IEEE PSES TSTC
Meeting Minutes: 21 July, 2010

Attendees: Al Martin (Tyco/Raychem), Mick Maytum (MJ Maytum), Joe Randolph (Randolph Telecom), Dan Roman (Dialogic), Gary Schrempp (Dell), Tom Smith (TJS Technical Services Inc), Peter Tarver (Ericsson), Jim Wiese (Adtran)

Introductions
Introductions were waived for prior teleconference attendees.

Administrative topics
1) The minutes from the last meeting were approved as submitted

Discussion topics
1) Mick Maytum discussed his 2009 ITU-T COM–C43-E contribution on North American wiring simulators. To quote from his Summary:

According to US standards to prevent damage, a wiring network of traditional (0.1 mm diameter X 4 ≈ 32 AWG,) phosphor bronze tinsel conductor telephone line cord feeding two pieces of terminal equipment should have its current limited to:

- 2.2 A (long duration),
- 7 A for 5 seconds, and
- $I^2t = 100\ A^2s$ for short durations (this value is suspect).

A single wire of 26 AWG (0.4 mm diameter) has limits of:

- 5 A (long duration), and
- $I^2t = 1200\ A^2s$ for short durations (this value is suspect).

The estimated power fault stress levels are:

1. 600 Vrms, 40 Arms for 1.5 s: Power line contact to a telephone shielded cable ($I^2t = 2400\ A^2s$) Telcordia GR-1089-CORE uses 60 Arms for 5 s
2. 600 Vrms, 7 Arms for 5 s: Power induction or from a ground potential rise after a power line fault to a multi-grounded neutral conductor.
3. 600 Vrms, 2.2 Arms steady state: Induced currents from a power line fault to resistive earth.
4. 120 Vrms, 25 Arms steady state: Power line crossed with a telephone line.

NB The 600 V rms test level is set by the maximum let through voltage of a carbon block primary protector – it is not an AC distribution supply voltage.

The limit current time conditions have been variously defined as current-time values, current-time templates (graphs), bare AWG wire and a fuse type. The last two are grossly inaccurate as fuses are not precision gauges and the use of wire simulator using the same wire gauge as the actual wiring is a misconception. The advent of large memory depth digital waveform recorders has allowed the latest UL 2564 outline of investigation to exclusively use accurate current-time templates for evaluation the equipment of component current limiting.

The discussion of this topic will be continued at the next meeting.

2) Jim Wiese discussed his contribution on issues relating to 60950-21 that make it incompatible with the service providers network. Some of the issues are related to safety, some to Creepages and Clearances, and some to insulation classes. Span powering is also an issue. Peter noted that span power was supposed to be stripped off the line before it entered a building. But network equipment is often located on customer premises, and is sometimes either span powered or supplies span.

Jim said that numerous attempts were made in the ATIS T1E1.7 committee to get UL to fix the problems with UL 60950-21, but nothing ever happened. Peter indicated that this was due to absence of a proposal This is an issue, because equipment located on customer premises needs to be listed.

Peter noted that recommendations for change need to be taken to TC108, if any progress is to be made in correcting UL60950-21.

Discussion will be continued at the next meeting

Next meeting
18 August 2010

Respectfully submitted,

Al Martin
Secretary

IEEE Product Safety Engineering Society
Telecommunications Technical Activities Committee Roster

Participant	Employer	Telephone	E-mail	IEEE Member?	PSES Member?	Linkedin Subgroup	Other Committee
James Bress	AST Technology Labs	+1-321-254-8118	jrbress@asttechlabs.com				
Don Gies	Alcatel-Lucent	+1-908-582-5978	don.gies@alcatel-lucent.com	X	X	X	
Phillip Havens	Littelfuse	+1-214-450-9658	phavens@littelfuse.com			X	2
Carl Linquist	SOC Fuse		fuseman@attglobal.net				2
Al Martin	Tyco Electronics	+1-650-361-5822	amartin@tycoelectronics.com	X		X	2,3,4,5,7
Mick Maytum	Retired	+44-1234-838589	m.j.maytum@ieee.org				2
Joe Randolph	Randolph Telecom	+1-781-721-2848	jpr@randolph-telecom.com	X	X	X	
Dan Roman	Dialogic	+1-973-967-6485	dan.roman@ieee.org	X	X	X	
Gary Schrempp	Dell	+1-512-724-3757	gary_schrempp@dell.com	X	X	X	
John Shinn	Retired		jmshinn@pacbell.net			X	
Tom Smith	TJS Technical Services	+1-403-612-666	tsmith@tjstechnical.com			X	6
Peter Tarver	Ericsson AB	+1-408-970-2155	peter.tarver@ericsson.com	X	X	X	1
Tailey Tung	Network Equipment Technologies	+1-510-574-2385	tailey_tung@net.com	X		X	
Jim Wiese	Adtran	+1-256-963-8431	jim.wiese@adtran.com			X	2,4
Steve Zugay	Alcatel-Lucent	+1-919-850-6219	stephen.zugay@alcatel-lucent.com				

Guest: Jack Burns, Dell, IEEE PSES, VP Technical Activities

Chair: Peter Tarver
Vice Chair: Don Gies
Secretary: Al Martin

1) UL Standards Technical Panel for Subjects 60950-1, -21, -22, -23
2) TIA TR 41.7, TR41.7.1
3) IEEE Surge Protective Devices Committee
4) ATIS Protection Engineers Group
5) ITU-T, SG5, WP1
6) Canadian National Subcommittee for IEC TC108
7) TIA TR 41.7.10 (Smart Grid)

Other LinkedIn members:

hifi cha, China (Independent Consumer Electronics Professional)