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1 Attendees, Introductions

Duane Allen, Self (retired)
Dennis Dubro, Boston Scientific
Howard Castrup, Integrated Sciences Group
Jorge Martins, National Instruments
Keith Bennett, Transcat
Mark Kuster, Pantex Metrology
Mitch Johnson, Donaldson Company
Suzanne Castrup, Integrated Sciences Group
Tim Osborne, *Trescal*, Dynamic Technology

Some WG members did not attend due to travel restrictions.

2 Special Note

The committee congratulated Howard Castrup for 30+ years of highly productive service.

3 Minutes Review

The chair called for any corrections to the March, 2012 Meeting: None
4 Status Updates Since Last Meeting

The committee heard RP development and other status updates from each working group chair and held discussion as follows.

4.1 173.1 Calibration Interval Analysis (RP-1)

Working Group Chair: Mark Kuster, Pantex Metrology

Mark Kuster briefly summarized the 173.1 WG meeting from the previous Saturday (see attached minutes). Mark Kuster spoke to Craig Gulka earlier this week and requested help surveying the membership for RP-1. Craig indicated that would work fine. Howard Castrup and Mark Kuster presented interval analysis methodology effectiveness research at the conference.

4.2 173.2 Measurement Decision Risk Analysis (RP-18)

Working Group Chair: Howard Castrup, Integrated Sciences Group

Howard Castrup reported that he will focus back on RP-18 now that he has finished his RP-12 contributions. The committee discussed developing risk analysis examples along the same lines as the uncertainty analysis examples discussed at Tuesday’s RP-12 WG meeting and on the same scenarios. The examples may show the main three ways to compute the risks. Tim Osborne suggested asking 171 (Z540 Handbook) committee members to help with the work. RP-18 has a method intended to be superior to the Z540 TUR method but assessors should learn it so that they recognize it as credible to prevent issues when performing assessments. Howard Castrup will form a WG after working over the current RP draft. The WG will not hold the meeting left on the schedule from a previous conference.

4.3 173.3 SPC for Metrology (RP-XX)

Working Group Chair: Howard Castrup, Integrated Sciences Group

Howard Castrup confirmed tabling this work until after RP-18, maybe until after RP-19. Committee participants mentioned existing software for SPC such as MiniTab, Excel, and custom Google Apps worksheets. The legacy test cases do not link test points to end-item utility. Mitch Johnson and Duane Allen volunteered for future material reviews. Applications include plots vs. time with check standards, vs. value over a range, and to help determine calibration intervals also.

4.4 173.4 Measurement Quality Assurance End-to-End (RP-19)

Working Group Chair: Howard Castrup, Integrated Sciences Group

Howard outlined the RP-19 ideology and the original supporting software, ETS: The techniques link end products to high-level measurement standards through the traceability chain, but practitioners may find the required information hard to obtain and never use it. Also, the legacy test cases don’t link test points to end-item utility. Mitch Johnson indicated that captured labs such as his would have access to the data. This resource, when developed, would serve as another avenue to demonstrate metrology’s value in management terminology, i.e., ROI, cost savings, etc. This material probably fills a bigger gap than the SPC material so the committee considers this a higher priority and the existing NASA document provides the source material.

4.5 173.5 Uncertainty Analysis (RP-12)

Working Group Chair: Suzanne Castrup, Integrated Sciences Group

Suzanne Castrup summarized Tuesday’s WG meeting and reported issuing the draft document to all WG
meeting attendees and others as of today for final review with an August 31, 2012 comments due date. (See attached minutes.)

Tim Osborne reported that Craig Gulka intents to apply the Chicago Style Guide and modern formatting to all NCSLI documents. Suzanne Castrup suggested that NCSLI create RP templates for committees to use in that regard. Tim Osborne will ask the board Friday if they approve Craig’s decision and mentioned an open board action item on document branding. It will likely apply to RP-12 and RP-18 example formatting also. NCSLI has not issued the style guide. The RP-12 WG will delay final formatting until the NCSLI Board makes a determination.

Suzanne Castrup reported adding two more uncertainty analysis examples to the list. This conference also has a liquid flow turbine meter calibration example in the proceedings that will inform one example. The committee discussed mining the past proceedings for further examples, with credit for authors who might serve as a TAG contact for their associated example document. The NCSLI office may issue a call for support on particular analyses. Marlene Moore also has expressed interest in a gas flow example.

5 General Discussion

Mitch Johnson said that the NCSLI has its web site 90% ready to go for committee communications.

Mark Kuster suggested that the committee develop long-term goals after addressing its obvious short-term goals regarding RP-12 and RP-18. We should research methods so that we may graduate from single-measurement-point to instrument-level analysis. The committee discussed RP-3, the new RP-12 material, and other recent movements to address range calibration point selection.

Tim Osborne requested that the committee document its activities and membership via the established NCSLI forms.

6 Action Items

- Mark Kuster: Issue WG application (membership record) forms to all current participants.
- Suzanne Castrup: Coordinate uncertainty analysis example preparation.
- Howard Castrup: Prepare RP-18 and form a WG.
- Tim Osborne: Obtain a formatting decision from the board.
- Tim Osborne: Submit the RP-12 and RP-18 examples plan to the board for approval.