

IEEE Standards Coordinating Committee 14 (Quantities, Units, and Letter Symbols)
2014 April 29 Meeting Minutes

Attending: Gordon Aubrecht, Bruce Barrow, Elizabeth Gentry, James Frysinger, Stan Jakuba, Howard Ressel, Terry Scott, Ambler Thompson, Lorelle Young

The meeting was called to order at 13:32.

1. Adoption of agenda

Moved, seconded.

2. Secretary's minutes of last meeting

Were distributed online, reading waived.

3. Approval of minutes of meeting of 2013 March 27

Minutes approved unanimously

4. Chairman's report

IEEE training presentation on patents (annual requirement)

No questions, assumed done thoroughly.

Annual report on 2013 August 07 (copy provided); next due 2014 September

Unanimously accepted.

Financial Report submitted; next due 2015 March 31

It has been submitted saying we have no money.

Chair reappointed 2014 January 04

Summary Status of standards – These will be discussed as needed in the subcommittee reports.

See the provided spreadsheet for details.

– *IEEE expiration dates*

2018: 260.3, 260.4, 270, 280, 945, 1541

2020: 260.1, SI 10

– *ANSI expiration dates in 2013*

260.4, 945, 1541

– *withdrawn*

P80000

No standards above require IEEE approval until 2018; ANSI does have earlier deadlines (referring to SI-10). It will have to be changed if we decide to let the five-year deadline pass. We could choose to

revise the standard. The onus is on IEEE to remove the ANSI designation (American National Standard) if we let it pass. IEEE has departed from ANSI procedure in going to a ten-year renewal cycle; the Board refused to allow us to change any word in a standard we adopt.

This change goes back to IEEE and IEC not to change any wording. We could adopt as IEEE with changes to the wording as long as we can do a PAR. (ASTM is also still on the five-year cycle.)

5. Reports of subcommittees

SCC14.1 – **Barrow** — Revision of SI-10 due 2020 by IEEE rules.

Barrow says there hasn't been any contact with ANSI. A question is what has to be revised. Has a new definition of SI. We can start a revision process, even if we change only the date. Frysinger does not see any reason for a revision. We leave this in the hands of Barrow to pursue; ANSI is supposed to chair this revision.

SCC14.2 – IEEE Std 270-2006): **Aubrecht** — reaffirmed 2012 December 05, expires 2022

Nothing needs doing.

SCC14.3 – IEEE Std 260.1-2004: **Frysinger** — expires 2020; ANSI expiration in 2015
– IEEE Std 1541: **Frysinger** — expires 2018; ANSI expiration in 2013

Some things in 1541 need revision—prefixes for binary multiples, for example, but there is no pressing deadline.

SCC14.4 – Quantity symbols (Std 280-1985): **Barrow** — PAR extended through 2013; tied to P80000; std expires 2018. Now that P80000 has been withdrawn, what shall we do?
– IEEE Recommended Practice for Preferred Metric Units for Use in Electrical and Electronics Science and Technology (Std 945): **Barrow** — Revision in progress.

We withdrew P80000. What needs to be done about 280? It expires in 2018. Barrow will look at this and see what will happen after he clarifies SI-10.

945 is alive and Barrow is working on the revision. All of SCC 14 are comembers. Those who do pay attention and respond will be called the working group. Aubrecht raised two points: 4.1 is not weight; we might want to consider concentration. Jakuba added a comment to the email. Members are strongly to become part of the working group. Frysinger distributed a redline version immediately prior to the meeting.

SCC14.5 – Acoustics (Std 260.4-1996, reaff. 2008): **Ehrlich** — expires 2018; ANSI expiration in 2013

Stan has not been heard from. Thompson suggested contacting the Acoustical Society of American (perhaps Susan Blaser). If they want a standard, they may need to appoint someone else. Thompson will proceed with finding if they want to continue.

SCC14.6 – IEEE Std 260.3-1993): **Aubrecht** — reaffirmed 2012 August 30, expires 2022

Nothing needs doing.

SCC14.7 – International System of Quantities: **Thompson** — PAR80000 approved 2009 March; withdrawn 2013.

We should close this subcommittee.

SCC14-Int – International report: **Thompson**

— IEC TC25, ISO TC12, IEC/TC 1

— CCU

Thompson went to Berlin. After Andres Tor died, they tried to replace Sweden as convener. The Germans are having a conference at DIN. The PTB also showed up, Joachim Ulrich is PTB president, as well as president of the CCU. PTB is interested in the international system of quantities because of the redefinition of the units. They are concerned about us ramming things through the system as the new kilogram vote happened in 2011. They are putting significant resources into the effort.

The DIN website will have everything about the ISO parts. The IEC parts will be run a different way. There was discussion of how Frysinger gets greater access. The 80000-3 series appointed Paul Giroux. We want to post the working drafts on the IEEE SCC website.

There is a conference next month in Frankfurt that Frysinger and Thompson might be able to attend by web.

There was a problem with the 80000-3 medical drafts; other medical organizations decided to cooperate in this effort. This is a really active conflict of interest going on.

There is a renewed interest in ontology (study of the nature of being, becoming, existence, or reality, as well as the basic categories of being and their relations). The Malaysian jet was communication with various elements; computers need to be able to recognize these things. We need to get stuff to where the correctness of the concept is assured. We have a very specific idea of quantity, but this is tricky to communicate to computers. We will be watching with interest in this endeavor.

We don't all use the same system of units, and these entities must seamlessly be able to convert.

Frysinger got involved with this in IEEE 1616 (the black box under the car seat). All go back to standard quantities.

SCC14-Rev – Review: **Barrow** — Volunteers needed!!!

There is too much for Barrow alone to cover; he needs help. Barrow has not been able to get into the standards due to all the changes in the IEEE procedures. Scott said that the reviewers had no idea of SI at all. This is frustrating, because the IEEE is not doing the tutorial. Scott and Ressel volunteered to assist Barrow. Frysinger said IEEE's Michael Kipness will help as he is our liaison.

SCC14-Leg – Legislative

— NIST report: **Gentry**

Gentry will send a copy of the written report after her oral report. High points: Nothing has changed in NIST's organizational charts since last year (after major changes). They have a student intern, Jessica Drayal, who is helping them digitize archival publications. Clark Cooney is joining the group from Oregon.

Much work is outreach. Many events are going forward this summer. They are working with DC schools in June to integrate the next generation science standards. They will do a metric estimation game. They are participating in the NIST summer school for middle school science teachers, financed by a grant. Teachers are brought from around the country and introduced to some NIST activities.

The video game Minecraft is popular. NIST gave a challenge in this game to make a video to show the importance of SI units.

There is a new graphic cartoon video NIST created to be shown at the science and engineering symposium in Washington last week. They are doing further editing on that.

NIST distributes many teacher kits.

The government shutdown happened at "Metric Week," when most kits are distributed. These were handled late.

FPLA: FTC is asking for public comment because they may make exceptions to the legislation. This could support voluntary metric labeling. They're looking for people's opinions based on evidence. There is a form on the FTC website with ability to upload files. The deadline is 21 May 2014. It was likely to want to hear that consumers are accepting of metric-only units. FTC could decide to permit metric labeling, and that would eliminate the necessity of legislating this point. NIST is finding no person in Congress to support this.

Barrow suggested also that the committee also take a position. Gentry is happy with the suggestion.

There was extensive discussion of the possibility of misunderstanding micrograms. The problem is that μ can't easily be transmitted electronically (not in ASCII 127). The solution is "u" while FDA insists on "mc" as a solution.

There is an effort to eliminate customary units as people misinterpret units for OTC medicine (tsp vs mL). There have been nearly fatal accidents.

49 states have adopted (New York is waiting for the FPLA) the UPLR. It's a model law that increases uniformity among the states.

The uniform unit pricing regulation has had poor adoption. Only a handful adopted or some form of it. This is to stop frustrating value comparison. A working group is developing a best practices guide (started in 2012, coordinated by David Sofchek in Gentry's office) with many different stakeholders. It will go through the NIST review process; it will be posted on the NIST website. It will give best practices on how a metric label should look. It will be beta-tested on some groups.

The Hawaii HB 36 wants to make metric official by 2018. It will be carried into the next legislative session. There are many international visitors to Hawaii.

— USMA report: **Young**

Young reported that 50 cases of medicine mistakes were received and they are trying to do something to fix this problem. Young suggested that they should include the measuring device with the medicine.

Young put forward the work of Paul Trusten in getting doses in milliliters.

Common core does not know the metric system exists. Many teachers do not know also. Kids are confused by units because both customary units and metric are taught. The *We the People* petition was answered by NIST. NIST didn't even do justice to the metric system in its response.

Young said that we are behind in international comparison partly due to this lack of metric. Stan said it is not only in K-12, also in college!

6. Other old business

None.

7. New business

All: Request for Public Comment on FPLA. Comments from SCC14? Deadline May 21.
<https://www.federalregister.gov/articles/2014/03/19/2014-06066/rules-regulations-statements-of-general-policy-or-interpretation-and-exemptions-under-the-fair>

We should take a position on this FPLA. The committee needs to make a task group to craft a response. Bruce made three points: 1. We ought to permit metric-only labeling. 2. The draft FPLA makes mention of metric SI; we should suggest it be called metric instead. (The Federal Register deems the term metric means SI.) There is antiquated language in the draft. 3. The words weight or mass are used together. "Weight in a synonym for mass," said Barrow.

Barrow made a motion to form a ad hoc writing committee. Aubrecht seconded. Gentry noted she needs to be on the fringes. The National Conference on Weights and Measures is working on a position paper as well. Aubrecht, Barrow, Frysinger (who will sign it), Jacuba, and Ressel, with a copy to Gentry. The first draft needs to be available in 10 days. Barrow will give the link to the document.

Frysinger: Who will be the next Chair of SCC14?

Frysinger may be thinking of resigning.

8. Review of action items: **Aubrecht**

Barrow: SI-10 and ANSI; 280 when possible; and working on 945 945.

The ad hoc working group for the letter needs to report before the 21 May 2014 deadline.

Frysinger will attempt to remote link to the Frankfurt meeting of JWG 1.

9. Date for 2015 meeting — March in Gaithersburg? Tele/Web/Videoconference?

The meeting will take place in the latter half of April 2015.

The meeting adjourned at 15:13.