

In-the-SPIN

Newsletter of the Boston  SPIN

Issue 21, November, 1998

Editor: Carol Pilch

Editorial

Consistent with the Boston SPIN charter, *In-the-SPIN* is provided by the Boston SPIN as a means of supporting the free and open exchange of software process improvement experiences and ideas. The steering committee encourages feedback on the newsletter as well as broader participation in the content and production of the newsletter. Therefore,

❖❖ You Are Cordially Invited ❖❖

to submit your articles of interest to the SPIN membership. Your article will appear in the Feature Article column of a future issue of *In-the-SPIN*.

and

We invite you to participate on the Boston SPIN newsletter committee.

RSVP to carol.pilch@gsc.gte.com

This month's edition of *In-the-SPIN* features a SPIN Perspectives column by Maxine Crowther on how to produce graphs that easily convey your data and have impact. Barbara Purchia contributes a book review to our Feature Article column. The book she reviews is entitled "The Deadline – A Novel about Project management" by Tom DeMarco. Also in this edition, is a report on our October meeting contributed by Maxine.

Boston  SPIN *Software
Process
Improvement
Network*

Since January 1993

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We thank the Computer Science department of UMASS- Lowell for providing support and hosting our Web page

SPIN Perspectives

This month's SPIN Perspectives article is contributed by Maxine Crowther. Maxine is a Senior Quality Consultant with Cadence Design Systems, Inc. and serves on the Boston SPIN steering committee as Secretary.

Measuring Up

Getting Your Point Across –

Graphs That Make an Impact

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How many times do you look at a measurement graph and not understand its message? If you are like most people then the answer is quite often. Graphs need to be designed to tell your story; not just produced from your spreadsheet package! Graphs can be an instant visual picture of status. If you want to grab customer or management attention, there is no better way than a picture that's worth a thousand words. Designing a graph for impact is almost as hard as choosing the metric in the first place. Here are some simple rules for graph design:

1. Design your graph with the reader in mind. Use terminology that they understand.
2. If your data is continuous use lines, otherwise use bars. Readers tend to try to interpolate values on lines whether they exist or not.
3. Let readers know what goodness is.
4. Title your graph and label the axes. If there are critical values, label them too.
5. Use goal lines as often as possible.
6. Use text appropriately to set the context.
7. Make sure that if there is required analysis that it is included.
8. Use colors carefully; think about the psychological impact of red, green, and blue.

Continued on next page

IN THIS ISSUE . . .

Editorial.....	1
SPIN Committee Perspectives	1
Boston SPIN Calendar	2
Meeting Summary	3
Feature Article.....	4
Boston SPIN	5

Boston SPIN Calendar

Information about Upcoming Meetings by Johanna Rothman, Program Chair

November Meeting Announcement

Topic: "A Better Alternative to the KPA-by-KPA Approach to Process Definition and Process Rollout"

Speaker: Carrie Buchman, Vice President, Northeast Operations of Pragma Systems Corporation
When: Tuesday, November 17, 1998. 6:30pm-8:30pm
Who: Everyone (Academia, Government, Industry)

Abstract:

Many organizations adopt a do-it-yourself approach to process improvement that involves forming expert working groups usually called Process Action Teams (PATs). These PATs are generally formed around Key Process Areas (KPAs)-one for Requirements Management, one for Software Configuration Management, and so on. These PATs often fail to define processes that are compliant with the SEI's Capability Maturity Model (CMM) for Software. When they do succeed, the PATs typically take far longer than expected.

Some organizations that have muscled their way to Level 2 by PATs have then lost it. This loss is an indication of the weaknesses of the KPA-by-KPA approach.

There is a better way. This talk will focus on a role-based approach to process definition and rollout. Three organizations and the results they achieved using this role-based approach will be discussed.

Location: GTE, 77 "A" St., Needham MA.

Looking for Interesting Speakers

We are always looking for interesting speakers. If you'd like to speak at Boston SPIN, please review these criteria before sending us an abstract:

Speaker Guidelines:

1. Boston SPIN looks for relevant topics facing software groups who want to improve their processes. Particular relevance to recent advances/ changes in this field are particularly welcome.
2. Preference is always given to speakers who present information pertaining to actual experiences in the field as opposed to purely theoretical presentations.
3. Our membership attends hoping to learn how they can enhance their own results. We request proven, practical detail in your presentation.

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9. Remember that some of your audience may not be viewing your graph in color.
10. Keep your design clean. Use the same design for similar graphs.
11. If you keep these simple rules in mind, your graphs will be easy to understand and have a much greater impact on your audience.

If you keep these simple rules in mind, your graphs will be easy to understand and have a much greater impact on your audience.

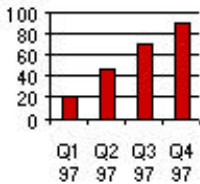
BEFORE

Defect Containment

How many of the rules does this graph break?

How easy is it to understand what the message is?

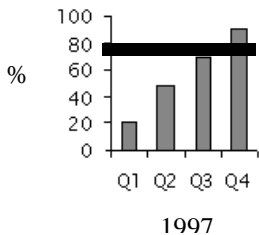
If you received this graph would it raise more questions than it answers?



References: Tufte, Edward R., The Visual Display of Quantitative Information, Graphics Press, Cheshire, CN, 1983

AFTER

% of Defects in XYZ Product Found Prior to Release



Goal = 80%
Goodness = ↑

Improvement based on code reviews started in Q2. Goal will be reviewed prior to next period end.

This graph shows how much impact the same data can have if you design your graph.

Descriptive titles, text, and labels all play a part in telling your story.

Tufte, Edward R., Envisioning Information, Graphics Press, Cheshire, CN, 1990



- The presentation should be based on the presenter's personal experience.
- If you are a vendor or a consultant, remember that the most effective presentations are those where you explain your area of expertise and show how to be effective. Please do not use your time at Boston SPIN as a sales pitch.

We developed a speaker checklist so that none of us would have to rely on our short-term memories. Please use the checklist to prepare for your SPIN talk.

Speaker checklist:

- 60 days in advance of meeting: deliver 2 paragraph abstract, one paragraph bio to jr@jrothman.com
- Within one week of meeting date: If desired, email copy of paper or overheads to heimann@world.std.com so that it is downloadable from the SPIN web page.
- At the meeting: Speaker provides one copy of overheads to Charlie Ryan for our library.
- Optional but highly recommended: bring 50-60 copies of overheads to SPIN meeting.

If you have information you'd like us to hear, please send an abstract to Johanna Rothman, jr@jrothman.com. Or, contact Johanna at 781-641-4046.

Future Program and Speaker Schedule

Date	Speaker/Topic
Dec. 15, 1998 @ GTE	(tentative) Alice Brown "Software Safety Analysis"
Jan. 19, 1999 @ GTE	Bill Silver "A Testing Assessment and Framework"
Feb. 25, 1999 Joint ASQ dinner at Holiday Inn, Newton (Thursday!)	James Bach "Good Enough Quality"
Mar. 16, 1999 @ GTE	Carol Pilch "A Tailorable Mini-assessment Method"
Apr. 20, 1999 @ GTE	Cem Kaner "Good Enough Testing or Bad Software"
May 18, 1999 @ GTE	Open
June 15, 1999 @ GTE	Open

Monthly Round Tables

What: These are focus group or "birds-of-a-feather" sessions. They provide a professional forum for sharing information and experiences, for learning about other techniques, and for finding out that you are not alone.

Do you need or want to share information about handling thorny situations at work? Do you wonder what metrics are

most important? Quality, scheduling effectiveness, time to market...? Would you like to know how to manage a project that you have just been thrust into in mid stream? Could you benefit from leading edge approaches and innovative solutions for handling current project challenges? In an effort to elevate your organizational ranking from SEI CMM Level 2 to Level 3, are you in search of Lessons Learned from other survivors? Would you like feedback from the diverse backgrounds (Government, commercial, industrial, consultants) on topics related to your projected career moves?

Propose your wish list or questions as a Round Table and get your information from the movers and shakers in the software community. Round Tables are generally informal discussions, with a facilitator, to stimulate and moderate discussion.

A member of the SPIN Steering Committee will assist as Scribe for the discussion. Round Table proposals may be submitted by posting a sign-up sheet with the SPIN Steering Committee Round Table Coordinator, Caroline Starita (staritac@amp.com). Proposed Round Table sessions will be posted for sign-up prior to the monthly meeting in order for attendees to register their interest.

When: 6:30 - 7:00 PM, before SPIN Meetings

For further roundtable information, contact Carolina J. Starita, 978-442-4004 or staritac@amp.com or see the Boston SPIN web site, <http://www.cs.uml.edu/Boston-SPI>

Meeting Summary

Notes from the October Meeting

by Maxine Crowther, Senior Quality Consultant, Cadence Systems, Inc.



"(Retrospective) Code Inspection for System Performance or 'How Did That Get in There?'"

Speaker: Benson Margulies

A very energetic and knowledgeable Benson Margulies demonstrated how code inspections can be used as an integral part of the product change process. By using a performance issue as the model of a problem that is often ill-defined and causes fire drills, we were led through a very thorough and

clear explanation of how to attack and solve these kinds of often qualitative issues.

The real key to Benson's case for using inspections is to go back to our elementary school introduction to the "Scientific Method". By first defining the problem with as much quantitative information as is available, we can then hypothesize and experiment to find solutions. The record

Continued on next page

keeping that is introduced as part of the Scientific Method is also a requirement - what did you do, what did you observe, what configuration did you run on, what version did you test. Typically it is difficult to instrument complex code with measures that will allow us to experiment to solve problems like performance.

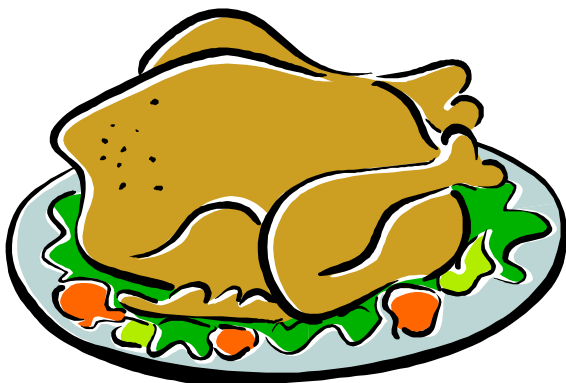
This is where inspections come in to address issues like "snow blindness" - the inability of the developer to find and address their own code complexities. After all, if the developer really understood the code complexities, the problem might not have occurred in the first place! Inspections also generate brainstorming ideas, give perspective on critical code areas, and allow everyone to "rediscover the forest in the trees".

Once the inspection has occurred, the assigned "fixer", who might be a fresh set of eyes, needs to balance investigation with implementation. Too many quick experiments that don't work may lead to customer dissatisfaction faster than taking some time to investigate.

Benson also talked about the role of management, which starts by modeling the inspection behavior and showing that keeping records of what is done is rewarded. The manager can sometimes create an expert by assigning the fix to someone unfamiliar with the code, who is tenacious, has ancestors from Missouri, and is organized enough to start or continue the record keeping process. Though this was billed as "retrospective" code inspections, the point was not lost on the audience that by doing this work during development, the problem might not have occurred in the first place!!!

Benson left us with some food for thought - when problems occur, do we want to act like the Keystone Kops or use a process to solve the problem? Code review should be part of the process and should be considered not only as a problem solver but also as part of the proactive process to head off problems before they occur.

The audience Q&A included a question on how to encourage developers to participate willingly. Benson feels that by making the inspections a pleasant experience, without a "cannibal feast" on the developer, that the benefits will far outweigh the natural tendency of developers to keep their code to themselves.



When asked about a statement regarding managers participating in the inspections and keeping track of who is "at fault", Benson stated that this should be used as the stepping off point for new learning for developers who may need some upgrading of their skills.

Another question on resources was answered with names of several books that might help. Johanna Rothman, the SPIN Q&A facilitator answered the question by providing the following list of references:

Steve McConnell, "Rapid Development", Microsoft Press, Redmond, WA, 1996.
Tom Gilb and Dorothy Graham, "Software Inspection", Addison Wesley, Wokingham, England, 1993.
Daniel P. Freedman and Gerald M. Weinberg, "Handbook of Walkthroughs, Inspections, and Technical Reviews", third edition, Dorset House, NY, 1990.
David Wheeler, Bill Brykczynski, Reginald N. Meeson, Jr., editors, "Software Inspection, an Industry Best Practice", IEEE Computer Society Press, Los Alamitos, CA 1996.

The last reference is a collection of articles and a floppy bibliography.

Feature Article

Book Review

by Barbara Purchia, Director, Engineering Operations, Kronos, Inc. and Chair of the Boston SPIN



The Deadline A Novel about Project Management

by Tom DeMarco, 1997, Dorset House Publishing

Have you ever read a book about project management that you just couldn't put down? Did you ever think that reading about project management would be filled with adventure, intrigue and romance? I found The Deadline by Tom DeMarco to be all of the above and more.

The Deadline is the story of a manager named Webster Tompkins and his remarkable experiences running software projects in the ex-Soviet Republic of Morovia. Mr. Tompkins is a good systems manager who has just been down-sized from a giant telecommunications company. He is kidnapped by a beautiful Morovian spy, Lahksa Hoolihan, to help the Nation State of Morovia export shrink-wrapped software by the year 2000.

Lahksa had been in a class with Mr. T and had been impressed

Continued on next page

with his beliefs on project management. He believes that the four most essential ingredients of management are people selection, task matching, motivation, and team formation. All the rest is Administrivia.

Mr. T is now in charge of fifteen hundred fairly senior software engineers who have been certified as CMM Level 2 or higher, co-located in Silikon Valejit. His goal is to develop six carefully chosen software products. And he has two years to deliver! Tompkins has more than enough resources to complete these projects and he and Lahksa decide to try a controlled experiment. He decides to run three parallel projects utilizing different teams of different sizes and using different methods to see which team finishes first in the world's first project management laboratory. These teams are pitted against each other and against an impossible deadline.

Tompkins keeps a journal of lessons learned and tips during the projects. Some things he already knows or learns by himself. Some things he learns from thinly disguised software gurus. It's fun guessing who they are!

Some of my favorite tips include:

There are infinitely many ways to lose a day ...but not even one way to get one back.

You can't get people to do anything different without caring for them and about them. To get them to change, you have to understand (appreciate) where they're coming from and why.

Ambiguity in a specification is a sign of unresolved conflict among the various system stakeholders.

During the project, Tompkins deals with a variety of characters including an interfering Morovian president, Belinda Binda -a bag lady who used to be the world's greatest project manager in her day, an administrator who measures the wrong things and wants to shorten the project's schedule, managers who don't want to manage, meetings that don't have agendas, difficult people, an ex-general, and more.

Although this is a novel and therefore, fictitious, it consists of a lot of real world experience. DeMarco has written a very engaging and readable book that is also highly instructive. If you are a project manager, work with or for project managers, or work on a project, then this is a book you should read.

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.

For more information about our programs and events contact:

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For information about SPINs in general including ***HOW TO START A SPIN*** contact:

Dawna Baird of SEI (412) 268-5539,
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IN THE SPIN is available on our Web page.

TO RECEIVE NOTIFICATION OF NEW ISSUES send email addressed to danallen@danallen.com. We have 2 separate email lists: one for this newsletter and one containing announcements that we receive from other process organizations and forward out.

TO ADD YOURSELF TO THE ANNOUNCEMENTS LIST send email to ryan@sei.cmu.edu.

Send letter-to-the-editor, quips, quotes, anecdotes, articles, offers to participate in the newsletter committee, and general correspondence to Carol Pilch, carol.pilch@gsc.gte.com.

Send job postings to heimann@world.std.com.

Back issues and other information about Boston SPIN can be found at our WEB HOME PAGE:
<http://www.cs.uml.edu/Boston-SPIN/>

