2017-05-24_5th_TimeSync_Subgroup_Meeting

Participants:

Name	Company
Roman Graf	ABB
Johannes Schilling	Belden
Paul Myrda	Epri
Juan Carlos Billalabeitia	GE
Ya-Shian	NIST
Allen Goldstein	NIST
DJ Anand	NIST
Bernhard Baumgartner	OMICRON Lab
Roy Lei Zhang	Siemens
Jean-Sebastien	Vizimax

Housekeeping:
- All E-mail communication is handles via the TimeSync Subgroup Google group.
  To send an E-mail to all group members use: iop-timesync-sg@googlegroups.com

- To enlist for the subgroup either:
  use this link: https://groups.google.com/forum/?hl=en#!forum/iop-timesync-sg and click
  Apply for membership or send an E-mail to bernhard.baumgartner@omicron-lab.com

- All data is stored on the **IOP Sharepoint** server in this directory (and subdirectories)
  TimeSync_Subgroup

- Meeting reports: can be found here Meeting reports

Mission:
- Allow IEC/IEEE 61850-9-3 and IEEE C37.238-2017 focused interoperability testing.
- Offer test bed for people that detect problems in the integrated tests and want to dig into the issue.

Discussed Topics:

- **2017 Test cases:**
  2015 Test cases for IEC/IEEE 61850-9-3 were reviewed and unnecessary tests deleted

  - A new draft is generated after each subgroup meeting. If you want to add comments or modify the draft check out the current file and apply your changes. (Make sure that track changes is switched on).

    Current Draft:
    http://iec61850.ucaiug.org/2017IOP-NOrleans/IOP%
    20Documents/TimeSync_Subgroup/2017_Test_Cases/IOP%20PTP%20Test%20Cases%

20for%20IEC_IEEE_61850-9-3_Draft_2.docx

Additional Test cases to be added:

○ **Bernhard**: Default settings only - test witch changing domain
  ▪ default domain 0 only
  ▪ recommended domain 93 only - start with 93
  ▪ mixed domains by adding or changing equipment to domain 0

○ **Jean-Sebastien:** Insert end2end device
  Some devices might be impacted by the end to end traffic - GM end2end and one client end2end

○ **Bernhard: BMCA Idea:** Two Masters fed with different GPS Signals - how will this affect the BMCA
  configure long cable length to simulate static offset at one GM
  400 ns.

○ Power Down GM
  Power Down OC
  Power Down infrastructure
  Clause 7.1
  Powering up grandmasters with and without synchronization signal.

○ Isolated Testing IED restart [AG1]
  _____

  Testing IED restart / power up of a GOOSE subscriber[AG1]
  Restart of all components (GM, TC, BC and OC) should be tested
  How is impact on the other devices.

○ **Jean-Sebastian:** Test on traceable flags

☐ What are the network failure modes in this case?
  ☐ HSR & PRP - single point failure
  ☐ **Amin** to provide short E-mail to Bernhard
  ☐ **Gustavo** will also provide input RSTP & PRP

○ Monitoring:
  Commercial test device like (**Calnex**) - measuring timing accuracy, Allen plans to bring a Calnex (to be confirmed)

• **Equipment list:**
  Every participant in the time sync subgroup should enter his equipment into the equipment list that can be found on the server:
  http://iec61850.ucaiug.org/2017IOP-NOrleans/IOP%20Documents/TimeSync_Subgroup/1588_Equipment_list.xlsx

○ PICS for all 9-3 equipment that will be brought to the IOP should be submitted in addition to entering them into the Equipment list.

- **Time Reference**
  - GPS Security (Spoofing and Jamming) should be evaluated.
  - GLONASS should be tested as well if possible. --> Jean Sebastian might be able to borrow a simulator
  - In-Room transmission of GPS Signal from Simulator would be better than distributing an L-Band Signal via cables (problems for some devices) --> Bernhard to check --> **GPS transmission not possible. GPS repeating requires a license.**
  - Might be interested to have a re-broadcast of live GPS signal for the integrated testing.
    - ☐ **PAUL:** Talk to Herb about **experimental license**
  - ☑ ⭐ Check equipment from OMICRON if available or not - available - **PAUL:** we need to know the **distances**

- **Transparent Clock Manufacturers:**
  - ☑ We need to get the following companies on board:
    Siemens / Rugged Com - have one-step TC (will bring one-step TC)
  - **PAUL:** Cisco
    Belden
  - **PAUL:** Arbiter
    GE Switches
    Moxa **(Bernhard)**

- Meinberg (NIST)

Questions:
- ❓☐ Does someone have a GLONASS Simulator for testing?
- ❓☑ Does someone have a second GPS Simulator? (confirmed by NIST - NIST will check if they can do GLONASS)
- ❓☐ Who can help to contact the switch manufacturers?

To dos:
- ☐ **EVERYBODY: Please enter the equipment you plan to bring into the Spreadsheet available on the Sharepoint**
- ☐ **EVERYBODY: Review current 9-3 Test Case Draft and provide comments.**
- ☑ **EVERYBODY: Review the test cases mentioned at the end of the meeting report to see if any test cases for the TimeSync Subgroup can be derived.**
- ☐ Jean Sebastian: Check if GPS/GLONASS simulator is available - check if you can borrow one or get specialists to come.
- ☑ Bernhard: add 100-FX and 1000-FX column to equipment list
- ☐ Bernhard: Prepare proposal for PICS Template

Next meeting:

Wednesday June 7th
16:15 CEST - invitation will follow