

# *In-the-SPIN*

Newsletter of the Boston  **SPIN**

Issue 30, October, 1999

Editor: Carol Pilch

## Editorial

In this month's Feature Article, Johanna Rothman provides some good advice on getting insight into problems when the boss gives a directive before acting. Also, if you think you want to find out more about the technique, context-free questions, which Johanna presents in a creative way, she's provided a reference. Also, in this month's SPIN Perspectives column, Dolores McCarthy has contributed an amusing take on how standards might emerge.

If you missed the September SPIN meeting and Tom DeMarco, check out the Notes in the Meeting Summary column. As expected, Tom DeMarco drew a large audience and his views on the CMM® kept our constant attention. DeMarco gives a lot of credit to software practitioners as a highly motivated, skilled workforce and emphasizes the importance of the soft skills.

If you're a reader of this newsletter, the Boston SPIN would like your feedback. 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 Boston SPIN would like to know if the readers' expectations are being met. The steering committee encourages feedback on the newsletter as well as broader participation in the content and production of the newsletter. Send letters-to-the-editor, quips, quotes, anecdotes, articles, offers to participate in the newsletter committee, and general correspondence to Carol Pilch, [carol.pilch@GD-CS.COM](mailto:carol.pilch@GD-CS.COM).

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Since January 1993

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## SPIN Perspectives

*This month's SPIN Perspectives feature is contributed by Dolores McCarthy. Dolores is a Senior Process Engineer with Computer Sciences Corporation and is Secretary of the Boston SPIN.*

### ON STANDARDS



On the first day, the Creator said, "Let there be standards," and it was good.

On the second day, the world said, "Let there be experts and consultants," and it was good.

On the third day, confusion reigned, the people said, "I like my old way better," and it grew dark.

On the fourth day, warring factions drew sides, fights broke out, and blood ran in the streets.

On the fifth day, the wounded agreed to talk about differences, and a measure of quiet set in.

On the sixth day, reconciliation was achieved, and a change for the better took place.

On the seventh day, light dawned and peace reigned.

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# Meeting Summary

DeMarco's list of "the hard problems of software" are:

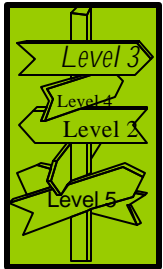
- Charismatic management
- Motivation
- People selection
- Team formation
- People retention
- Stakeholder interaction
- Conflict resolution
- Product choices
- Risk taking.

## Notes from the September Meeting

*Contributed by Carol Pilch, General Dynamics*

### Topic: Are Five Levels Enough?

Speaker: Tom DeMarco



Tom DeMarco's presentations always keep our attention and provide a lot of food for thought and discussion. His presentation at the September SPIN meeting was no exception. He started with what he referred to as a "diatribe," then set the stage for his "constructive appraisal" and lastly provided his "constructive appraisal."

### Diatribes

DeMarco asserted that he is not a fan of the CMM®. "A dumb idea that gets dumber." "A set of factory methods ill targeted against skilled, motivated people." "Factory methods are the wrong prescription."

This was followed with an analogy to organized religion. The analogy is that both the CMM® and organized religion have an element of "revealed truth" and a need for an "elite core of priests." De Marco concluded the diatribe with "CMM® is a bigger waste of time than Y2K."

### Post Diatribe

De Marco began to set the stage for his constructive appraisal of the CMM®. He stated that his "quibble" is with the institutionalization of process improvement. "I clearly think one level is enough." And then he went on to make the following points:

- The CMM® is ill suited to the target audience. The target audience is a highly motivated, skilled workforce. By its nature, this work force will invent and improve processes.
- The idea of standards as a way of doing things is wrong. Standards should be established at the interfaces.
- The CMM® is hopelessly compromised by its design – the 5 level scheme.
- The CMM® is utterly irrelevant. It focuses on the things that do not matter. It focuses on the easy parts of management not the hard parts. You get no points for investment; no points for work on CORBA.



DeMarco stated that there are fans of the CMM® who do not understand what it means or the underlying reality. He views the CMM® as forcing us into management by objectives (focus on a number, the objective being the number). De Marco stated that he is against management by objectives, a fad that has "justly passed."

De Marco went on to say that the CMM® makes you "IBM-like." "We don't want to be like IBM." He continued in this vein and told us about a group at Apple that used the CMM®. The Apple group selected the things in the CMM® that would provide benefits to them. In DeMarco's view, the Apple systems group became "post-CMM." They took what value they could from the CMM® and moved forward. De Marco would like us all to become "post-CMM."

**"There are 5 hidden hypotheses of the CMM® and they're all false."** Here they are:

1. The Level will not become the goal. (The Level is the goal.)
2. Best is best (what's good for Boeing is good for Aetna).
3. Process improvement won't slow projects down in the short run. (However, this does not mean projects will not benefit in the long run.)
4. Improved processes won't slow projects down. (Need to strike a balance between mobility and armor. The CMM® is armor – projects need to be fast – organizations with the lightest process will be the fastest. Paperwork weighs projects down.)
5. Project selection won't be affected. (The CMM® has created what DeMarco terms "level envy." Some companies are willing to take on a risk but may not have the level to qualify for selection. Also companies may put "scary" projects lower on the list while the boss is clamoring for improved levels.)

### Constructive Appraisal

DeMarco provided a design principle that could be used in redesigning the CMM®: "The design is not done until I can't think of anything to take away."

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## What could we take out to change for the better?

- : A ton of documentation – Ask what could we do to lighten documentation – use pictures, less formality - reduce the documentation. We need a light process; not a complete process.
- : All code inspections – almost never is the bug in the code. It is in the part that interacts (on the edge; look at boundary characteristics). We should be looking at the design. Focus on the explicit act of design to the lowest module and inspect at the design level. Replace code inspections with design inspections.
- : Levels 2-5. Numbers become the goal. The CMM® should have level 1 and non-level 1 (Non-level 1 are simply people who have made some improvements.)

DeMarco concluded his presentation by stating, “You may think I am a dreamer but I’m not the only one. Some day the world will be one of organizations becoming post-CMM.”

## Questions & Answers

Here are some additional points made by DeMarco in response to questions from the audience:

- Testing is a misnomer. When you find something wrong it is rework not testing. Assume that every extra minute you spend in design will save you an extra minute of testing.
- You don’t find perfect software engineers. You build perfect software engineers.
- Focus on architecture design, interface design, and low level decomposition design.
- People know success is being a great designer.
- Conflict resolution is much more complicated – we cannot build anything without conflict resolution. The software industry has achieved a concept of team interaction that other industries have not achieved.
- Peer coaching is the most exciting thing that goes on in a healthy organization all the time. Peer coaching is the thing that we do very successfully.
- Soft skills are non-trivial. We need to get better at conflict resolution.
- On ISO: ISO becomes the goal; makes you heavy instead of light; focuses you away from risk taking. We ought to become post-ISO.
- On removing documentation: This is a goal. The approach is to achieve a text-free life cycle. Document things that go to the user. Be text-free for internal purposes. Draw almost everything. Write nothing or very little; use outlines.
- Missing from the CMM® is the benefit of the product you are building. The CMM® gives no credit for attempting to do something that gives you an edge against competitors.

- On Dilbert: In a healthy company there are no Dilberts only pointed headed managers.

# Boston SPIN Calendar

## Information about Upcoming Meetings

by Johanna Rothman, Program Chair

## October Meeting Announcement

### **Topic: Software Projects in Crisis: Dealing with Imposed Deadlines**

Speaker: Michael Mah, QSM Associates, Inc.

When: Tuesday, October 19, 1999. 6:30pm-8:30pm  
6:30-7:00 Networking and Roundtables  
7:00-7:10 Announcements  
7:10-8:10 Featured Speaker  
8:10-8:30 Questions and Answers

Who: Everyone (Academia, Government, Industry), no charge

### **Abstract:**

Commercial pressures of today's economy result in imposed deadlines being the norm for technology projects. This creates extreme degrees of project risk, and perpetuates the so called "software crisis", whereby a large percentage of projects are canceled, delivered late, or with cost overruns and poor quality. Michael Mah will discuss:

- Critical flaws in traditional planning processes
- Risk management techniques to avert future need for crisis/contingency planning
- Successful navigation techniques for projects already in crisis.

### **About the Speaker:**

Mr. Mah is Managing Partner with QSM Associates, Inc, specialists on software management, productivity benchmarking, estimation, and project control.

As a principal with QSM, Mr. Mah has lectured internationally in North America and the Far East. He is also a senior member of the Cutter Consortium IT Alignment Team and Year 2000 Services Team, headed by Ed Yourdon. With over 17 years of industry experience, Mr. Mah has advised Fortune 500 companies, commercial, and government agencies, and has been a contributing author for publications such as Software Development Magazine, American Programmer, Cutter I.T. Journal, Year 2000 Journal, and Application Development Trends.

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Mr. Mah holds a degree from Tufts University, Medford, MA.

**Location:** General Dynamics, 77 "A" St., Needham MA.

**Directions:** From Route 128 in Needham, take exit 19A onto Highland Avenue East. Take your first right by the Ground Round and take your second left onto "A" Street. General Dynamics is the last building on the right. Enter the parking lot by the General Dynamics sign and come into the building by the cafeteria entrance, which is located to the left of the main entrance. There will be a security guard at the entrance.

Info: See our web page, <http://www.cs.uml.edu/Boston-SPIN>  
For SPIN info, contact Johanna Rothman, 781-641-4046, or [jr@jrothman.com](mailto:jr@jrothman.com)

Cancellations (including weather cancellations): We will notify the membership via email to the SPIN distribution list by 3pm, post the notice on the SPIN web page, and announce the cancellation on Channel 7 TV and radio, WRKO AM 680.

*SPIN '99-'00 Program and Speaker Schedule  
as of 9/19/99*

Date	Speaker/Topic
Oct. 19, 1999 @ General Dynamics	Michael Mah "Software Project in Crisis: Dealing with Imposed Deadlines"
Nov. 16, 1999 @ General Dynamics	James Bach "Good Enough Quality"
Dec. 21, 1999 @ General Dynamics	Audience Participation Roundtables
Jan. 18, 2000 @ General Dynamics	Paul Lanzoni "Technology Planning and Decision Making"
Feb. 15, 2000 @ General Dynamics	Johanna Rothman "Using Quality to Drive Project Lifecycles"
Mar. 16, 2000 Joint meeting with ASQ	Jim Driscoll "Ensuring Clients Achieve Superior Value in the Digital Economy"
Apr. 18, 2000 @ General Dynamics	Dolores McCarthy, Carol Pilch, Others TBD Panel: "Getting to Level 2" Moderator: Donna Johnson
May 16, 2000 @ General Dynamics	TBD
June 20, 2000 @ General Dynamics	TBD

**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 Criteria:**

1. The topic must be timely, an issue of concern to our membership.
2. We want to hear about real-world topics. If you have an academic topic, we're interested in how it applies to the real world.
3. If you are interested in creating a panel, please write an abstract, and suggest at least one panelist. We can work with you to find other panelists.
4. The topic should either explain how to *do* something, or bend our brains in another direction.
5. The presenter should be intimately involved with the "hows" of the thing that got done.
6. We are not interested in sales pitches.

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

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:**

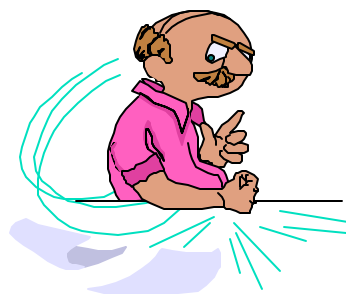
1. 2-paragraph abstract and speaker bio at least 60 days in advance to Johanna.
2. Speaker provides one copy of overheads for our library.
3. If speaker desires, a copy of overheads, paper, etc. for our web page as of the day of the meeting. If possible, provide 50-60 copies of overheads at the SPIN meeting. The attending members really appreciate this.

**Feature Article**

*This month's Feature Article is contributed by Johanna Rothman. Johanna is president of Rothman Consulting, Inc. and is Vice-chair and Program Chair of the Boston SPIN.*

***What's the Real Problem?***

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The Product Development VP said "Reduce development costs by one-third in the next fiscal year. You two make it happen". Sally, the Director of Engineering and Tom, the Director of Quality looked at each other. They thought "How the heck can we do that?" and "We know what costs we're supposed to reduce: us!"

When we hear directives from our senior managers, we have all kinds of reactions, many of them resigned or cynical. Directives give you some insight to the problem and are a place to start defining the requirements to solve a problem.

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Directives are not real problem statements. When you get a directive, take time to define the problem to solve, the real business results you want to achieve.

First, avoid thinking you must obey the stated directive. Ask some questions first, such as:

**“Oh, it sounds like you’re concerned about costs”**

Once you have agreement about and understand your manager’s concerns, ask context-free questions to define the real problem. Context-free questions might be:

- Who are the clients of this activity?*
- What does a highly successful solution look like?*
- What is that solution worth to you?*
- Why are these results desirable?*

One of my clients was convinced they had to reduce product development time from 12 months to 6 months. I was concerned about their ability to reduce cycle time, so I asked some questions of a senior manager (SM):

- SM: We want to reduce cycle time.
- JR: Why?
- SM: Well, we want to get our products to market faster, so we can improve our return on our product development investment.
- JR: What return are you currently getting, and what return do you want?

We discussed the total costs of development and support from some previous releases and came up with a specific desired business result:

*Reduce cycle time in order to see sales impact from major releases in less than 6 months.*

This organization’s customers typically waited about 12 months after a release to buy the new product. This is not a problem of just cycle time. Cycle time reduction was part of the solution, but not the only solution.

- We proceeded with our conversation:
- JR: What is the reduction in cycle time worth to you?
  - SM: A lot.
  - JR: What does “a lot” mean to you? Is it worth a \$3,000,000 investment in equipment, training, and process improvement? Is it worth more or less than that? Is it worth some of *your* time?

In order to frame a real solution, I had to understand the SM’s tradeoffs.

- JR: what does a successful solution look like to you? Can you describe what the solution looks like or feels like to you, to your managers, to your technical staff?
- SM: Well, everyone’s busy working on the new release, doing their work, not wasting time.

I didn’t think people were wasting time, so I asked a slightly different question:

- JR: Let’s assume people aren’t wasting time now. Does the mix of work change? Do other groups change how they work? Do you work differently? Do you have different problems than you have now?

The Senior Manager then realized what I was asking for, and answered me. Then we talked about why these results were desirable:

- JR: Why are these results desirable? Aside from a reduction in cycle time, what else do you get from this work?

By the end of this 1-hour conversation, I had the information I needed to be able to start framing the real problem, and some of the requirements for the solution. Even better, the senior manager realized that just issuing a directive wasn’t enough to get to the needed solution.

Instead of turning into cynics or becoming crazed when you hear a directive, calmly develop a problem statement and then figure out what you need to do to solve the problem.

To learn more about context-free questions, see Gause and Weinberg’s *Exploring Requirements, Quality Before Design*, published by Dorset House Publishing, New York, 1989.



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:  
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For information about SPINs in general including \*\*\*HOW TO START A SPIN\*\*\* contact:  
Dawna Baird of SEI (412) 268-5539, [dbaird@sei.cmu.edu](mailto:dbaird@sei.cmu.edu),  
<http://www.sei.cmu.edu/collaborating/spins/spins.start.html>.

IN THE SPIN is available on our Web page:  
<http://www.cs.uml.edu/Boston-SPIN>.

TO RECEIVE NOTIFICATION OF NEW IN-THE-SPIN ISSUES and Boston SPIN specific notices send email addressed to [danallen@danallen.com](mailto: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.

IF YOU WANT TO ADD YOURSELF TO THE ANNOUNCEMENTS LIST send email to [ryan@sei.cmu.edu](mailto:ryan@sei.cmu.edu).

Send letters-to-the-editor, and general correspondence to Carol Pilch, [carol.pilch@GD-CS.COM](mailto:carol.pilch@GD-CS.COM).

Send job postings to [heimann@world.std.com](mailto:heimann@world.std.com)

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<http://www.cs.uml.edu/Boston-SPIN/>