, it contained a virus and our system was down for two days."

A greater problem than viruses, though, is the liability issue for being caught illegally downloading music, movie, or game files. Fuher points to an Arizona company with fewer than 50 employees that recently had to pay the recording industry \$1 million for copyright violations involving MP3 music that had been stored on the company computer system. "And what's scary is 77 percent of companies polled in a 2003 study had detected at least one P2P application on their network," says Fuher.

A third area of abuse comes from personal e-mail accounts being checked over the Web, such as Hotmail, Yahoo, gMail or AOLMail. "Similar to IM and P2P software, Webmail presents the same confidentiality concerns," says Kellner. "All protective measures that the business has in place for their corporate e-mail system are compromised when someone

Continued on page 6

Got Cyberslackers?

Continued from page 5

uses Webmail, because there's no record of what was communicated."

Pandora's Box Meets Panoptech's Box

"For an agency, you have to look for some type of solution that will allow you to monitor and manage those Internet applications—IM, P2P, and Webmail—as well as what your employees should or shouldn't be browsing," says Fuher.

Instead of using simple keylogging programs on the individual desktop that can be easily disabled, or incurring the expense of new servers, and maintaining server software, Nulty-Beals implemented iPrevision's Panoptech™ "single-box" solution.

The "single box" is a network appliance about the size of a cable TV or satellite signal receiver. As information or packets of data pass in and out of the agency, the Panoptech box scans and caches information, URLs, and more in order to not only analyze and monitor usage but also to minimize any congestion. From a technical standpoint, iPrevision manages all of the content and software updates from their end, because "we don't want to create more IT work for an employee," says Fuher.

Fuher says that once the inconspicuous-looking appliance is delivered to an agency, installation is not much more than taking it out of the box and plugging it into the network. "With Nulty Insurance," notes Kellner, "within 10 minutes they were up and running and seeing usage data."

Real-Time Data

Panoptech offers on-demand, real-time reporting on Internet, IM, and web usage. Since the system is connected to the network, those who administer, monitor, or review the data can do so from their office, from home, or another remote location, which makes monitoring of multiple or branch offices much easier.

Nulty-Beals says, "We just use it for Internet monitoring right now—just to see how the Internet is being used in our office. We're not using it for filtering."

Internet monitoring reports show user name, IP address, the computer name, date and time stamp, and a URL with clickable link. "We've had stories of people coming in after hours, even cleaning staff using the network, so having detailed information is key," says Kellner.

"In one instance," he recalls, "an agency had been running the system for only a week and when they went to do employee training, their reports showed that some employees had been downloading inappropriate material. After dealing with that eye-opener, they now say their reports are 'kind of boring.'"

Panoptech makes it easy for managers or owners to set filters for web sites or types of sites. For example, with a single click on the "porn" check box, Panoptech will automatically filter out more than 1.3 million active pornography sites thereby denying access to anyone trying to visit one of those sites. "We have "bots" that continually look for sites, putting them into categories ranging from shopping and sports to entertainment and porn," says Fuher. "But, we also leave it customizable so you could filter out all shopping but still allow eBay—so basically, we're letting you create your own white- and blacklists."

Panoptech also monitors IM usage, tracking usernames and logging all conversations to and from "buddies." Besides being able to monitor IM usage on most of the common IM formats/protocols like Yahoo, MSN, AOL, and even IRC, The Panoptech solution also gives agencies a good way to meet retention policies for IM communication. As with all of the other monitoring and filtering capabilities for Internet and Webmail usage, specific employees or groups of employees can be blocked from any and all IM usage.

With Internet browsers, P2P programs, and IM clients all residing on the individual's computer, Webmail is a little trickier because it resides on another server, and access to an e-mail account still requires a username and password. Panoptech, however, is able to take virtual "snapshots" of the employee's activity and reconstruct messages that could potentially put the agency at risk.

"In the past, Internet monitoring was handled by the IT staff—usually reactively after something happened," says Fuher. "For small agencies without an IT person, it's difficult to implement an enforceable usage policy, so we try to provide a scalable, manageable—and yet affordable—service that shows an almost immediate return on investment."

"Whether you have 10 offices or one office, agency owners or managers now have an eye into those offices to see how their employees are using the Internet," says Kellner. "It really hits home for them when they can see the reports and the usage, and that data can help them evolve their policies and plans. So if they run a report showing the top domains visited by their employees and none of their carrier or customer sites show up on the list, it becomes easier to address."

"For the most part, and for whatever reason, a lot of these Internet applications have been off of our radar," says Nulty-Beals, "but the more I learn about how they can be used, the more I'm thinking they shouldn't be off of our radar." ■

High-Tech Tools: How's the ROI?

by Lamont D. Boyd, CPCU



■ **Lamont D. Boyd, CPCU**, is responsible for client and partnership opportunities that make use of Fair Isaac's credit-based insurance scoring and property risk scoring products and services. Working with more than 300 insurance clients throughout the United States and Canada and speaking regularly to industry groups, Boyd is recognized as one of the industry's leading experts in predictive scoring technology. Prior to joining Fair Isaac in 1993, he served 19 years in underwriting and sales management with a major property and casualty insurer. He received his CPCU designation in 1990 and is a member of the CPCU Society's Information Technology and Underwriting Sections.

On Tuesday, September 12, 2006, the Information Technology and Underwriting Sections, as well as Accenture, LLC, presented "High-Tech Tools: How's the ROI?", to folks attending the CPCU Society's Annual Meeting and Seminars in Nashville. The seminar garnered a great deal of interest and discussion about the value and future of technology to the world of property and casualty underwriting.

The seminar was moderated by **J. Brian Murphy, CPCU**. The presenters included **John B. Hennessy**, senior vice president, casualty underwriting and middle markets for CNA, **Gail E. McGiffin**, global managing underwriting partner for Accenture LLC, and **Richard Shellito, CPCU, CLU**, vice president, systems for State Farm.

Murphy kicked it off by briefly sharing some of his own "technology experience" from data processing initially to predictive modeling today. Next, McGiffin provided an in-depth look at the results from—"Accenture Property and Casualty Underwriting Study—Turning from the Past to Create the Future"—released in April 2005. The study (which is available on the CPCU Society's web site in the "Members" area) resulted from Accenture's secondary industry research, client interviews, and analysis of an online survey of the CPCU Society's Underwriting Section. Nearly 800 Underwriting Section members, representing more than 300 carriers, provided the backbone for the study. Accenture explored the relationship between technology and underwriting practices, and sought to uncover training and development opportunities.

Many of the survey results were not surprising. However, some responses clearly reveal that more effective efforts must be made to help frontline underwriters recognize how they can benefit from advances in technology. As McGiffin noted, the study offered a view of the intersection of underwriting and technology . . . and it appears there have been some preventable accidents occurring at that intersection.

Most responders felt their firm's implementation of new technology was good but that the value of such implementations has not yet fully been recognized—much like where the banking industry was perhaps 15 years ago. More systematic transformation in practices, behaviors, and leadership is likely needed to assure fully successful



■ **Richard Shellito, CPCU, CLU**, and **John B. Hennessy** discussed how agents and underwriters who embrace technological advancements will thrive in the marketplace of the future.

implementation of technological advances. Effective integration of technology, to minimize multiple processing steps, as well as adequate training budgets, is necessary for success. Underwriters are concerned that their firms are not providing enough training.

While personal lines has benefited most from advances in technology, small commercial is following, and middle-market commercial is slowly moving in the right direction. The lag in commercial lines is due to its more complex nature, as well as, due to the strong desire by many underwriters to remain personally involved with their risks. Some responders seemed resistant to increased automation, equating it to "more work." McGiffin commented that effective business leadership is needed to achieve greater value through technological advances such as rules-based decision systems.

John Hennessy shared his perspective as a 25-year veteran on the business side of the middle commercial lines market. He highlighted the fact that a competitive marketplace now allows a smaller number of national and regional carriers to meet the needs of the agency/business production system.

Continued on page 8

High-Tech Tools: How's the ROI?

Continued from page 7

John Hennessy was surprised that the study seemed to indicate that a fairly large number of underwriters expect little change in technology over the next five years. This runs directly opposite to the expectations of those in leadership. The latter group views technological advances as necessary to fend off rising combined ratios. Technological advancement, while once seen as an expense reduction tool, is now considered by industry leaders (particularly predictive modeling) to be a key to improved operations. Specifically, it is considered crucial to controlling risk and managing books of business in a manner that will improve their bottom line. Such a result is likely to please their Board of Directors and gain Wall Street acceptance.



■ The "High-Tech Tools" seminar garnered a great deal of discussion about the value and future of technology to property and casualty underwriting.

Hennessy believes that predictive modeling will be the primary agent of change. It should allow underwriters to work more efficiently and effectively over the next several years. The actuarial value of predictive modeling is undeniable, and it will help to minimize underwriter biases that may hinder future market opportunities. Modeling will not replace underwriters but will make their roles more rewarding, more valuable, and more focused. "Strategic underwriting" will allow for greater industry class expertise, with underwriters reviewing only those risks that "fall out" of the model. On the other hand, "new business underwriting" will require strong agency relationships and the pursuit of new business opportunities.

There are, however, issues with predictive modeling that will need to be more fully addressed—data access and cleanliness, underwriter resistance to releasing some underwriting authority, actuarial challenges as to data robustness and accuracy, potential compliance issues, and appropriate protection of intellectual capital.

Richard Shellito of State Farm was emphatic on one issue. He shared his opinion that a computer cannot fully perform the work of an underwriter or an agent. . . . because "it's very difficult work." Computers can, however, quite easily perform the mundane, routine tasks that will then allow underwriters to make the more cognitive, significant, final decisions.

For advancements in technology to reap their intended benefits, there has to be a committed partnership between business and information technology leaders. An understanding of each discipline's needs must be based on effective guidance from each perspective for successful planning and implementation. Appropriate consideration must be given to both downstream and upstream systems or applications before enhancements are made to assure a smooth transformation and acceptance.

Shellito noted that State Farm relies on accountability for its projects, from start to finish. He said that this approach minimizes miscommunication between business and IT. Hennessy mentioned that CNA has seen many improvements in recent years with key IT liaisons closely linked to every business venture to assure success. In other words, the company's business strategies are equally aligned with new IT solutions.

Hennessy commented that the "more IT-savvy" and "partnership-oriented" agents will thrive in the future marketplace, while those less able to adapt will not. Those agents who accept the value and credibility of predictive modeling will continue to grow profitably with their



■ Gail E. McGiffin provided an in-depth look at the results of Accenture's 2005 study on property and casualty underwriting.

carrier partners. He also shared that the type of carriers who may best be able to take advantage of future opportunities are those that exhibit greater marketplace flexibility.

It was evident to all in attendance that a clear business vision with capabilities to support that vision will be necessary to overcome any gaps that may exist between how underwriters and senior management view technology's impact on the underwriting process. A more "strategic underwriting" view rather than one as an "exception processor" will go a long way toward a more successful and rewarding future. A business vision that matches IT capabilities is critical to ongoing growth and profitability.

Because competition for capital within each company is severe, IT funding seems tighter for commercial lines projects where greater complexity of organizational structure make evidence of returned value more difficult to see. As Shellito noted, the ROI for technology advances in commercial lines, given the greater processing complexity, is longer term than in personal lines. Having said that, it appeared that those in attendance agreed with McGiffin that another survey in a year's time would certainly help us more fully understand how recent technology advances in property and casualty underwriting are being viewed by the industry. ■

Merits of a Document Repository

by Tom Filep, CPCU



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What is a document repository and why should this matter? It is imperative to manage risks more efficiently and cost-effectively for the benefit of company investors, shareholders, and most importantly, for our customers. A document repository helps to accomplish this objective.

A document repository is designed to streamline communication and significantly reduce expenses inherent with long-tail insurance claims that are in litigation. Some books of business, e.g., California construction defect, environmental/latent health/hazardous waste, certified class-action lawsuits, require many time-consuming court appearances with the same collateral sources, insurers, and attorneys. Using a document repository could help resolve all issues months and sometimes years faster than the existing process for handling claims in litigation. By unifying discovery materials for all interested parties, collateral sources enjoy

consistent and complete disclosure of legal discovery, which makes for well-informed, timely business decisions.

Interested parties typically use a diverse, non-integrated, combination of paper-intensive and technology systems. The document repository helps to resolve these current challenges by offering web-based browser capability, basic document view, extraction and searches, multiple-user access, team support for document processing, and technical assistance for document loading. Also, multiple screen displays enable the end user to review actual documents side by side with chronological history of all pertinent documents, and customized document interface accommodates end-user preference. End users can extract online management reports, view images in original file format, and monitor history of documents viewed to project conclusion.

Who benefits from a document repository and how?

- Insured—get issues settled and closed promptly, which eliminates any potential exposure to corporate/individual assets not covered by insurance.
- Insurer/reinsurer/self-insured—resolve claim issue as efficiently and cost-effectively as possible to promote industry goodwill for future claims in litigation.
- Plaintiff attorney—get a fair settlement for the client by disseminating consistent data to all interested collateral sources.
- Defense counsel—work with client to get a fair, equitable settlement, or favorable trial result. A favorable result earns client trust and respect, which often yields additional business.
- Producer—improves communication and client relations, which generates more business.
- Courts/industry regulators—ensure good-faith claim practices and a reasonable business profit for all

parties involved. Keeps court calendar moving smoothly. Facilitates a viable audit trail. Improves public goodwill.

What costs are involved?

- Typical end-user costs include but are not limited to database set-up fee, end-user set-up fee, monthly maintenance, monthly user fee, monthly image storage, and additional data uploads.

Who houses the data?

- Electronic data can be warehoused at an insurer's server location, at a vendor's facility, or both. Larger insurers might prefer to retain all data in house.

Won't everybody have access to confidential work products?

- Network security is increasingly more sophisticated and cost-effective. As the insurance industry embraces technology to improve financial results, better technology is becoming available at lower cost.

Who can I sue if something goes wrong?

- Typical client/vendor contracts, including hold-harmless issues, are negotiated and in writing prior to project implementation.

How can I trust an outside vendor with in-house documents?

- Document repository end users are restricted to client needs, and each end user only has access to her or his company data. Information is shared only if all parties agree to it at a project's inception.

Won't implementation/training/testing create a lot of down time for my staff?

- Many programs are implemented off site, with limited, if any, down time.

Continued on page 10

Merits of a Document Repository

Continued from page 9

Paper processing is often the friction point where business costs escalate and customer service goes down. Insurance and financial services firms have typically relied on in-house technology systems only to be overwhelmed by the mounting complexities of a reliable business solution. Business automation methodology inherent with a document repository provides a consistent approach to the issues of claim process automation for the global insurance industry.

A typical document repository project process is as follows:

- Litigants provide documents to vendor at central document imaging center, either as images in PDF or TIF format, or as hard copies. Vendor provides specifications to each end user to define preferred format, then works with each end user to confirm specifications and set production schedule. All end users are provided with service list of other end users.
- Vendor then processes documents as needed to prepare for loading into the document repository. This could include scanning hard-copy documents to TIF image format, endorsing TIF images with control (Bates) numbers, and converting TIF to PDF format.
- Vendor loads documents and notifies end users of protocol. End users are then notified of new document in the document repository.

- End users log on to the document repository to browse and search for documents. Vendor will monitor secure access to data by providing repository user name and password. End users can then browse repository and search for documents via a built-in search engine. Also, end users can view documents online, print documents, save documents to their computers, and e-mail document links to authorized end users.
- Document repository is customized when warranted to suit client requirements.

A competent vendor should provide the following document repository management services:

1. Document processing—scan and number as required, then load documents into document repository. Vendor will provide guidance for end users that prefer to load documents in house.
2. Project coordination—vendor will monitor loading, processing, and return of documents for each end user. End users will be notified of updates.
3. System maintenance—vendor will provide data backup and monitor network security to ensure end-user data is protected.

- 4. Support—vendor will provide support to end users, including guidance for database searches, document collation, CD/DVD production, and document delivery upon request from designated end users.
- 5. Project management/quality assurance—since clients are emphatic about getting solid ROI/ROE for technology consulting investment, vendor provides project management support and budget reports to ensure success of relationship.
- 6. Billing—vendor provides itemized billing to track end-user costs.

Caution—do not expect the document repository to magically transform your risk management practices into the most profitable P&C or L&H firm in the industry. But the right document repository vendor selection can most certainly make your firm more competitive in the marketplace. And it will help make the industry stronger for company investors, shareholders, and most importantly, for our customers. ■

IT Events Calendar

FYI, you may want to mark your calendars for the following information technology-related event:

February 26-28, 2007

Gartner Business Process Management Summit

Sheraton San Diego
San Diego, California

This summit addresses the difficulties presented by cross-functional process alignment and achieving (or improving) an organization's effectiveness. For more information visit: http://www.gartner.com/2_events/conferences/bpm3.jsp.

What Is a Requirement?

by Phil Coley, BSc, MBCS, CITP

Editor's Note: This article is by **Phil Coley, BSc, MBCS, CITP** of Coley Consulting, a United Kingdom-based training specialist in user acceptance testing. It was originally published on his web site, www.coleyconsulting.co.uk, and is reprinted with his permission.

A good set of requirements is needed for any project, especially computer system projects, to be successful. This is where many projects fail, in that they do not specify correctly what the system should do. In fact, many systems have just been given a deadline for delivery, a budget to spend, and a vague notion of what it should do.

The root of this problem is:

- Computer systems developers rarely have as good an idea of how a business runs and should run, compared with a business user.
- Business users have little idea of what a computer system could achieve for them.

As a result, paralysis sets in and business management time is concentrated on meeting timescales and budgets, rather than what is going to be delivered.

Requirements Definition

The truth is that you do not need a great deal of technical knowledge to specify requirements; in fact it can be a big disadvantage. A requirement for a computer system specifies what you want or desire from a system. For a business in particular this is, "What you want or desire from a system, which you believe will deliver you a business advantage."

This advantage need not just be a reduction in costs; in fact many systems justified on a reduction in operating costs, fail to deliver as low-skilled but relatively cheap staff have to be replaced by high-skilled, and more expensive staff. The advantage can be a reduction

in processing time, which will lead to a reduction in costs, or being able to better use the unique knowledge base belonging to a business.

As you start to specify what you want or desire, you hit up against technical language of requirements. Fear not, this is quite straightforward:

Functional requirements—what you want a system to do.

Non-functional requirements—restrictions on the types of solutions that will meet the functional requirements.

Design objectives—the guides to use in selecting a solution.

Functional Requirements

These are the behaviors you want the system to perform. If you were buying vehicles for a business, your functional requirement might be:

- The vehicle should be able to take a load from a warehouse to a shop.

Similarly for a computer system you define what the system is to do. For example:

- The system should store all details of a customer's order.

The important point to note is that **what** is wanted is specified, and not **how** it will be delivered.

Non-Functional Requirements

These often lead to much mystical mumblings, implying that a high priest of the computing fraternity is the only person who can understand them. They are however quite simple; they are the restrictions or constraints to be placed on the system and how to build it. Their purpose is to restrict the number of solutions that will meet a set of requirements. Non-functional requirements can be split into two types: performance and development.

Performance Constraints

These constraints are how the system should perform when it is delivered. The vehicle example, without any constraints, might result in solutions being offered for everything from a large truck to a sports car. To restrict the types of solutions, you might include these performance constraints:

- It must take a load of at least one ton.
- The load area must be covered.
- The load area must have a height of at least 10 feet.

You may include more. Similarly for a computer system you might specify values for these generic types of performance constraints:

- The response time for information to appear to a user.
- The number of hours a system should be available.
- The number of records a system should be able to hold.
- The capacity for growth of the system.
- The length of time a record should be held for auditing purposes.

For the customer records example, these might be:

- Information should be made available and be stored in a maximum of three seconds.
- The system should be available from 9 a.m. to 5 p.m. Monday to Friday.
- The system should be able to hold 100,000 customer records initially.
- The system should be able to add 10,000 records a year for 10 years.
- A record should be fully available on the system for at least seven years.

The important point with these is that they restrict the number of solution options that are offered to you by the developer.

Continued on page 12

What Is a Requirement?

Continued from page 11

Development Constraints

In addition to the performance constraints, you may include some development constraints. These mainly fall in the field of project management, but are still a restriction on the types of solutions that can be offered. There are three general types of development constraints:

- **Time**—When a system should be delivered is the obvious time constraint.
- **Resource**—How much money is available to develop the system is obvious, but a key resource would be the amount of time business staff could spend in briefing system development staff.
- **Quality**—Any standards that are used to develop the system including project management, development methods etc.

Design Objectives

Design objectives assist in selecting a solution from a number that are offered to you. Only you know what is the most important feature of a new system, whether it should be fast, have large storage, be easy to use, or whatever. Unfortunately, you can't have all you want; compromises have to be made.

Experiments with teams of developers in the 1970s showed that they delivered systems according to what is defined as the top design objective. A number of teams were given an identical set of functional requirements, but each had a different design objective: some had to make the system fast, some had to use only a small amount of computer storage, some had to be easy to use, etc. Each team delivered a system that met their top objective fully, and other objectives to a lesser degree.

If you do not produce a set of design objectives, which are in a priority order, the developers will produce their own, and these might not be what you want.

Bad Types of Requirements

The above are all good types of requirements and will allow a development team to provide you with a number of options from which you can select a suitable solution. However, many sets of requirements given to developers are polluted with design and implementation solutions. This means that the customer has told the developer how to conduct his or her work!

Examples of design solutions are:

- The system should run on our existing network of computers.
- The structure of a customer record must have a separate field for the first and last names of a customer.

Examples of implementation solutions are:

- The customer record systems should run on a SQL database.
- The system should be built using the Java programming language.

Each of these says **how** the system should be built, not **what** the design should deliver, and you may miss out on a better solution, due to you making these design decisions. There may be good reasons for some of these statements, but until you have seen a number of designs, you do not know if they are valid for you.

Prioritizing Requirements

When a set of requirements has been produced, it is often large and complex. The realities of time, scale, and resources mean that it won't all be delivered, at least not the first time out. The customer should prioritize the requirements to specify what he or she most wants, and what is nice to have. If the customer does not prioritize, then it will be done by the developers, who may select the parts of the process that are easiest to produce, or that are technically challenging, but not taking into account the needs of the organization.

Conclusion

A good set of requirements consists of prioritized sets of functional requirements, non-functional requirements, and design objectives and does **not** include any design or implementation decisions. Producing these will enable you to get systems that will deliver a business advantage. ■

Liten Up!

By B.D. Hicks



Slacking for Professionals

by Michael Gasior

Michael Gasior is the founder, chief instructor, and president of AFS Seminars LLC, which specializes in financial and investment training. Gasior has held a host of securities licenses and industry designations. He has authored 10 textbooks on investments and the investment markets, and more than 300,000 people worldwide read his monthly newsletter. His breakthrough radio program "Big Money with Mike Gasior," which aired worldwide on the VoiceAmerica Radio Network, was one the first shows ever to focus on the needs, concerns, and issues faced by the world's largest investors.

Editor's Note: The following article is offered in humor. Its publication is not a serious endorsement of the advice it provides. It is reprinted from the *Gasior Newsletter*, June/July 2006 issue, with the author's permission.

I saw a statistic the other day that stated that slacking at work cost U.S. corporations \$544 billion during 2005, and that 87 percent of employees in the United States have reported being angry about colleagues they felt didn't pull their weight at the office.

Well, I'm now 25 years into my "professional" life, and my current business allows me to be present in a wide array of corporate offices every single year, allowing me to see some of the best corporate screw-offs in the world today. I'm not talking about the obvious, lazy slob who everybody clearly knows is useless. This list of traits I am about to share with you, are the techniques that are employed by the world's finest slackers. You all know the type of people that I'm talking about too; the person who the boss considers one of the best employees in the department, but who truthfully does very little at all. It's quite a science really.

Although I am going to frame these behaviors I've observed as sort of a "how-to manual" for how to be a more successful

slacker, I hope it will help bosses and colleagues around the world bust these corporate cheaters once and for all.

So here are the keys to professional goofing off.

1. Always act impatient and irritated.

When you appeared annoyed and agitated all the time, people tend to think that you must just be way too busy. This technique works wonderfully on two fronts, since some people will be afraid to add to your already heavy workload, while others will just want to avoid this cranky jerk.

2. Multi-task.

It is critically important to make certain you are at least somewhat associated with as many projects as possible (but obviously in no important sort of way) so you will always have an excuse on why some work didn't get done. "I've been so buried with Project A, I just haven't had any time to get that stuff done on Project B. Sorry boss."

3. Make lists.

Make sure to write down every possible thing you might do, even including stuff like "check voice mail," and leave the list in a prominent spot on your desk with a couple of the things scratched off. This will give anybody stopping by an idea how you are swamped with stuff to take care of, and with only a few items crossed off your extensive list they might think twice before they burden you with anything more. Not to mention that your list making actually makes you look organized and diligent.

4. Keep a pretty messy desk.

Really hard-working people have no free time to be cleaning their desks, so nothing screams "very busy" more than a disaster on your desktop. After all, with all the projects you have going on, you **need** all those piles, right?

5. Always have lots of windows open on your computer monitor.

This is basically the oldest trick in the book, but with four spreadsheets, five e-mails, and a word processing document all open at the same time, it makes the Spider Solitaire and eBay windows very difficult for anyone who unexpectedly walks into your workspace to detect. It also conveys the sense of how busy you are.

6. Carry documents everywhere you go.

Never leave your desk without at least a few memos, folders, notebooks, binders, or papers of some kind with you. This gives the appearance that you're always on your way to somewhere important and related to business, versus just heading to the coffee machine or the restroom to read *Sports Illustrated*.

7. Document your time in the office.

Whenever you find yourself in the office unusually early or late, make certain to send your boss e-mails or leave voice mails that will time stamp your extreme hours. It doesn't really matter that the only reason you were in the office at 8 p.m. was because you forgot your concert tickets in your top drawer. All that matters is that you **were** actually there, and not much else really does.

8. Drink tons and tons of coffee.

Nothing screams "I'm so freakin' busy" more than sucking down gigantic buckets of coffee all day long. Every time you go on a coffee machine run, make sure to announce to the boss how you are in critical need of a "caffeine fix." Plus, all this caffeine will help you with my first suggestion of always being impatient and irritable.

So those are my observations, and if any of you know some other beauties, I would love to hear about them. ■

Eliminating Waste and Improving Business Software Value the Agile Way

by W. Thomas Mellor, CPCU, CLU, ChFC

In a previous *Cutting Edge* article I introduced the concept of agile development, and compared it to the traditional “waterfall” development methods. In this article, let’s examine more of the history and evolution of agile and why more organizations are drawing toward this technique.

Agile practice philosophies and fundamentals are based upon “The Agile Manifesto and Principles Behind the Manifesto” created in 2001 by leaders in the agile community.

Manifesto for Agile Software Development

We are uncovering better ways of developing software by doing it and helping others do it. Through this work we have come to value:

- **individuals and interactions** over processes and tools
- **working software** over comprehensive documentation
- **customer collaboration** over contract negotiation
- **responding to change** over following a plan\

While there is value in the items on the right, we value the items on the left more.

Principles behind the Agile Manifesto

- Our highest priority is to satisfy the customer through early and continuous delivery of valuable software.
- Welcome changing requirements, even late in development. Agile processes harness change for the customer’s competitive advantage.
- Deliver working software frequently, from a couple of weeks to a couple of months, with a preference to the shorter timescale.

- Business people and developers must work together daily throughout the project.
- Build projects around motivated individuals. Give them the environment and support they need, and trust them to get the job done.
- The most efficient and effective method of conveying information to and within a development team is face-to-face conversation.
- Working software is the primary measure of progress.
- Agile processes promote sustainable development. The sponsors, developers, and users should be able to maintain a constant pace indefinitely.
- Continuous attention to technical excellence and good design enhances agility.
- Simplicity—the art of maximizing the amount of work not done—is essential.
- The best architectures, requirements, and designs emerge from self-organizing teams.
- At regular intervals, the team reflects on how to become more effective, then tunes and adjusts its behavior accordingly.

Software Development Is Not Based in Manufacturing

Building software is complex and difficult work—and most of it falls under the category of new product development. However, the software industry (particularly the project management area) has traditionally viewed it within a manufacturing context, seeking to build repeatable, optimized processes to managing them in the same manner. Herein lies the paradox: software construction seems to be a candidate for a repeatable process, but in fact it is typically fraught with the uncertainty

and complexity that characterizes new product development.

Wastes in Manufacturing and Wastes in Software Development

Mary Poppendieck discusses this paradox in detail in her now classic book, *Lean Software Development* (Addison-Wesley 2003). Poppendieck applied the Seven Wastes of Manufacturing that emerged from the Toyota Production System to software development. She proposed the Seven Wastes of Software Development: partially done work, extra processes, extra features, task switching, waiting, motion, and defects. The ultimate goal of software development management should be to reduce and, if possible, eliminate these sources of waste in order to provide improved value to the customer. Agile development focuses squarely on doing this. Let’s examine how.

Partially Done Work (Inventory)

In software development, partially done work is inherent in traditional techniques because the entire development process is sequentially scheduled. All software construction should go through the software development lifecycle of requirements, design, coding, testing, and deployment. Traditionally, each segment is completed in its entirety and then the work moves to the next stage. This is similar to manufacturing practices of an assembly line. Therefore, throughout the traditional process, the product is a flux of partial completion until the very end (deployment). Under agile, complete (aka “shippable”) software is delivered in short increments (typically in cycles of one to four weeks). Partially done work is kept to a minimum and its value can be assessed frequently by customer inspection (and adjusted as needed or desired).

Extra Processes (Extra Processing)

Agile critics sometimes argue that agile practices lack the rigorous processes needed to assure product quality. Agilists that anything beyond the minimum process is wasteful. Paperwork that adds no value is waste and can actually hide quality problems when it obscures the actual functioning of the product. Product quality is best validated by persistently and thoroughly testing it. This is at the heart of agile in the form of test-driven development (TDD).

Under TDD, programmers write code based upon specific *user stories* (stories are customer descriptions of a desired feature). (For example, as an airline passenger, I want to select a destination, date, and time so that I can see all flight options.) By minimizing the process, more effort can be focused on actually creating the product. Deliverables should be created only for the benefit of the project team, service areas (the mechanics), and/or regulatory compliance.

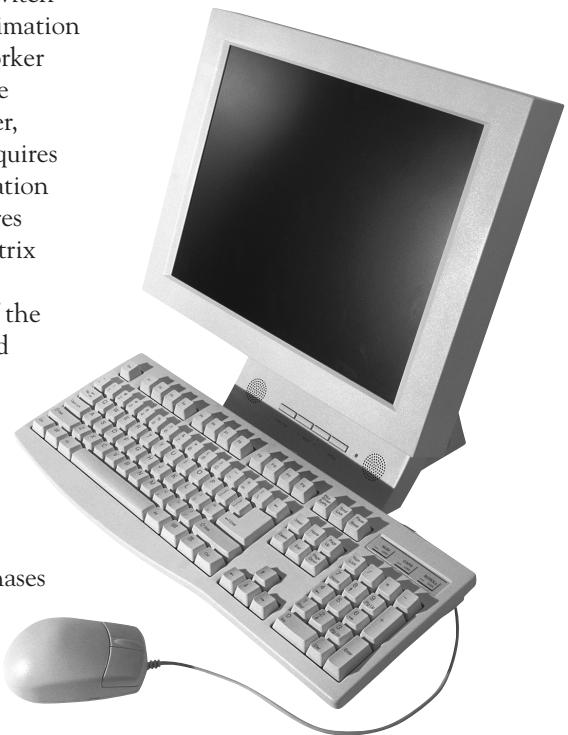
Extra Features (Overproduction)

Traditional development often forces customers to “gold plate”—add as many features as possible because they are uncertain of their value. Whether all of the features are truly needed is not the driving force; they are included because they are initially thought to be “probably valuable.” Agile forces the customer to prioritize features in descending order (typically called a *product backlog*). The development is still controlled by the typical project constraints of cost and time. The customer can decide (governed by these constraints) what features are most critical and valuable. A better decision regarding “good enough” can then be made.

Task Switching (Transportation)

In many organizations, IT people are assigned to multiple projects and often in a specific role (business analyst, developer, designer, etc.). This sub-

optimizes work due to having to switch between various projects. One estimation is that this switching decreases worker productivity by 50 percent or more (Tom DeMarco and Timothy Lister, *Peopleware*). The agile solution requires persistency and constant collaboration among team members. This requires an organization to shift from a matrix resource allocation structure to a dedicated team model. It is one of the most significant organizational and cultural changes for enterprises working with the traditional model.



Waiting

Traditional, linear software development schedules include phases that involve a considerable amount of waste. Workers frequently wait for others to perform predecessor tasks. There is often a time gap between when a predecessor task is completed and when that fact is communicated. Traditional teams report progress in weekly status meetings, so it may be a week or more before people realize they could perform their task. Agile projects use a daily, stand-up meeting where people report on their progress as well as their planned work. Communication is persistent and timely. Agile also minimizes waiting by delaying the most impactful decisions until more information is available to optimize the decision.

Motion

Most motion in software development is directed toward either product creation (designing, coding, and testing) or toward artifact maintenance. In many projects, the maintenance of large, complex requirements and design documents severely reduces the time available for actual product building. Agile minimizes motion by reducing artifact requirements; therefore providing more time for product construction. Also, by placing the team in a collaborative space, wasted motion on moving between meetings and other environments (such as a test facility) is also reduced.

Defects

Traditional development struggles with defects because the testing phase is one of last processes. Because of time constraints, this critical phase is often cut short to “make the delivery date.” So, the product is delivered with defects that are often tackled after delivery to the chagrin of the end users. In agile, testing is a continuous process because the development is driven by the user stories (thus the term test-driven development), which are used as the unit and acceptance cases. The customer can actually test the features for acceptance (functionality and usability) as the product incrementally emerges. Defects are identified and resolved early, but since user stories are the basis of development, the frequency of defects is much lower in most agile projects.

Agile's Future

In their 1986 *Harvard Business Review* article, “The New New Product Development Game,” Hirotaka Takeuchi and Ikujiro Nonaka identified emerging characteristics of the most effective companies in new product development: *Continued on page 16*

Eliminating Waste and Improving Business Software Value the Agile Way

Continued from page 15

In today's fast-paced, fiercely competitive world of commercial new product development, speed and flexibility are essential. Companies are increasingly realizing that the old, sequential approach to developing new products simply won't get the job done. Instead, companies in Japan and the United States are using a holistic method—as in rugby, the ball gets passed within the team as it moves as a unit up the field. (Takeuchi and Nonaka, *Harvard Business Review*, January–February 1986)

Professors Takeuchi and Nonaka are widely recognized as the first revealers of lean product development—the precursor to agile techniques. The adoption of agile techniques has been a slow, steady march

to the realization of the benefits first identified by these two academics in the mid-1980s. Agile practices are certain to become more common as the pressures of competition and optimization demand that waste be significantly reduced or eliminated. The market will see to that. At the Certified Scrum Master training I attended in February 2005, Scrum co-creator Ken Schwaber boldly predicted: "I foresee that in the not-too-distant future, software development will fall into two camps—agile and traditional. In the end, the agile companies will be building software for the traditional ones." That prediction seems more credible.

In my next article, we'll examine the differences in management and leadership of work in the agile environment. In the meantime, think lean! ■

"The number-one benefit of information technology is that it empowers people to do what they want to do. It lets people be creative. It lets people be productive. It lets people learn things they didn't think they could learn before, and so in a sense it is all about potential."

—Steve Ballmer, CEO of Microsoft Corporation

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