Aug 2014 Newsletter

Joint-Section Chapter - Boston - New Hampshire - Providence

June 2014 – August 2014

http://www.ieee.org/bostonrel

Greetings,

We had interesting presentations with good attendance in May and June. On May 14, Leslie Gabriele returned, for the first time in several years, to speak about "Personal Power and the Art of Perception." She gave a very entertaining presentation, including a lot of audience participation. On June 11, Dr. David I. Heimann returned to provide us with an update to his presentation last year; his presentation this time was "A Guide to the Revised IEEE 730 Software Quality Assurance Standard." As well as being the first time in three years having had a presentation in January, this was also the first time in three years, or more, since we have had a June presentation.

In addition to our usual chapter events, we had two additional IEEE events at MIT Lincoln Laboratory. Both events included people from the Boston area, including IEEE Reliability Chapter members. On Wednesday, May 28, 2014, there was a workshop for IEEE members of the Boston area to help with the process of elevation to Senior Member. On Thursday, June 19, 2014, there was a Leadership Skills workshop for IEEE members active in the various chapters who might be interested in leadership positions in the IEEE chapters or the Boston Section.

And, we are pleased that the Boston Chapter has been recognized by the IEEE Reliability Society as being the third best IEEE Reliability Chapter in the world, out of about 23 chapters. The Society counts many metrics of various types, such as attendance at meetings and technical publications. Congratulations to the other chapters that actively participated.

We have taken our usual break from activities during the summer, and we will resume monthly meetings in September. On Wednesday, September 10, at MIT Lincoln Laboratory in Lexington, MA, Kevin Foy will present, "Maintaining Quality & Reliability of a Complex Product through a Global Manufacturing Transfer," which will be about moving leak detector builds from Lexington, Massachusetts to Malaysia. On Wednesday, October 8, 2014, at Analog Devices in Wilmington, MA, Andrew Olney will present "Eliminating the Top Causes of Customer-Attributable Integrated Circuit Failures." On Wednesday, November 12, 2014, we will have a joint presentation with the Northeast Chapter of the ESD Association. We are fortunate that Eli Brookner has agreed to

address our group; his presentation will be on Wednesday, December 10, 2014. The November and December events will both be held at MIT Lincoln Laboratory in Lexington, MA.

If you are interested in presenting almost any technical topic, related to hardware or software, if it is related to reliability, please contact us for availability in our 2015 schedule. If you are local to the Boston area, or if you are in the Boston area the second Wednesday of the month, please attend our meeting, enjoy the camaraderie, and introduce yourself to me. I hope to see you soon.

Regards,
Dan Weidman, Ph.D.
Chair, IEEE Boston Reliability Chapter, joint with Providence, RI and New Hampshire
IEEE Senior Member

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Recent Activities:

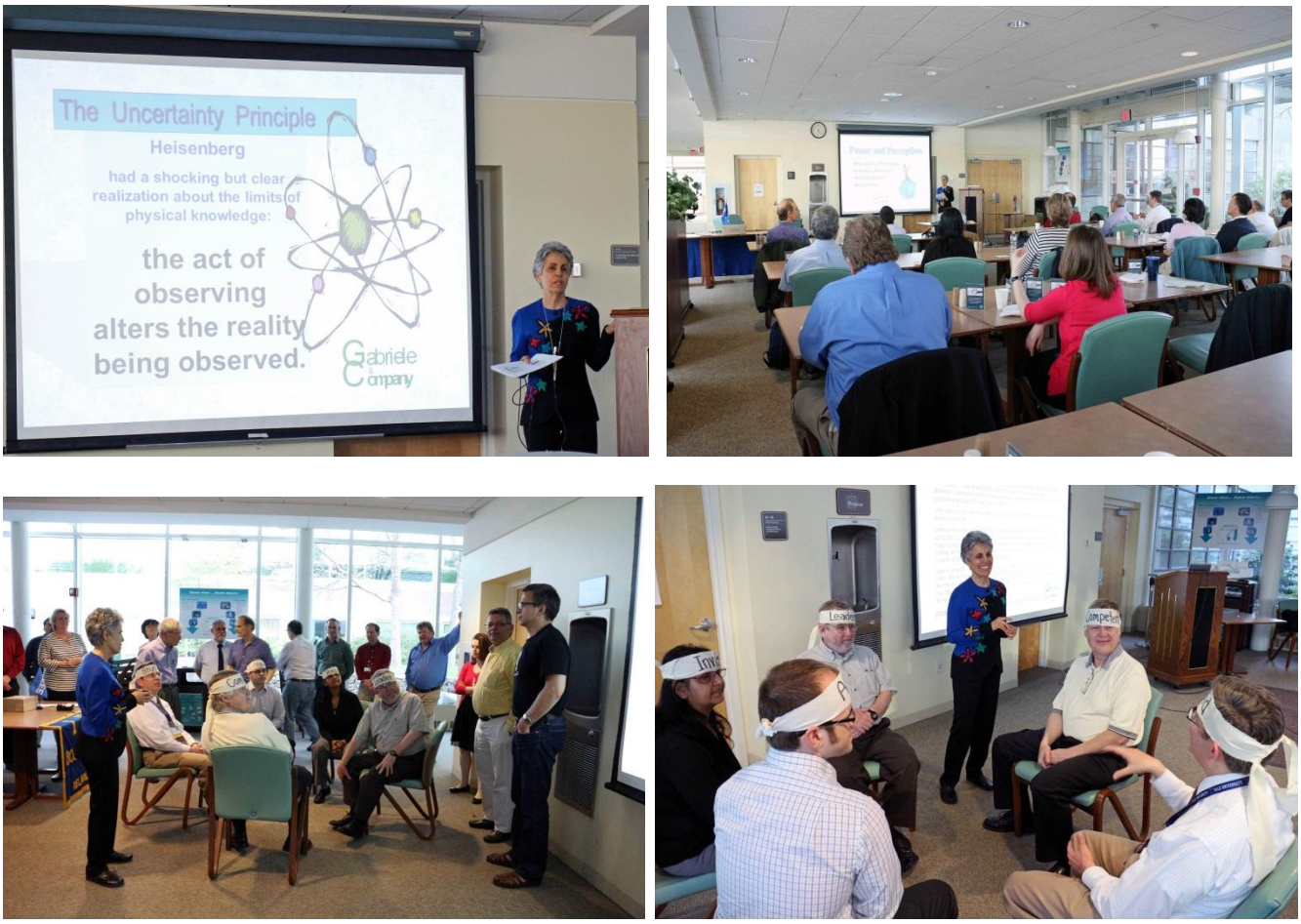
May 14, 2014	Leslie Gabriele, Gabriele & Company, "Personal Power and the Art of Perception,' at MIT Lincoln Laboratory, Lexington, MA.
May 28 , 2014	IEEE Boston section meeting for IEEE member and senior members about membership elevation clinic at MIT Lincoln Laboratory, Lexington, MA.
June 11, 2014	Dr. David I. Heimann, "A Guide to the Revised IEEE 730 Software Quality Assurance Standard," at MIT Lincoln Laboratory, Lexington, MA.
June 19, 2014	IEEE Boston Chapter's Workshop on "Leadership Skills" at MIT Lincoln Laboratory, Lexington, MA.

Upcoming Events:	Visit http://www.ieee.org/BostonRel to register
Wed, September 10, 2014	Kevin Foy on “Maintaining Quality & Reliability of a Complex Product through a Global manufacturing Transfer” at MIT Lincoln laboratory, Lexington, MA.
Wed, October 8, 2014	Andrew Olney of Analog Devices will present “Eliminating the top causes of customer-Attributable Integrated Circuit Failures” at Analog Devices Inc., Wilmington, MA.
Wed, November 12, 2014	Meeting will be jointly held with ESD association.
Wed, December 10, 2014	Eli Brookner
Announcements:	Details on other chapter and community related updates.

Recent Chapter Activities

"Personal Power and Art of Perception"

On Wednesday, May 14, 2014, Leslie Gabriele of Gabriele and Company presented, "Personal Power and the Art of Perception." Leslie is a technical recruiter for engineers and her presentation covered several topics related to human nature. She mentioned the Hawthorne Effect, which is an improvement in worker performance due to being studied or watched rather than due to real changes. (An example would be worker productivity increasing when lighting is increased so that workers can see better, and. later, worker productivity increasing again by management addressing environmental concerns by dimming lighting to save energy. Such results would not be due to brighter or dimmer lighting really being better for worker productivity.) Leslie pointed out that sales courses teach that sales are made with an emotional connection; with enough positive energy, people respond positively. She mentioned the Pygmalion Effect, where people perform according to expectations. For example, when students are expected to do well, they do, or when they are expected to perform poorly, they perform poorly. The Placebo Effect is somewhat similar, where there is a positive effect simply based on the expectation of a positive effect. Leslie has found in her experience that the most qualified person for a job is not necessarily the person who gets the job. The nicest person often gets hired, because hiring is done emotionally rather than logically. Leslie told a true story of a manager who took over a group that included a worker whom he planned to fire. However, the worker did one project after another perfectly. Therefore, he kept the worker. The point, though, is that the manager would have never been hired this worker.



Attendees at IEEE Boston Reliability Chapter's May 2014 presentation and interactive session

Leslie Gabriele conducted a couple of interactive sessions, with volunteers. With a brief Q&A exercise and a volunteer, Leslie demonstrated the differences between responding to a colleague with anger, and then responding to a colleague who is disengaged with no interest and no information, and then responding to a colleague with a helpful and sincere and people-pleasing attitude. In another exercise, this time with five people, each person was assigned a specific character trait: angry, invisible, leader, competent, and stupid. Each character trait was on a headband visible to everyone except the person wearing it. The group was presented a case study wherein a manager was about to leave on very short notice for an extended period of time. The group was then asked to discuss and address this quandary for several minutes. Afterwards, each person commented on how they felt the way they were treated. Most people could infer the way they were perceived, based solely on the limited interaction from the others in the group.

"A guide to the Revised IEEE 730 Software Quality Assurance Standard."

On Wednesday, June 11, 2014, at MIT Lincoln Lab, David I. Heimann, Ph.D., presented "A Guide to the Revised IEEE 730 Software Quality Assurance Standard." This presentation nicely complemented his May 2012 presentation "A Guide to the Forthcoming Revision of the IEEE 730 Software Quality Assurance Standard," with some humor throughout. At the June presentation, Dr. Heimann said that

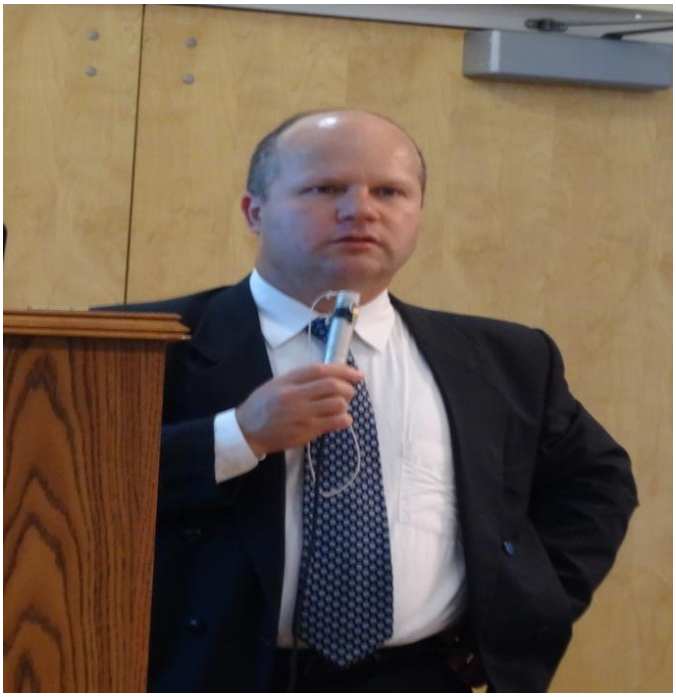
in 1979, this was the first software standard that was published by the IEEE. It has guidance and requirements for software quality assurance for use in a software project. This IEEE 730 Software QA standard is easy to use, gathers information all in one place, provides a clear checklist, and, since it is a standard, can be a nice selling point to customers who may be concerned about software quality.

David stated several points that are as useful to hardware quality assurance (QA) or "mission assurance" as they are to software quality assurance. (1) He said that software QA is not testing, which gets bugs out, but software QA intends to keep bugs out in the first place. It is not efficient to put in bugs and then remove them! (2) Software QA is not reviewing or auditing. (3) Software QA is not done just at the end of development, and it should be proactive not reactive. (4) Software QA is not a gate or "police" but rather should be like "walking with developers" in preparation for any upcoming "gate" or design review. (5) Subcontractor processes must be good. If not, then it might be easier to use bad processes in-house rather than bothering to outsource for bad processes! And, software QA activities should be independent. To be objective, they must be separate technically (i.e., not involved in the development), managerially (i.e., not reporting to the individuals responsible for project development), and financially (i.e., paid by or funded by a different group). And, in addition to meeting the requirements, the product must be acceptable. That is, the requirements must be consistent with what the customer expects. In hardware, this is described as validation of the design in addition to verification of requirements. Sometimes this is called, "Did you build the right thing?" in addition to worrying about "Did you build the thing right?" All of those points are generally very important when working on software or hardware. All in all, this was a very enjoyable and worthwhile presentation that was an excellent overview of the IEEE 730 Software QA standard.

http://ewh.ieee.org/r1/boston/rl/presentations.html

"IEEE Membership Elevation Clinic"

The IEEE Boston Section held a Membership Elevation Clinic at MIT Lincoln Lab on Wed, May 28, 2014, in the evening. This was a way to help people through the process of being elevated from IEEE Member to IEEE Senior Member. Various information is needed for this process, such as a resume. We learned that it helps if there is an "executive summary" of one or two paragraphs showing progression in one's career, such as promotion to a team leadership position or authoring publications or patenting inventions. Certain career accomplishments are required, such as a minimum number of years of experience since one's engineering degree, with fewer years of experience needed for higher degrees. To qualify to become a Senior Member, you need 10+ year of experience. The IEEE, for these purposes, counts a Ph.D. as the equivalent of 5 years of experience, while an MS is the equivalent of 4 years of experience. Most (almost all!) people take more than one year to get a Ph.D. Therefore, many recently graduated Ph.D.'s qualify to become Senior Member because the MS was more than 6 years ago … even though the Ph.D. was less than 5 years ago! In practice, most people who are considering elevation to Senior Member are probably qualified for such a membership elevation. Recommendations from IEEE Senior Members are required, and this workshop helped people get in touch with Senior Members from the IEEE Reliability Chapter as well as other Boston IEEE Chapters who are willing to write recommendations. If you are an IEEE Member and are interested in becoming a Senior Member, please contact Ramon de la Cruz at rdelacru@ieee.org



Mr. Progri at membership elevation Clinic May 28, 2014.

"Leadership Skills Workshop"

On Thursday, June 19, 2014 at MIT Lincoln Lab, we held a Leadership Skills Workshop. Paul Zorfass of the IEEE Boston Section coordinated this. This event was for current and prospective IEEE Boston-area chapter and IEEE Boston Section leaders. For example, in attendance were two IEEE Boston Reliability members, Charlie Recchia and Jay Yakura, who have been active members and are considering IEEE leadership positions in the future. There were a few panels that helped spur discussion. The first panel was on the topic of chapter Operations, which included the logistics of meetings; this was led by Dr. Daniel J. Weidman, the Chair of the IEEE Boston Reliability Chapter. Joe Yeh was one of the panel members and pointed out that getting students involved often works well because they always want to build their resume. There was a Communications and Outreach panel, which was kicked off by Christina Inge, who presented many helpful tips on improving participation. She suggested that when starting a meeting, we should ask the audience for a show of hands for who is new, and be specific about asking them to come again, and that we will look for them at future meetings. She suggested multiple ways of communicating, including a web site, email, Facebook, and Twitter. And, she suggested posing a question; for example, instead of a heading like, "Intellectual Property", it might draw more interest to ask "Are you concerned about your intellectual property?" Also, make the next step clear, such as "register by tomorrow by clicking this link." Another suggestion was to occasionally post articles of general interest, to attract people to the Facebook page or web site. When someone comes to a meeting for the first time, we should explain, face-to-face, that attending is both altruistic as well as good for professional development. If a member gets an award, we should post an announcement to Facebook and in our newsletter. There are free Wordpress plug-ins that can automatically post to Facebook, LinkedIn, and elsewhere. And, we also learned that Bob Alongi, who runs our IEEE Boston Section's office, can take a short statement of the Chapter and a description of volunteer jobs needed, because people often contact him asking him about volunteer opportunities.

Upcoming Events

6:00 PM, Wednesday, September 10, 2014

"Maintaining Quality and Reliability of a Complex Product through a Global Manufacturing Transfer"

by Kevin Foy

Kevin Foy will talk about moving leak detector builds from Lexington to Malaysia at MIT Lincoln Laboratory, Main Cafeteria., 244 Wood Street, Lexington, Massachusetts.

Transferring a complex product from its design manufacturing site to a LCC (Low Cost Country) manufacturing site is a difficult task. Performing the transfer without affecting Quality & Reliability, thus making it transparent to the customer, is more difficult.

This presentation will cover the Verification and Validation tasks necessary to assure the MTBF (Mean Time Between Failures), MTTF (Mean Time to Failure), and AFR (Annualized Failure Rate) metrics are maintained and/or improved during this time period. An actual example that was used at Agilent Technologies will be reviewed.

For meeting registration visit chapter website http://www.ieee.org/bostonrel Registration is required so that we can plan the pizza and beverages, but there is no charge to attend.

Announcements

Reliability Chapter's Facebook Presence

Our chapter recently established presence on Facebook, so check it out. Visit the page by searching Facebook for "IEEE Boston Reliability". Please click "Like" to friend us. Meeting announcements are posted on the wall. Your feedback is most welcome.

Annual Reliability Chapter Awards for 2014

The annual Reliability Chapter awards were announced. The IEEE Boston chapter was awarded the "third best" IEEE reliability Chapter in the world. The award selection criteria are based on membership, meeting attendances, number of meetings, workshops or conferences, training sessions, written papers, technical tours and other pertinent activities.

Society Participation

For updates on upcoming events: http://ewh.ieee.org/r1/boston/rl/events.html.

We are interested in having you help out as a volunteer contributing as much or as little as you would like. We have a good team of volunteers that help us keep things going, so if you would like to join us, there is probably ample opportunity to choose how you would like to contribute. Email or talk to any of us at the next monthly presentation, or attend one of our Advisory Committee meetings.

The IEEE Reliability Society Joint Section Chapter Boston - New Hampshire - Providence

Newsletter is available at the following link:

Boston - New Hampshire - Providence Joint-Section Chapter Newsletter

or copy and paste the URL above into your browser.

http://ewh.ieee.org/r1/boston/rl/newsletters/boston_chapter_newsletter_aug14.pdf