

CABLE SYSTEMS IN SUBSTATIONS (F2) MEETING MINUTES
Wednesday, April 12th, 2006
Scottsdale, Arizona

This meeting of the Cable Systems in Substations Task Force was Called to Order at 8:10 am at the Doubletree Paradise Valley Resort. 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) |
| Ken Aldridge | Allen & Hoshall | | Guest (interested) |
| Radoslav Barac | Power System Engrg | baracr@powersystem.org | Guest (interested) |
| Francois Berard | Synertech | | Guest |
| R. Steve Brown | Puget Sound Energy | r.steve.brown@pse.com | Member |
| Steve Brown | Memphis LG&W | stevendbrown@ieee.org | Member |
| Randy Clelland | BC Hydro | Randy.Clelland@bchydro.com | Member |
| Walt Constantine | DRAKA | Walter.constantine@draka.com | Member |
| Gary Engmann | Burns&McDonnell | gengmann@ieee.org | Member |
| Robert Ingebretson | TOR Engineering | | Guest |
| Dave Kelley | SRP | dekelley@srpnet.com | Guest (interested) |
| Debra Longtin | ATC | dlongtin@atcllc.com | Member |
| Shashi Patel | NEETRAC / GA Tech | patel@ece.gatech.edu | Member |
| Michael Pons | Synertech | | Guest |
| John Randolph | PG&E | jdr9@pge.com | Member (Sec) |
| Steve Reiter | Tucson Electric | sreiter@tep.com | Guest |
| Steve Shelton | HDR Engineering | Steve.shelton@hdrinc.com | Member |
| Boris Shvartsberg | PSE&G | Boris.shvartsberg@pseg.com | Member |
| Bill Thompson | Power Engineers | bithompson@powereng.com | Member |
| Diane Watkins | Salt River Project | dxwatkins@srpnet.com | Member (V-Chair) |

INTRODUCTION OF MEMBERS AND GUESTS

There were 20 attendees present: 13 members, and 7 guests. Chuck Todd had sent a note, and so his 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 no corrections.

OLD BUSINESS

1. Status of 525 draft 14

John Randolph provided an update that all prior assignments from Nashville were completed and incorporated into D14, which was then sent to the WG for review. Comments were received back, incorporated, and then sent to the IEEE Editors on 3/13/06. Mike Kipness is the assigned editor and will respond to John with comments via E-mail by 4/13/06 (standard 20 business day review period).

Comprehensive review was provided by Alan Kollar thereafter (Hanna mentioned to add Alan back on the active committee listing), and Randy also found some additional corrections, which he will provide to John.

2. Tutorial

Steve Shelton successfully coordinated a Tutorial on 525 on Sunday 4/9 with 15 attendees. The presenters were—Cable construction (Walt), Body of guideline (R. Steve Brown), Shielding (Shashi), and the Example (Randy). It was challenging to fit all this material into 4 hours, and the feedback from the 13 surveys was very positive.

NEW ASSIGNMENTS

1. Balloting

John to establish Balloting Pool, and update all comments as draft 15 and send for Balloting by early May, with the following process:

Open for Ballot 5/06
Close Ballot 6/06
JDR compile comments by 6/06

2. Tutorial for Seattle:

John will propose to B0 that we provide this Tutorial at next year's meeting in Seattle. In reading the comments and from his own evaluation, Hanna recommended some improvements to the Tutorial: Walt to add more figures showing the construction, and Steve to streamline the slides that are not referenced. Other comments were: provide a handout of the slides and flowchart, provide a copy of the draft, and keep it at 4 hours length. John will send D14 to all attendees by 4/21/06. Steve Shelton will provide John a CD of the presentation.

3. Future improvements to 525:

- Large Station Example – Hanna to lead with Rad and previous Small Example team
- Expand Fiberoptic Clause – Walt to lead with application info from R. Steve Brown
- Expand Cable Construction information – Walt to lead. Possibly add a Table
- Separate the Control and Instrumentation shielding practices – Shashi?
- Add Trenching aspects – John to lead with R. Steve Brown, Dave K., Deb, Boris, and Ken
- Add Wire Termination aspects for Control and Power (< 1kV) – Steve Brown (Memphis) to lead with Hanna
- Fire Stops
- Separation for ISO reliability rules

4. Transaction Paper

Boris, Shashi, Hanna and Walt will compose a Paper that summarizes and highlights this new, updated version of 525. They will include the flowchart, and publish it in IEEE Transactions within the next year in order to better publicize this Guideline across our industry.

OTHER

1. Michael Pons of Synertech provided a good presentation on trench systems, including load rating comparisons across the industry, installation details, and typical constructions. There were many questions on design implications—slopes, drainage, animal abatement, temperature, and Industry specs and tests.
2. There was further discussion of proper terminations. Send any additional thoughts or practices to Steve Brown (Memphis).
3. Ken Aldridge, Rad Barac and Dave Kelley requested membership, and accepted working assignments.

FUTURE MEETINGS

The next meeting will likely be in Nashville in October or November 2006, coupled with the D0 technical meetings.

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