



Atlanta SPIN

Software Process Improvement Network



Frank Tsui

The Atlanta SPINaker

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Communications In Software Development Projects Frank Tsui

“I often say that when you can measure what you are speaking about, and express it in numbers, you know something about it; but when you cannot measure it, when you cannot express it in numbers, your knowledge is of a meager and unsatisfactory kind.”

Lord Kelvin and Frank Tsui would have gotten along well. Frank’s presentation at our December meeting took a premise that most of us have tossed around at the water cooler and brought it into the realm of researched fact. The topic he ably led us through was “Communications in Software Development Projects.” With more than thirty years of experience in the software development industry, Dr. Tsui is an excellent guide.

From a quick “show of hands” audience poll, most of Wednesday’s audience agreed with Frank’s original premise: “More communication on a software development project is better than less.” Likewise, Frank and his students’ initial hypothesis – that most of the communication would occur in the requirements and testing phases, with the amount of communication falling off in the

design and development phases as the developers went “heads down” – was also widely accepted by our audience. The remaining fifty minutes of Frank’s presentation underscored Lord Kelvin’s point.

Frank took us on a guided tour of the months of research his teams performed in both the academic and professional worlds. He pointed out the dearth of actual research that has been done in this area, and outlined some of the work that he and his graduate students have been doing to fill the gap. Student teams under Frank’s direction engaged in development projects, tracking communications methods, content, and duration. The success of each team was measured and compared against its logged communications. Frank then took these measurement tools into the realm of the business world to confirm that data in the “real world” mirrored the data from the student projects. The results challenge some of the conventional wisdom around team communications on development projects.

Frank’s research suggests that the design and construction phase of a modern software development project is one of the times of greatest communications among successful teams. This contradicts the popular image of the developer “locked in a room and fed

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Next Meeting: January 16, 2008

Leveraging Lean Philosophies in Your CMMI Implementation

Presented by Tony Timbol
Time: 6:00 PM—8:30 PM
Location: La Quinta Inn & Suites
6260 Peachtree-Dunwoody Road,
Atlanta, GA 30328

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pizza under the door,” communicating with nothing but the computer. The research also suggests that the “hub-and-spoke” method of communication is the most utilized communications structure in the design and development phases. The data collected looked pretty similar across the student and industry groups.

The discussion that followed the presentation was quite

lively; the audience combined a good cross section of project leadership and execution with a broad base of experience in the field. The audience suggested a few different ways to analyze the data that might provide different insights, such as measuring the “management” communications separately from the “development” communications to determine what type of communication was occurring in the various phases of the project.

On the Boardwalk: Bill Reister, Webmaster

The Boardwalk is a regular feature of the SPINnaker. Our board members take this opportunity to give you some insight into their views about being on the SPIN Board of Directors.

What experience do you have in the software development lifecycle or technology?

My experience in the Software Development Life Cycle (SDLC) is pretty much complete. I started as a Subject Matter Expert in the Air Force (as a fighter pilot) helping to design software requirements for early DARPA war status reporting across NATO (semi-graphical runway and facilities status “dashboards” to allow aircrew to swiftly plan alternate landing sites for wartime operations). I got interested in database programming in the military as a hobby, and easily transitioned into the glory years of client-server programming in the 90s as a civilian. I have served as head of technology for two small companies, including a Monster.com subsidiary, and have worn nearly every “hat” that can be worn in purchasing and developing software.

What process improvement related activities have you personally been involved with?

I tend to be a process “minimalist,” looking to seek out the best bang-for-the-pain processes. My catchphrase is, “Make the process work FOR you, don’t work FOR the process.” I am an evangelist for version control, not only for software but for all important organizational documents – because “lost work” is the single biggest quantifiable hidden cost in almost every company I have worked for. I also insist that anyone asking software be develop demonstrate that what they want CAN be done manually – if it CAN’T, then it CAN’T BE AUTOMATED. If it CAN, then your process describes your

requirements and you are nearly done!

How did you get involved in Atlanta SPIN?

Like many people I spent a short time between opportunities during the tail end of the technology downturn, and discovered that for the first time in over 10 years the techniques I had used to find work no longer worked in today’s environment. I sought out all of the technology-related groups I could uncover and attended several sessions of each – and determined that Atlanta SPIN best captured the spirit of what I felt embodied “universal truths” about software development. Following the Axiom that if you want to be seen as a certain type of person you must do the things that that sort of person would do, I quickly volunteered to participate through joining the board of this exceptional organization.

What benefits have you personally derived from participation in SPIN?

Great new friends; personal satisfaction; and excellent experience in what it takes to run a successful theme group. Oh, and four work opportunities which resulted directly or indirectly through my participation in SPIN.

What motivated you to join the Atlanta SPIN Board?

I like being part of meaningful efforts, and having the opportunity to have a positive impact for a meaningful cause. SPIN offered both of these without requiring a total sacrifice of my personal life.

What do you hope to achieve by participating on the Atlanta SPIN Board?

I would like for Atlanta SPIN to surpass the DC SPIN run by the SEI, and to become the model after which all other SPINs

On the Boardwalk: Bill Reister, Webmaster (Continued)

function. If we are truly about Process Improvement, then I want to see that the Processes we follow are the best available.

Any other comments?

My wife and I are nearing retirement; however, we still have a few years in us. One interesting alternative we are considering is to spend 18-24 months on a "working vacation" to New Zealand, perhaps in the 2009 timeframe.

This year I intend to implement a set of Web Services to facilitate running a SPIN – and those services will be designed from the start to accommodate "N" number of individual SPINs on the same server. With that in place, I believe I could quickly yet effectively bring a successful SPIN launch to Auckland – and then see if we can't top Atlanta from there!

SEPG North America 2008: Shaping the Future of Quality Systems and Software

In 1988, the Carnegie Mellon Software Engineering Institute started the first SEPG North America Conference with just one track. Twenty years later, SEPG North America has exploded into the industry's premier gathering of the best and brightest in software and systems process improvement with eight tracks, over 170 sessions, 65 exhibitors and 2,000 plus attendees.

Join us in Tampa March 17-20 as we celebrate the 20th Anniversary of SEPG North America . Whether you're just getting started in process improvement, involved in a high-maturity project or somewhere in between, there's something for everyone. (www.sei.cmu.edu/sepg/2008/)

Discover models that will guide you through improving processes in your organization. Learn from experts in your field. Network with your peers. Share ideas and experiences. Hear real case studies that illustrate innovative solutions that really work-ones you can take back and apply in your organization for an immediate impact. Register for SEPG North America today. Come to Tampa and find out how you can lead the wave of process improvement in your own organization.

Spotlight on Sponsors: Scientific Games



The Spotlight is a regular feature of the SPINnaker. This feature helps you understand who are sponsors are. Maybe you or your company would like to [sponsor Atlanta SPIN](#).

Scientific Games (www.scientificgames.com) is a platinum sponsor of Atlanta SPIN. It is a global marketing and technology leader in the lottery , pari-mutuel, and telecommunications industries, with products and services ranging from design, production and marketing of instant lottery tickets; management of online lottery systems; development and commercialization of licensed and other proprietary game entertainment for all lottery product channels; provision of pari-mutuel wagering and venue management services for racetracks and off-track betting facilities; and production of prepaid cellular phone cards.

The Quality Mission of Scientific Games is to produce quality products on time and within budget through continuous process improvement at all levels of the organization. The company leverages industry best practices such as North American Association of State and Provisional Lotteries (NASPL), Project Management Body of Knowledge (PMBok), Capability Maturity Model Integration (CMMI) and ISO Standards to guide its continuous improvement journey. The company is the first lottery vendor to achieve certification in the two areas of the NASPL Quality Assurance (QA) Best Practices: Requirements Definition and Development Process.

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And our 18 Contributing Members!

Process Improvement Sites:

Software Engineering Information Repository

<http://seir.sei.cmu.edu>, has over 30,000 registered users and is a forum used to contribute and exchange information about software engineering improvement activities, including CMMI.

The CMMI Process Improvement Yahoo! discussion group

http://groups.yahoo.com/group/cmmi_process_improvement/ is a forum used to contribute and exchange ideas about CMMI-based improvement.

BSCW Shared Workspace <https://bscw.sei.cmu.edu/pub/bscw.cgi/0/79783> is a forum used to contribute and exchange CMMI-related materials.

Information courtesy of SEI Customer Relations. Find out more about SEI Membership online at
www.sei.cmu.edu/membership
customer-relations@sei.cmu.edu

About Atlanta SPIN, Incorporated

www.atlantaspin.org

The Atlanta SPIN organization was chartered in 1991. This group has been a force for software process improvement in the Atlanta area since then. The organization has a growing membership list that currently numbers 850+ members. The group typically meets every third Wednesday of the month. Our meetings typically attract audiences of 40 – 50 people. These meetings provide a forum for like-minded people, interested in learning from others and sharing their own experiences. There is time allowed before and after the meeting for networking among the participants, including a review from the audience of any job openings that are available. The Board, through its work with Sponsors, ensures that food and drinks are also available at no cost to the membership.