

In-the-SPIN

Newsletter of the **BostonSPIN**
Software Process Improvement Network

Issue 45 February 2002

Editors: Judi Brodman
Sheila Lynch

Editorial

Welcome to the February issue of In-the-SPIN. What a great month it has been for us in the Boston area. You don't have to be a sports fan to have been swept into the emotions surrounding the New England Patriots' march to, and victory in, Superbowl XXXVII! Even the least cynical among us had doubts that this team could do it. After all, they were using a back-up quarterback, there was no predominant star, their statistics were unspectacular. Yet somehow, week after week, they went out on the field and they won – much to the surprise of the experts. I'll leave the analysis of their season to the sports writers. But I'd like to comment on their achievements from a BostonSPIN perspective!



This team embodied the word teamwork. Each week of their schedule, they had a game plan. The milestone was a victory. To achieve it, they played not as a bunch of individual superheroes, but rather, as a team. They supported and encouraged each other, particularly in the face of adversity. They identified risks and overcame them. They analyzed their performance for flaws and strengths. And they never lost sight of their overall goal, to win the Superbowl.

Maybe we should invite the team to speak about their process improvement at a BostonSPIN meeting! But in lieu of that, we offer you, via this newsletter, our guest speakers, our roundtable discussions and our book club, the opportunity to discover how to be a member of a winning team!

Sheila Lynch, Co-editor, *In-the-SPIN*, email comments to salynch@mitre.org

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Letter from the Chair

Times like these

In times like these, it is helpful to remember that there have always been times like these. -- Paul Harvey

We've all been through a pretty tumultuous year with dot.coms crashing, biotech crashing, and planes crashing. As I talk with many of you before and after our meetings my heart goes out to you as I learn of more and more layoffs. We are in a bad economic place, without a doubt.

If it is of any comfort to you, I have been through five of these down turns since I started my consulting business in 1983 and yes, this seems black at this time but it will get better. That may seem of little comfort to those of you out of work so I want to propose something that will at least get you moving mentally, perhaps physically and keep you primed for the long hunt for new positions.

I would like to ask how we could help you. Several new SPIN volunteers are in a similar place to you and eagerly want to make networking turn into jobs. How can we do that? I want to ask if you're willing to put our heads together and start to make things happen. Do you have a friend that has a startup or know someone with a job at your last gig that you don't match that maybe is a perfect fit for someone else?

I'm not talking about casual networking. I'm asking would you be able to get involved in an intensive-short term effort to help match people with jobs, are you willing to share a lead, make a few phone calls?

If you are willing to make this commitment, then call me (Linda McInnis) at 978-635-9281. We have a space that we can meet at on a weekly basis; we have a web site that can support what we want to do. Help us help you.

Regards,

Linda McInnis

Chairman, Boston SPIN

Feature Article

Schedule Shredding: It's the Little Things We Do Part II

This issue's feature article is Part II of a two part article contributed by Richard Brenner, a consultant and principal of Chaco Canyon Consulting (www.ChacoCanyon.com) and a Boston SPIN board member. Copyright © 2001

If you've ever pondered the deep truths of project management, you've probably wondered why projects are so often so late. If everyone working on a project—and certainly everyone who isn't—wants the project to be done on time, why can't we finish on time?

Last month, I presented a collection of practices that emphasized the personal level. This month, let's look at the organizational level

Bare bones equipment and software

A large IT integration consulting firm recently had a client who insisted that they could save money by using a production environment for both testing and development. Not only does this approach threaten the integrity of production, it also hampers testing and development. It's a singularly bad idea, but it's a great example of trying to tackle difficult problems with inadequate equipment.

In resource-restricted organizations, capital-restriction strategies appear to make more sense than they actually do. In part, this illusion is a result of the limitations of accounting systems, which are very good at measuring the cost of equipment, space and software, and very bad at measuring the effort that people expend to compensate for inadequate equipment and tools. A decision to restrict capital expenditures appears to offer significant cost reduction, when in fact it can actually produce cost increases, if you take labor into account.



Since accounting systems don't measure very well these labor-based cost increases, the capital restriction decision continues to appear correct even as costs increase, and capital expenses sometimes are cut further to "save" even more. Because of this feedback loop, some organizations have been caught in spirals of cost increases and capital restriction.

If you have a resource-allocation role in your organization, think about how much it costs the organization to get by with too little space and too little or obsolete equipment. In the end, the money saved by restricting capital expenditures might be minor compared to the money lost by delaying delivery or delaying market entry.

In-phase infrastructure investments

Typically, organizations make infrastructure investments during quarters when Net Income looks good. For example, we wait until the record-setting quarter to upgrade our internal network architecture, to buy everyone new laptops, or to shut down half of the East-end elevators while we upgrade the motors and software. One effect of such "in-phase" infrastructure investments is that the disruptions that inevitably accompany them arrive at a time when they can cause maximum revenue disruption.

Like infrastructure investment, new product development is often in phase with Net Income. Thus, the disruptions associated with infrastructure investment are often synchronized with major new product initiatives. Consequently, many of us have developed an impression that new product development is more difficult to manage than it actually is. There are indeed difficulties, but some of those difficulties arise not within the context of the project, but elsewhere in the organization—at the level of the organization responsible for timing infrastructure investment.

Again, the culprit is the typical accounting system, which fails to assess the full cost of infrastructure improvement projects, because it doesn't measure the cost of delays and disruptions throughout the organization. If the accounting system did measure the total cost of the improvements, including opportunity cost, it would be much easier to justify out-of-phase infrastructure investment. A new approach to infrastructure investment, one in which we undertake improvements out of phase with Net Income, might improve both long term results and new product development performance.



Failure to relocate

Many organizations today have a heritage of acquisition. As one result of a series of acquisitions over a period of years, they have organizational elements at several sites scattered around the country or around the world. When these organizations work on development projects, the project team itself can be apportioned across those sites, with critical expertise drawn from those locations that possess it. This situation has led to much research and interest in managing geographically dispersed teams.

No doubt, we can get better at managing dispersed teams, but collocated teams will probably be more effective than dispersed teams for foreseeable future. The one thing we can do that will most improve the performance of dispersed teams is consolidate them—relocate people so that the team is no longer dispersed.

Sometimes we fear that if we try to relocate people, they'll elect to leave the company instead. And sometimes, they

will. But failure to deal with these problems effectively condemns our organizations to high costs, project delays, increased communication costs, and a higher incidence of shredded schedules. In some organizations, it's time to face the possibility that promises made about never relocating might have been mistakes. It might be necessary to find ways to reconfigure the company geographically into a smaller number of sites, with less geographical dispersion. That effort might cause some people to leave the organization.

To accomplish consolidation with a minimum of losses of key people is a difficult problem, but if we honestly account for the cost of *not* solving it, we can make a fairly strong case for applying significant resources to a quick and effective solution. Applying those resources in novel ways to provide financial support and to ease stress for the people who must relocate is the key to successful consolidation.

In the next seven days, collect your own organization's schedule-shredders. What can you do to manage them? Unless you have organizational responsibility, you probably can't do much directly. But you probably know people who can. Can you talk to them? Can you talk to people who can?

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Dear SPIN Doctor Not a Super Hero in Sight

by Judi Brodman © 2002

Dear SPINners:

What can I say about this year's New England Patriots' team that hasn't already been said. Look at the Sports Illustrated Special Super Bowl edition's articles - "One Crazy Run", "Super Bill", "Worst to First", "The Brady Hunch", "Chilling", "It's about Time" and "Smashing Finish". These articles tell the story of a team of men never given a chance to win at all - a group of second stringers and waived players being coached by a 'second stringer' who began the season being close to the worst team in football. And not a Super Hero in sight!

So, what happened to make them go from the worst team in football to the best team in football, you ask, all in the same season? Ah, now that is the joy of it. The same thing that made them the worst ended up making them the best - a group of second stringers and waived players. These players learned that with discipline, training, and a game plan, they could win - together. They learned that if they exercised their roles well they could win - together. They learned that a game plan would help them meet each week's new challenges head on - together. They became a team that had confidence in themselves and their teammates - they trusted each other to do their jobs and do their jobs to the BEST of their ability. Still, not a Super Hero in sight! They believed that if they were prepared and had full knowledge

of what was lay ahead of them at any given time, they could beat any team - together. And they did it - together. And still, not Super Hero in sight - just ordinary guys doing extraordinary things!



Isn't that what most of us face every day - working in teams with ordinary people. But most of us don't believe that discipline in our profession makes a difference or learning our roles and exercising them to the best of our ability makes a difference. Or looking ahead and assessing the risks we face week to week makes a difference. Or having a game plan that takes us week to week makes a difference. Or that we don't need the Super Hero to get us across the goal line. We in New England waited 42 years to have a team who understood it all - that they could get there together. Let's learn from this group of ordinary guys who did extraordinary things - with not a Super Hero in sight!

This column is for you; let's make a difference! Send your comments and questions to "Dear SPIN Doctor" at brodman@LOGOS-Intl.com. Sign them or use a "pename" I respect your confidentiality.

"The SPIN Doctor"

January Meeting Synopsis

"Writing Testing Lessons"

Speaker: James Bach
Founder, Satisfice, Inc.

The following synopsis is contributed by Dolores McCarthy, Boston SPIN Secretary and Quality Manager at Computer Sciences Corporation, Cambridge.

An audience of about 200 filled the auditorium at MITRE to hear James Bach's lively recounting of his venture with Cem Kaner and Brett Pettichord in developing a practical guide for testers, *Lessons Learned in Software Testing: A Context-Driven Approach*. The underlying methodology could be applied to many areas of endeavor when attempting to present one's expertise to others.

In his plain-vanilla, no-nonsense, practical style, James told how he and his fellow colleagues Cem and Brett had become frustrated by the "preachy and hidebound way" most testing textbooks are written. They determined to improve on the subject and set about to create a set of testing lessons that would be creative, unstuffy, yet effective and easy for testers to use. Jim explained the challenge they faced in transferring their own years of knowledge into something that would benefit testers with varying degrees of expertise.

The team started with the realization that mastery of something has many aspects, and excellence of one kind does not necessarily mean excellence of another. For example, the ability to learn about something is different from the ability to converse about it, or perform it, or achieve a



goal, coach someone in it, or invent new ways of doing it. The team had to appreciate these facts to understand their own limitations in developing a successful set of test lessons, and the limitations of their target audience in learning from what they had to present.

The team realized they faced social as well as skill simulation problems. In the social sense they did not want to appear pedantic or authoritarian. Yet they had to address the problem of a less skilled person possibly following instructions blindly and going down the wrong path unwittingly, whereas the more skilled person could interpret situations appropriately.

They decided on an informal, anti-authoritarian style, like the “Dummies” series of instruction books. They would also avoid recipes (let people invent their own), write short explanations, allow some inconsistency for different sides of issues, and refer to underlying contexts in the lessons.

James described how the team set their ground rules for developing the lessons in a very short time. There was a set of seven rules. Some were, “Each lesson stands alone,” “Each lesson is peer reviewed,” and “We do not have to be complete, just helpful.” Then they brainstormed, assigned chapters, went off and put their ideas on large cards for the test lessons. James had the cards with him, tossed them on the stage, and invited us to look them over after the talk. The team brainstormed some more, held long discussions, refined their ideas, and wrote day and night for two weeks. The whole process, including copy edits and final reviews, took forty-five working days. The result was 293 lessons in 11 chapters. Some of the lesson titles are, “Fresh eyes find failure,” and “Avoid following procedures unless they followed you first.”

James summarized his talk with, “What makes written testing lessons helpful?” - Community, Shared Skills, and Self-Learning Culture. The audience applauded enthusiastically one of their favorite speakers. (See the complete



presentation on the SPIN web site.)

January Roundtables

Roundtable #1: Creative Ways to Implement Risk Management in Software Development

Facilitator and Scribe: Dolores McCarthy, Boston SPIN
Secretary, Quality Manager, Computer Sciences Corporation.

This Roundtable began with the definition of risk from Webster, “Risk is the possibility of suffering loss.” The group volunteered some types of loss a project might suffer - more

cost to the project than budgeted, delivering insufficient functions, unavailability of a database server, schedule delay, or loss of customer confidence. Most of the group had experienced problems on a software project due to a potential risk materializing, but not many had used a risk management process that involves identifying, analyzing, mitigating where possible, and tracking risks throughout a project. Several people named types of risks they might encounter – underestimating resources for a project; not interviewing enough stakeholders; telling the truth and having the project cancelled; not getting the balance right for cost, schedule, and quality; having tests designed to make the product look good instead of finding errors (influence from the top); losing personnel to another task because of multitasking; and not having enough of a budget to include some form of risk management.

Understanding risks to a project and doing something to lessen the chance they might occur is practicing risk mitigation. One person described a favorite way to mitigate the risk associated with estimation on a new project – one third of the way through a new project, get the real estimates to date from the people doing the work and re-estimate the rest of the project. This new estimate works out in practice.

Another person suggested putting a stake in the ground about telling the truth on the status of a project. It’s more risky to mislead and pay the consequences when the truth comes out later.



On the subject of insufficient funds for risk management, someone else stated that the key risks are in your head anyway and you ask about them at every meeting.

If there is some funding for risk management, the project can brainstorm to identify risks, the likelihood (probability) of the risks occurring, and the loss (impact) to the project if they do occur. A minimal way of assigning probability and impact to risks is to judge them to be High, Medium, or Low (instead of trying to assign definite numbers to them), and to concentrate on the risks that are High probability and High impact. There should be a plan for what to do if one of these risks occurs. Then the risks should be tracked each month for their status to see whether their likelihood of occurring has changed, if they are no longer an issue, or if the impact may have changed. Even on a smallish project, an Excel spreadsheet may be used to track risks. For larger projects there is a free tool called Risk Radar which is available on the Software Program Managers’ Network at <http://www.iceincusa.com/rskrdr.htm>

Handouts for references on risk management at the table were:

Risk Management Overview at

<http://www.sei.cmu.edu/programs/sepm/risk/>

This document contains web references on risk management.

Risk Management in Practice at

<http://www.stsc.hill.af.mil/crosstalk/1997/apr/management.asp>

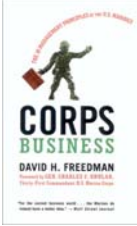
This document contains more references to other articles on risk management.

January Book Club

“Corps Business: The 30 Management Principles of the U.S. Marines”
by David H. Freedman

Facilitator and Scribe Barbara Purchia, BostonSPIN Vice-Chair, Quality Engineering Director, Configuration Management Business Unit, Rational Software.

Attention!!! This was a really good book! You may be wondering what do the Marine Corps know about business. They know a lot -- about planning, organizing, building a capability-based organization, building authority-on-demand into the hierarchy, acting quickly, and much, much more. These books described each management principle in terms of how the Marines follow them and also provided some examples from the business world and how they related to some of the principles.



Our discussion group reviewed the thirty principles and began discussing some of them. These are some of the interesting points we discussed:

- Organize according to the rule of three: In times of stress, most people can efficiently handle exactly three key responsibilities. It is also important to prioritize those responsibilities. If one or two missions are failing, regrouping on the higher priority task can help it succeed when it might have also failed due to lack of resources.
- Reward failure: Someone who never fails probably isn't pushing the envelope. There were several examples of sergeants or managers taking the “blame” for a private's or employee's mistake. This is viewed as training experience and helps grow the individual. This is also part of another principle, *Breed decision by analogy*.
- Distribute competence: Obsessively and ceaselessly educate and train people at all levels of the organization. People are trained and cross-trained. If someone is unable to complete a task, someone else is trained to be able to take over. This helps prevent mission failure due to lack of leadership.

We had a lot of laughs, shared experiences, and fun.

SPIN Book Clubs give you a good reason to read those books you've been putting off and offers you the opportunity to talk with others who have read similar thought-provoking books related to the work you're doing or would like to do. Come join us for February's SPIN Book Club, Getting to YES: Negotiating Agreement Without Giving In, by Roger Fisher, William Ury, Bruce Patton (for the Second Edition).



February 19 Meeting

Roundtable Programs

6:30* - 7:00 PM

Roundtables are focused group or "birds-of-a-feather" discussions, with a facilitator to stimulate and moderate discussion. Please join us for a lively series of discussions during the networking portion of the SPIN meeting, before the speaker. Select the topic of your choice, but come early. The facilitators will determine the number of participants, and “first come, first served.”

Roundtable 1: Process Measurement

Facilitator: Michael Brother

Discussion will include the following topics:

- Process improvement benefits from measurement: Without objective data, your knowledge is meager and unsatisfying.
- Developing a self-measuring process.
- Changing needs for measurement across the process lifecycle. Which are useful across the entire lifecycle? Which are limited to a single phase?
- Defining a minimal set of useful metrics to avoid metric-overkill.

Come to the Roundtable and share your experiences, questions, and ideas on this topic.

Roundtable 2: Test SIG Flavors of Software Test Automation

Speaker: John Pustaver

***Note: This SIG meets at 6 PM.**

Test automation using tools such as WinRunner, SilkTest, and Robot can be carried out at different levels with each level requiring a different level of expertise and having its own pluses and minuses. Four levels of test automation will be discussed:

- Record and Playback,
- Data-Driven,
- Table-Driven at the Design Level, and
- Table-Driven at the Requirements Level.

The advantages, disadvantages, and requirements for each will be discussed.

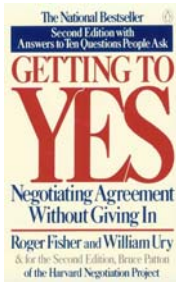
John Pustaver is a software quality consultant and president of SWQuality, Inc. He holds certifications from the American Society of Quality as a Certified Software Quality Engineer and Certified Quality Engineer, from the Institute for the Certification of Computing Professionals as a Certified Computing Professional (management and software engineering), and from Mercury Interactive as a Certified Product Specialist for TestSuite (WinRunner). He is the founder of the Software Quality Group of New England and has been its director since 1994.

February Boston SPIN Book Club

“Getting to YES: Negotiating Agreement Without Giving In”

by Roger Fisher, William Ury, Bruce Patton (for the Second Edition)

Facilitator: John Britis



Getting to YES offers a concise, step-by-step, proven strategy for coming to mutually acceptable agreements in every sort of conflict – whether it involves parents and children, neighbors, bosses and employees, customers or corporations, tenants or diplomats. Based on the work of the Harvard Negotiation Project, a group that deals continually with all levels of negotiation and conflict resolution from

domestic to business to international, *Getting to YES* tells you how to:

- Separate the people from the problem
- Focus on interests, not positions
- Work together to create options that will satisfy both parties
- Negotiate successfully with people who are more powerful, refuse to play by the rules, or resort to “dirty tricks”

The second bullet, “separating interests from positions,” applies directly to the need to separate functionality from design, which is faced by every software analyst. The concepts and strategies presented apply directly and will serve the software analyst well. This will be a breakthrough concept for those who haven’t been exposed to it. The discussion on this point alone will be well worth the price of admission for anyone involved in software lifecycles.

This book was first published in 1981 and a second edition was published in 1991. It is as topical today as it was 10 and 20 years ago!

Come join us on February 19 and share your experiences negotiating agreement without giving in.

February Main Program How much Process is Enough?

Speaker: Linda McInnis, Boston SPIN chair

Abstract:

When we try to implement process in an organization, it's hard to know when to stop. During this talk you'll get a set of tests to determine where your organization needs process or where it doesn't need any more process. We'll also give you rules of thumb on which kind of methodology matches your organization's personality.

About the Speaker: Linda McInnis

Linda McInnis founded Noble Associates, Inc. 20 years ago to help companies to produce software faster, better and at lower cost. Linda started in the "other" side of product development: quality assurance and technical documentation. She then branched out to add configuration and release engineering, data operations and finally on to code development. As you can imagine, she has seen the good, the bad and the ugly sides of development.

One of her observances over 20 years is that because most people continue to be largely self-taught in software development there are large knowledge/experience gaps on teams and to fill in these gaps she founded The Computer School in Acton, Massachusetts to teach project/process thinking and basic software development skills.

Upcoming Meetings

March 19, 2002

Speaker, Donna Johnson, Software Process Improvement and e-Business: an Oxymoron?

Book Club, *Are Your Lights ON (How to figure Out What the Problem REALLY Is)*, by Donald Gause and Gerald Weinberg

April 23, 2002

Joint ASQ/SPIN dinner meeting

May 21, 2002

Speaker, Tim Lister

Book Club, *Peopleware (Productive Projects and Teams)*, by Tom DeMarco and Time Lister

June 18, 2002

Speakers, Judi Brodman & Steve Hannigan, Achieving CMM Level 2 and Beyond

Book Club, *Surviving the Top Ten Challenges of Software Testing (A People-Oriented Approach)* by William Perry & Randall Rice

SPIN Elections



Announcements

Cancellations (including weather)



Starting at 3pm, we'll notify you via email to the SPIN distribution list, we'll post the notice on the SPIN web page, and we'll send the cancellation announcement to Channel 7 TV and WRKO AM 680.

Future Programs

We welcome your suggestions for future Boston SPIN programs. Program suggestion forms can be found on our web site <http://www.bostonspin.org>. We are always looking for interesting speakers.

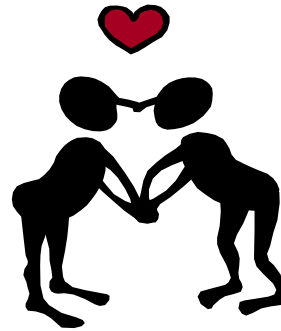
If you'd like to speak at Boston SPIN, please review the criteria specified on the Boston SPIN web site before sending an abstract to Linda McInnis, Boston_SPIN@yahoo.com.

New Meeting Location

Boston SPIN meetings for the 2001-02 year will be held at The MITRE Corporation in Bedford.

Please be aware that MITRE has advised us that, due to increased security concerns, you will need a Picture ID for admission to the SPIN meetings. We encourage you to leave all carrying bags, backpacks, and briefcases behind (i.e., in your car). Otherwise, you should be prepared to have these opened and inspected upon arrival.

MITRE's campus is located at 202 Burlington Road (Route 62), Bedford. SPIN meetings are held in the 'S' building. Directions can be found on our Web site: <http://www.bostonspin.org>



BostonSPIN Established January 1993
Software Process Improvement Network

Sponsors:

The MITRE Corporation
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UMASS – Lowell (provides support)

The Boston SPIN is a forum for the free and open exchange of software process improvement experiences and ideas. Meetings are usually held on third Tuesdays, September - June. Boston SPIN welcomes volunteers and sponsors. There is no charge to attend the meetings. For more information about our programs and events contact:

Linda McInnis, Chairperson
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