

IEEE Product Safety Engineering Society

Minutes of the IEEE PSES TSTC teleconference held Wednesday, December 3, 2014 at 11:00 AM EST, for one hour.

1. Attendance/Introductions

Members present: Don Gies (Alcatel-Lucent), Al Martin (retired), Joe Randolph (Randolph Telecom), Anne Venetta-Richard (Alcatel-Lucent), Jim Wiese (Adtran).

Members absent: Tim Ardley (Adtran), Philip Havens (Littelfuse), Peter Lim (Alpha Technology), Mick Maytum (MJMaytum), Paul Ng (GE Energy), Doug Parker (Adtran), Dan Roman (Colgate Palmolive), Gary Schrempp (Dell), Tom Smith (TJS Technical Services Inc), Peter Tarver (Enphase Energy), Steve Zugay (Cree).

2. Meeting arrangements

Don Gies supplied the call-in number:
Bridge No. (Toll Free): 1-800-771-8734
International Access: +1-647-723-3953
Access Code: 5825978

3. Previous meeting minutes (attached)

4. New business

Joe Randolph on NEBS meeting:

Dan McMinniman had good talk on the consequences of earthquakes.

NEBS guys say they're trying to do the right thing, but customers complain about the requirements.

5. New RFT standard –IEC 62368-3.

a. Don Gies is a member of the WG 11 adapting IEC 60950-21 concerning RFT circuits, to IEC 62368. (Tokyo report attached) The TSTC previously had discussions for proposals. Any inputs?

b. Previously, Jim Wiese had moved to amend UL 60950-21 with US deviations. Jim has sent in supporting information (attached)

Don: Any new inputs?

Jim: I sent a package of stuff. A bit was added to the Scope. If you are a service provider, go with the Appendix. Otherwise use the body of the standard.

Don: Anything on cables?

Jim: ATIS put in a proposal for the standard. The proposal explains what is wrong with the present standards. Standards groups have ignored our input, and we're the users of this.

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Jim: Service providers now requiring span-powered equipment to be listed [both head-end and remote equipment].

Don: What do we do about coax cable which also supplies power? It's only 60 V.

Don: Standards don't address equipment powered by AC.

Don: AC is outside the scope.

Jim: It's been determined that DC powered equipment is safe.

Don: We build some telecom transformers with reinforced insulation before IEC 60950-21 was issued, based on the supposed voltages on an RFT system.

Jim: Most cards don't have reinforced insulation. Issue: Can't meet reinforced insulation at the connector.

Joe: What is the big picture?

Jim:
-21 doesn't work for service providers.

Telecom carriers writing requirement saying that any line-powered equipment must be listed. The appendix makes the adjustments that are required by service providers. Scope says that if this equipment is owned by service providers, then consult appendix.

Don: I found that there is a noticeable absence of telecom guys at IEC meetings. What we need to do is take the ATIS work and put into a proposal.

Jim: Randy Ivans said that the body of the standard will never be changed.

Don: A new standard is being created, so now is the time to try to influence it. If we can say what was wrong with the present standard, we can correct it.

Jim: The appendix to the document creates exemptions that allows equipment to work in North America. ATIS created a table that lists all the problems with -21. This was taken to the IEC, but IEC blew us off because they said that ATIS had no standing in the IEC.

Joe: Seems like it's worth trying again, since the IEC 62368 standard is still in flux.

Don: We need one standard to test to. We want the standard to allow equipment to be used in any application.

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Jim: Service providers not now allowed to pass span powering past the point of demarcation. Independents can do what they want, as long as they control the whole system.

Joe: There won't be one set of rules that apply to everyone. There will be a set of rules that apply to service providers. Service providers say that they have a lot of equipment that would be non-compliant if the present standards have to apply.

Jim: IEC acknowledges that there is a problem, but put requirements into the standard anyhow.

Jim: -21 doesn't separate service provider equipment from user equipment.

Joe: We can't change IEC 60950, but what about IEC 62368?

Jim: Can we cite work Telcordia is doing as an argument for changing IEC documents?

Don: Is there anything we can do as a start?

Joe: Does anyone on this call know how the IEC62368 will treat RFT circuits?

Don: IEC 62368 is adopting an RFT standard based on -21.

Joe: If work in IEC is underway, we have a chance to influence it.

Don: There are some emails on the subject. Let's review the existing documentation, and put forward a proposal.

Joe: The GR1089 new differential surge on Ethernet: Looks to me like the 75 ohm resistors must take whole surge. Will they die?

Jim: If less than 1/16 watt, it will probably die. There was an exemption for the test in GR1089 issue 4, but put back in issue 6.

Protection of DC feeds to radio equipment at the top of towers – Al Martin

This is an issue that has a lot of interest with outdoor wireless installations.

- a. What protection is typically installed on equipment that will be located at the top of towers, and is any consideration given to the height of the tower?
- b. What lightning waveshape is considered when designing protection for equipment to be located at tower tops?

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- c. Is there any information about the failure of installed protection to protect equipment located at tower tops?
- d. Mick Maytum has supplied support documents (attached)

6. **Telcordia GR-3171-CORE, Issue 2 TTF – Wireless equipment – Don Gies**

- a. GR-3178-CORE - Generic Requirements for Wireless Transceiver Facilities near release (latest draft attached)

Don Gies: Moving parts of GR-3171-CORE into new standards. GR3178 based on GR950. Issues with some of the tests: Drop test (30" is too much), brush fire (exemption for equipment designed to be discarded, from GR-487-CORE), complaints about the number of samples to be tested. Telcordia amended the standard to take concerns of members into account.

Joe: Will there be lightning requirements in this set of standards?

Don: Don't know yet.

Joe: From NEBS meeting, it didn't appear that lightning requirements for towers have made their way into standards.

Joe: There was a NEBS presentation about cables that run up towers.

Don: Type NC cables are armored, and contain fiber optics and power. Our vendors list them.

Don: When discussing requirements, don't say "exemption", say "not covered".

Jim: Applying an exemption to cell sites can cause problems, because there is no control on access.

Don: Someone developing RRH that is running really hot. If it is in a restricted access area, it may be OK. Issue: Is incidental contact possible? Everyone in the space should know if unit is running hot. Density of equipment is going up – more amplifiers in the same space, which is driving up temperatures.

Jim: Randy Ivans no longer in telecom at UL [he's doing wire and cable].

Don: Most telecom activity is coming from California, not Melville.

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Joe: Not doing testing in Melville any more. Issue is long delays in testing, and high cost.

Don: I forwarded GR3178, which is the only new thing. The electrical sections of GR3171 haven't been discussed yet.

7. Additional agenda items

8. Old Business

- a. UL Subject 1801 vs. IEC61204-7 2nd Ed committee draft – Paul Ng

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Next meeting – Proposed **Wednesday, 28 January 2015**.

Respectfully submitted

Al Martin, Secretary