

Atlanta SPIN

Software & Systems Process Improvement Network

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Srikant Chellappa

“Quality Assurance in Agile Methodology”

By Srikant Chellappa

In the past couple of years, Atlanta SPIN has been bringing you speakers on topics beyond just the SEI product set. In March we came through again. This time however, our speaker brought a new twist. He represents a company that has been able to attain a CMMI maturity level 3 while at the same time conduct product development in an Agile shop. Srikant Chellappa is the VP Client Services and Delivery with eMids, a company that provides product engineering and development services to product companies, primarily in the health IT industry.

As our regular meeting attendees can attest, our past presenters on the topic of Agile Methodology had been practitioners and developers on a few projects. Srikant, on the other hand, lives in this unique world every day. His presentation was very well founded and focused on real life situations where CMMI and Agile overlap and coexist. The first major point about Agile is that it is a lean approach to managing projects but is not an “anything goes” kind of free for all. It IS very

much dependant on high degrees of team interaction and rapid feedback.

Srikant reviewed some of the characteristics of an Agile team. Included in that list were the expected small “sprints” of development activity which produce working and tested (and possibly deliverable) iterations of code. Additionally, there are the team aspects including daily progress meetings and constant involvement of the customer in the development cycle. Then came a comparison of the traditional waterfall method with Agile. Both have the same end goal in mind but get there in very different ways.

Srikant described the various roles in a project and how they interact during the sprints. While the sprint is a short time period (3 - 4 weeks) for exercising the full lifecycle, it necessarily works with only a subset of the known requirements. This allows the team to be making verifiable progress as the project advances. It also allows for development to stop once the necessary functionality has

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Next Meeting: April 15, 2009



“Unique Process Challenges in Developing Software for Mobile Devices”

By Joseph Mathew

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

Quality Assurance in Agile Methodology (continued)

(Continued from page 1)

been achieved. This is an advantage when you consider that projects developed with the waterfall method frequently have a large amount of functionality that is rarely or maybe never used.

The discussion then turned to the involvement of the QA organization. This is where Srikant is most deeply involved. This is also where QA has some of its biggest challenges. He discussed problems such as scope creep, inadequate time and minimal requirements to prepare test plans (in the compressed time of the sprint), and the need to become less of a gate keeper for quality and more of a partner in quality.

In the second half of the presentation Srikant explained how eMids uses a concept of “Unified Scrum” to manage the development of its software. It is a combination of the best practices of traditional SCRUM, RUP (Rational Unified Process), and PMI (Project Management Institute) methods. In this model there is a more traditional approach to the RUP phases of Inception and Elaboration. Toward the end of the Elaboration phase the sprints begin. Srikant described in several increasing levels of detail how the eMids Unified SCRUM model works. The final level of detail traced a sprint through the week by week agenda for the team. This method works well in the highly matrixed environment of eMids and there were several questions from the group about matrixed organizations.

Srikant brought out some of his lessons learned along the way and was very responsive to questions that popped up during the presentation. His major lessons form a good set of warnings for others who wish to use these methods. Less emphasis on documentation (a characteristic of Agile methods) can lead to some half baked test cases. Test coverage can become a major problem with compressed

sprint cycles. Requirements changes can be a problem if they are not adequately communicated or are changed in the middle of a sprint. System integration testing can take a back seat to other types of testing if you don't watch out. And finally, the low emphasis on status reporting and management reporting can make it difficult to track the overall quality status of the project.

In summation, Srikant added a few more items to help guide those who are interested in using a similar approach for software development. Quality is the responsibility of the entire SCRUM team. It changes the paradigm from the old “build it and throw it over the wall to the testers” philosophy so characteristic of waterfall development. Continuous integration leads to continuous QA and grows with each sprint. A good QA team will prioritize test cases by risk and frequency of feature usage (which should also be a driver for the order in which requirements are included in a sprint). Finally, use a technique called “Sprint Retrospective” to identify where in the sprint process did the failure in quality occur. This recognizes that defects are not like Admiral Grace Hopper's bug (the moth that flew into a relay in an early computer giving rise to the term “bug” for a defect). They are problems that people introduce into software because of a lack of process rigor that permitted it to happen and go unnoticed until long after the development effort is completed.

Srikant then started a very lively question and answer session with the group. We have a large number of Agile savvy members who attend the monthly meetings. This meeting was no exception. After the Q&A, Srikant stayed to answer additional questions individually. As is our normal practice, Srikant's presentation can be found on the Atlanta SPIN web site along with his bio and a short abstract of the presentation. If you are interested in any of the presentations from over the past few years please visit our web site and look on the “Meeting Information” page.

Call for Suggestions on Articles and Presentations

We regularly seek articles and related information that would be of interest to our readers and members. If you have a suggestion for an article please let us know by sending an email to “newsletter@atlantaspin.com”. Or better yet, if you would like to contribute an article of interest to our group, please contact us at the same email address and let's talk about it.

The Atlanta SPIN meetings and newsletter strive to bring members excellent professional talks providing suggestions for improvement based on your feedback and ideas as the foundation. We want to hear from you!

Software Engineering Institute Repository (SEIR)

Have you every wanted to get more information on a process improvement topic but didn't know where to start? You don't have to be a process geek to be interested in learning how others have made improvements in their organizations. After all, you attend Atlanta SPIN meetings and read this newsletter in order to pick up some tips and tricks to bring back to your work environment. Hopefully, you do the same thing during the networking portion of the evening before the meeting. That is where you can meet other practitioners and maybe even some SEI authorized Lead Appraisers, Instructors, and Transition Partners (there are a few of those in amongst our regular meeting attendees).

When it comes to getting copies of presentations and whitepapers on process improvement topics, do you know where to go? Well, you could Google for items and get odds and ends from all over the internet. Another method would be to use the database of information already gathered and organized by the SEI. And the best part is that it is FREE. Yes, it's free. The place to start is known as the SEIR – Software Engineering Institute Repository. This article will only skim the surface about the contents of the SEIR. In order to fully experience the full effect go to <https://seir.sei.cmu.edu/seir/> . From the home page you will see a collection of help on what is the SEIR, how to participate in the SEIR, how to get an ID and password to access the SEIR, etc. At a minimum you should register to get a login ID and password to get access to the real stuff. By registering you will identify yourself as a user of SEIR and be able to get email updates about the SEIR including password reminders.

Once you get in you see a whole collection of domains listed. These domains include all of the CMMI process areas (for all models including the newest Acquisition and Services models), many of the other SEI products such as TSP (Team Software Process), PSP (Personal Software Process), case studies, and presentations that have been given at many of the annual SEPG (Software Engineering Process Group) conferences over the years.

There is a search capability built in to the interface. You can search on words in the title or authors name. You can also search on a key word in the article or paper. A search on the

key word “configuration” resulted in 58 hits. Many of the hits were on papers and presentations given over the last couple of years. Some were from older works related to CMM. You can also do a search on the SEI web site. A search on the same keyword yielded 1900 hits. Many of these hits were on SEI web pages containing the word. If you are looking for presentations and want to avoid the SEI advertisements your best bet is to search in the SEIR.

You have some other options too. You can get the last 25 most downloaded documents. This will tell you what is hot in the SEI and process world. You can also get an alphabetical list of documents. There are over 1700 documents so you will have to narrow your search by selecting a domain or

One word of warning is necessary here. The interface is a little clunky and difficult to deal with. The site was built with HTML frames. All but one of these frames are non-scrolling. There are links across the top of the page, lists of links down both sides, and again across the entire bottom of the screen. There is only a small space in the center of the screen for you to scroll through to see the content. Maximize your window to get the largest scrolling area. That way the information will be less scrunched in the middle of your screen. The good part is that when you find a link to a presentation or other content, clicking it will open a new window with only the content (presentation, whitepaper, etc.) in it.

The final reason to join SEIR is to become a Platinum member. To do that requires that you be willing and actually contribute to the repository. In an upcoming article I will talk about becoming a Platinum Member and the additional resources available to only to the Platinum Members.

If you are looking for some great and easy opportunities to get free advice on firing up your process program, go straight to one of the best locations on the Internet: the SEIR. Keep in mind, this is your tax dollars at work. The SEI is funded by the Department of Defense as well as through the products and services that SEI sells. By using free resources you can get a huge return on a very small investment of only your time. The materials available on the SEIR itself are free. Even if you couldn't go to one of the SEPG conferences you can get most of the materials through the SEIR.

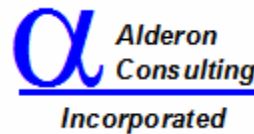
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Process Improvement Sites:**Software Engineering Information Repository**

<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 1994. 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. Atlanta SPIN is a 501C3 non-profit corporation. Your contributions may be tax deductible and qualify for corporate matching contributions from your company.