

**Chair:** Nenad Uzelac   **Vice Chair:** Francois Soulard,   **Secretary:** Frank DeCesaro,   **Webmaster:** Mark Feltis

## Meeting Minutes

### 1. Call to order and introduction:

- Meeting called to order at 1:35 PM by Christian. Attendees introduced themselves along with company affiliations.
- A minute of silence was held in memory of task force member Tim Taylor who passed away since the last meeting.

### 2. Roster Check:

- Roster changes were discussed by Christian.

20 members, 1 corresponding, 10 guests registered on the attendance sheet. 1 excused member and 7 absent. 2 new members (Paul Found and Andy Seccombe). 2 guest requested membership in the working group (Jonathan Deverick and David Dart)

### 3. Previous Meeting Minutes

- Minutes from the last meeting were presented and summarized by Christian.
  - Jonathon Deverick Stated he was at the last meeting as a guest. Minutes should reflect this.
  - Moved to approve Jeff Mizner, seconded by Francois Soulard.

### 4. Project Status & Timeline

- On schedule for finalizing the report in 2015.
  - a. Fall 2012 – Team is put together.
  - b. Fall 2012 to Fall 2013 – Knowledge Gaps
  - c. Fall 2012 to Fall 2014 – Contributions
  - d. Spring 2012 to Fall 2014 – Draft reports
  - e. Spring 2014 to Spring 2015 – Comments

### 5. Meeting Highlights

- Discussed our function
  - Technical Report to be published as IEEE Xplore
  - Recommend to RODE how to proceed.
  - Expect to be completed by end of 2015. We are in the phase of contributions continuing to the chapters. Most chapter leads have uploaded their chapters and we will review today.

- Reviewed our overall scope of work.
- Slight change to Chapters from before. We had 10 now we are 9.
- Chapter Presentations:
  - Chapter 1 Overview – Mark Feltis
    - Environment outside substation can be harsher with such things as items such as salt from road etc.
    - Question on whether Std 1050-2004 needs to be kept in the document. Francois Soulard will check and get back. Francois stated that the standard title and number do not need to be in the definition section. Rest of the document but not in the definition section.
  - Chapter 2 – Environmental Factors – Christian Heinrich
    - Outline has not changed since last meeting.
    - Christian asked for volunteers, from users particularly, to help with the portions of the topics in the chapter that are not completed yet. Francois Soulard is the only one who has volunteered.
    - Francois will provide information to Christian about the type of field tests and information his utility has.
    - Christian feels the lightning and grounding issue go to chapter 4 that it does not fit here. Francois Soulard agreed to take this on in Chapter 4.
    - Impact of environmental chambers on electronics such as lightning/surges/ground loops may not be part of chapter 2. What about moving it?
    - Chris Ambrose feels that lightning, soil, water level, all affect grounding and it does belong in the chapter. Christian agreed it should stay in this chapter.
    - Clause 7 design/type tests. Christian wonders if this should stay in the document at this part. There are 13 pages already. The document may become too massive.
    - We think the document as a guide and therefore may not need to cover the type tests.
    - Tim Royster question. Are we going to reference design tests that influence other sections in those areas? It was difficult as a user to determine what type of tests you should be doing for controls. The value drops if you don't reference different tests for various concerns discussed. Can possibly tests be listed in the bibliography?
    - Recommendation is to list documents, test standards, etc related to controls in the bibliography. Does not infer that these are all things that you should be doing. It is up to end user which is applicable for their case.
  - Chapter 3 Mechanical Factors – Antone Bonner
    - Provided chapter info to Christian via thumb drive.
    - Antone provided a summary discussion of his material.
    - They are looking for experience from users.

- Chapter is about 30% completed.
- Question presented is that gear may not need to pass the criteria we are specifying for the controls. How do we handle this?
- Christian stated that our scope limits it to control, not gear.
- Chapter 4 – Electrical Factors – Francois Soulard
  - Francois made a one-slide document from his laptop.
    - Christian should have this slide on his pc for notes later.
  - Status: He has followed the schedule as provided to him.
- Chapter 5 – Human factors – Ed Jankowich
  - Figures have been added since the spring meeting.
  - Two definitions are now in the document as requested at spring meeting.
  - What is meant by end of life? Life expectancy of the control. Average life expectancy of the product, not how long it will be manufactured parts availability. What influences it?
    - Christian thinks this should be at a higher level in the document. It is an overall item that may not stick with any of these sections.
    - Ed Jankowich will try to elevate this for other areas by next meeting.
    - Note to all: Use the website to post your comments so all members can benefit from them.
- Chapter 6 – Hardware interface considerations and testing – Antone Bonner
  - On specific transformer versus a network transformer that feeds a customer the utilities depend if there is communications in the control. If not communication they tend to use a network transformer. That way when the customer reports power outage they know the control is also down.
  - Are controls that are passively powered covered? Such as from CT's.
  - Are batteries and charging covered? No, they have not since it is inside of the cabinet. Francois Soulard made comments about batteries. Tim Roster will put it into the safety section.
  - What about surge protection? Several chapters could possibly deal with this. There are comments in this section on surge arrester placement.
    - Comment made to put the power cable along the pole and keep it about 8 inches away. Others have heard to keep them far apart. Keeping it far enough away will eliminate the influence.
  - The tests listed in his document are planned to be related to what test deals with which condition.
  - Rodent nibbling should be discussed especially if there are 120 V cables in a bundle. You get water ingress that can go to the socket and accumulates and then makes more damage than if it were low voltage signals.
- Chapter 7 – Firmware / Software Considerations – Bill Glennan
  - Do they look into age of pc software based applications? Windows 95 to Windows 8. What gets supported?
    - Nothing has been touched on interaction with PC software and the control.

- Discussion of firmware change and its impact on type tests should be discussed.
  - Chapter 8 – System Considerations and Testing – Paul Found
    - Asked question regarding single point grounding.
    - Can group give examples of systems with motors?
      - Motor driven actuators
      - Motor operated Pole, vault, or pad mounted equipment.
        - Motor circuits can be relatively long.
  - Chapter 9 – Other Considerations – Chris Ambrose
    - They may need help with documentation. Looking for a utility person.
- Discussion held that the document needs to be limited not to have extremely large amount of pages (100-150).

**6. Next Steps:**

- Need to complete the chapters. Leads responsible for it.
- Complete first draft of report. Nenad Uzelac is responsible for this.
- All documents on the web page. Some people may have issues with getting on web page. Go to the work space and then go to the controls link.
- If you don't have access then contact Nenad to get setup.

**7. New Business:**

- No new business

**8. Next meeting:**

- Spring 2014: May 6, 2014 - Disney Contemporary Hotel, Orlando, FL USA

**9. Meeting adjourned at 5.30PM**

## Member Attendance

| Role             | Last Name  | First Name | Company              | 09/17/13 |
|------------------|------------|------------|----------------------|----------|
| Chair            | Uzelac     | Nenad      | G&W Electric         | Excused  |
| Vice chair, Lead | Soulard    | Francois   | Hydro Quebec         | X        |
| Member           | Ambrose    | Chris      | Federal Pacific      | X        |
| Corresponding    | Befus      | Craig      | Xcel Energy          | absent   |
| Section lead     | Bonner     | Antone     | Cooper power systems | X        |
| Member           | Decesaro   | Frank      | Copper power systems | X        |
| Section Lead     | Feltis     | Mark       | SEL                  | X        |
| Member           | Fitchett   | Doug       | AEP                  | absent   |
| Member           | Gieger     | Jeff       | T&B                  | X        |
| Section lead     | Glennon    | Bill       | SEL                  | X        |
| Member           | Glinkowski | Mietek     | ABB                  | absent   |
| Section Lead     | Found      | Paul       | BC Hydro             | X        |
| Member           | LaBianco   | Michael    | G&W Electric         | X        |
| Member           | Lambert    | Frank      | Neetrac              | absent   |

|               |           |           |                       |        |
|---------------|-----------|-----------|-----------------------|--------|
| Member        | Lee       | Ken       | T&B                   | X      |
| Member        | Lettow    | Chris     | S&C                   | X      |
| Section lead  | Heinrich  | Christian | Siemens               | X      |
| Member        | Hirz      | Harry     | T&B                   | absent |
| Section lead  | Jankowich | Edward M  | T&B                   | X      |
| Member        | Martin    | Don       | G&W Electric          | X      |
| Member        | Mizener   | Jeff      | Siemens Industry      | X      |
| Member        | Puranik   | Sachin    | Hubbell Power Systems | absent |
| Member        | Putman    | Larry     | Powell                | X      |
| Member        | Royster   | Timothy   | Dominion              | X      |
| Member        | Seccombe  | Andy      | Schneider             | X      |
| Member        | Swank     | Jim       | Cooper                | X      |
| Corresponding | Swisher   | Andrew    | SCE                   | X      |
| Member        | Tobin     | Tom       | S&C                   | absent |
| Member        | Walter    | Bill      | We-energies           | X      |
|               |           |           |                       |        |
| Guest         | Adigwu    | John Paul | SCE                   | X      |
| Guest         | Reid      | Herzog    | OG&E                  | X      |
| Guest         | Behl      | Bob       | ABB                   | X      |
| Guest         | Dart      | David     | Noja Power            | X      |
| Guest         | Jacob     | Joseph    | Toshiba               | X      |
| Guest         | Dullni    | Edgar     | ABB                   | X      |
|               |           |           |                       |        |

Submitted by:

Nenad Uzelac

Controls for Distribution Equipment Task Force Chair

October 4-2013