

CABLE SYSTEMS IN SUBSTATIONS (F2) MEETING MINUTES
Tuesday, October 24th, 2006
Nashville, TN

This meeting of the Cable Systems in Substations Task Force was Called to Order at 8:00 am at the Clubhouse Inn & Suites. Those in attendance were as follows:

<u>NAME</u>	<u>COMPANY</u>	<u>LAN ID</u>	<u>MEMBER OR GUEST</u>
Hanna Abdallah	APS	hannaessa.Abdallah@aps.com	Member (Chair)
Steve Brown	Memphis LG&W	stevendbrown@ieee.org	Member
Randy Clelland	BC Hydro	randy.clelland@bchydro.com	Member
Debra Longtin	ATC	dlongtin@atcllc.com	Member
Shashi Patel	NEETRAC / GA Tech	patel@ece.gatech.edu	Member
Fred Randolph	First Energy	frandolph@firstenergycorp.com	Guest (interested)
John Randolph	PG&E	jdr9@pge.com	Member (Sec)
Brian Wallace	Salt River Project	bewallac@srpnet.com	Guest
Diane Watkins	Salt River Project	dxwatkin@srpnet.com	Member (V-Chair)

INTRODUCTION OF MEMBERS AND GUESTS

There were 9 attendees present: 7 members, and 2 guests. Chuck Todd, R. Steve Brown, Steve Shelton, Walt Constantine and Boris Shvartsberg had sent notes, and so their absence was excused.

Hanna Abdallah (Chair) ran the meeting and provided copies of the agenda.

APPROVAL OF MINUTES FROM PREVIOUS MEETING (Nashville)

The minutes were reviewed and approved with one correction to Diane's LAN ID.

OLD BUSINESS

1. Status of 525 draft 15

John Randolph provided an update on the balloting and comments from draft 15, which had been recently provided to the WG for review. 76 ballots were received in July, with 6 negative ballots. All comments have now been incorporated as Draft 16, and sent for a 10-day ballot recirculation last week. This draft was sent last week to the WG. Any final comments will then be incorporated and sent in as Draft 17 for Revcom approval, which will be early March 2007. We've missed the agenda cut-off date for the December 2006 meeting (sorry folks). So, publishing should follow Revcom approval in mid-2007.

John circulated EPRI Volume 4, IEEE 576 and IEEE 1138 for WG review and familiarization:

these valuable, related documents have been added to the Bibliography as part of D16. Fred was thanked for his “behind-the-scenes” editing of D14 earlier this year (via Alan Kollar). Randy provided John some additional corrections he found on D16. Hanna instructed John that copyright permission forms were likely not required for the customized material that members have contributed to this document, so John will confirm with IEEE. John will also contact Anne-Marie concerning the reference paper typo from the 1992 version.

2. Transaction Paper

Boris, Shashi, Hanna and Walt have not yet started composing a Paper that summarizes and highlights this new, updated version of 525. They have planned to include the flowchart, and publish it in IEEE Transactions within the next year in order to better publicize this Guideline across our industry.

Hanna mentioned an article in PES magazine or trade journals might be a better venue for broader notice among the industry. He will try to start a draft, and John will contact Boris to engage his help as well.

NEW ASSIGNMENTS

1. Tutorial for Seattle:

John has proposed to B0 that we provide this Tutorial at next year's meeting in Seattle. Steve Shelton has agreed to coordinate the Tutorial again, using the same valued presenters from Scottsdale: Cable construction (Walt), Body of guideline (R. Steve Brown), Shielding (Shashi), and the Example (Randy). Recommended improvements will be targeted: Walt to add more figures showing the construction, and Steve to streamline the slides that are not referenced. Other attendee comments were: provide a handout of the slides and flowchart, provide a copy of the draft, and keep it at 4 hours length.

2. Future improvements to 525:

- Large Station Example – (no action yet) Hanna will provide a draft 230/69 kV station to the example team by early March. The team will preview it, and come prepared to discuss at our next meeting in Seattle.
- Expand Fiberoptic Clause – (no action yet and no status) Walt to lead with application info from R. Steve Brown.
- Expand Cable Construction information – (no action yet and no status) Walt to lead, and possibly add a Table from his presentation.
- Separate the Control and Instrumentation shielding practices – Shashi?
- Add Trenching aspects – (no action yet) John to lead with R. Steve Brown, Dave K., Deb, Boris, and Ken. Brian mentioned he can assist Dave Kelley.
- Add Wire Termination aspects for Control and Power (< 1kV) – Steve Brown (Memphis) provided a draft recently to Hanna and John. Steve had received some company practice information from WG members since our last meeting. Hanna will review and John will forward to additional members for review. Steve will check 576 for any applicable info.
- Fire Stops – Randy will check with Don Delcourt to see what can be added and whether it belongs in 525 or 979.
- Separation for ISO reliability rules—(no author assigned yet)

3. Other Out-of-Scope comments from balloting that should be considered for the next revision:

- Reactor grounding and other grounding practices for capacitors—Shashi to handle

- Animal and insect damage
- Conduit vs. tubing explanation
- "Tree" routing discussion – move from Annex G to F?
- Add other country standards and IEC references
- More information about isolation devices

OTHER

1. Hanna mentioned he will be stepping down as Chair of F2, and that we will need WG members to step forward as officers, particularly Secretary for the next revision cycle. Both Deb and Fred will consider this opportunity for increased involvement in IEEE Substations.

2. Fred discussed issues his company is having with recent changes to ICEA standards for applications of ungrounded 2 kV cable and unshielded 5 kV cable. None of the other WG members were aware of these changes, and how they might impact existing installations or company standards/ practices. The 2 kV standard has been changed to now require 173% insulation for ungrounded cable, meaning that some 480 volt systems should no longer use 600 volt cable. The 5 kV standard has been changed to now require shields above 2 kV, meaning that a cable that was previously used for 4.8 kV is now commonly marked 2400 volts by the vendors.

FUTURE MEETINGS

The next meeting will be in Seattle the week of April 15th, 2007 during our Annual meeting.

The meeting was adjourned at 10:30 am--Minutes prepared by John Randolph.