# IEC 61850 2019 IOP Meeting Minutes (2019-03-19)

## Agenda

* WebSite – under construction (<http://iec61850.ucaiug.org/2019IOP-Charlotte/default.aspx>)  
    
  Currently it is not restricted. So not fully functional. People need to send me their UCAIug IDs.  
    
  If you don’t have a UCAID, go to <http://www.ucaiug.org/default.aspx> and Register for an ID.

Discussion of changing site technology – Going to continue to use Sharepoint.

* Cost discussion
  + Received EPRI costs 2019-03-18. Working on putting costs together.
  + One or two people for participant fees?
* Testing Areas and assignments of lead responsibilities (National Grid to Provide Test Cases)
  + PTP issues
    - Configuration selection not changing clock domain. – use IEC 61850-9-3 domain for integrated application.
    - Transparent clocks not putting information into the correct TLV- National to provide a write-up for group review.
    - Others.
* Need to start test case review
  + Integrated Application – looking for volunteers: Dustin, Al (national grid), Herb, Joel
  + Security – looking for volunteers. Add: Mark from Copadata, GPM .
* EDF/Hydro-Quebec OpenSource SCL Validation Tool to be added as validation checker.
  + Add as forth validation tool.
  + Add some discussion of validation tools in Boot Camp.
* Next Meeting – April 2nd same time slot US. Will specify UTC.

### Other information

* EPRI Site “Export” Procedure
* Heads-up: CIM and OpenFMB will be having IOPs at the same time in a different building.

### Dates

* September 21-22 Training Boot Camp
* September 23-27 Actual Testing
* September 20-22 Setup
* Charlotte, EPRI facility
* Tentative date for payment to participate as a vendor: mid-May/June as the drop dead.  
  Tentative date for payment for witnesses/individuals: mid-July.  
    
  Cost goes up after deadline dates.

### Previous Issues

Need to address issues encountered with Last IOP

* ICD SCL file validity  
    
  Testing to be performed mid-June.  
  Test import into SCTs.  
  Follow-up after test being run to review results and determine ETA for corrections.  
    
  Submitted ICDs shall have a declaration of what the device is intended to provide in the integrated application.  
    
  Keep everything open as much as possible. Have a sharepoint directory for testing of ICDs. – Herb to get procedure/directory set up.
* System Engineering  
    
  Address assignments prior to – Lets discuss with tool vendors. IP Addresses for sure. R-GOOSE/R-SV need assignments. VLANs are part of the overall system design.

Preliminary SCD targeted for mid-August. Without IP and GOOSE/SV address assignment.  
 Paul and Christoph.

Final SCD Expect to be complete September 21st.

* General marketing communication and expectation settings of witnesses.
  + Appoint a Witness Coordinator – Joel Greene, Herb Falk, Al and Mark Thompson (National Grid).
* Define scope of the IOP
* Prioritization of testing
* Network engineering and deployment  
    
  Network setup for the integrated application: September 20th.
* Allocation of Control Blocks/Subscriptions for Reports and DataSet Content design needs to be addressed.
  + Signal Mappings
  + SSD file
* Cyber-Security organization
  + Ralph, Scott, Herb, Joel
* Resource limitation by vendors – number of participants and devices.
  + Lower cost may equate to more participants.
  + Suggestion would be to include 2 people for participant fee.
* Observer usage and training
* Test case details
* Visa letters – Herb
* Reach out to local universities – UNC Charlotte, UNC, Freedom Center, Duke, NC State, Clemson

### Some thoughts for Testing:

* Should reuse the SLD and application that was attempted in 2017- agreed
  + 2 substations
  + 1 control center
  + Morph integrated application to make use of BAPs under development.
* Continuing from 2017 testing:
  + Cyber Security (MMS, GOOSE, SV, R-GOOSE, R-SV Security, firewalls, RBAC, ACL, Event Logging) testing
  + SCL Engineering
  + Integrated Application
* New Areas of testing
  + Had proposal from Hydro Quebec about DA/Telecom?
  + CIM/61850 Harmonization
  + R-GOOSE/R-SV as part of integrated application – might need a separate area
  + PTP as part of integrated application
  + 90-4 testing of SCL for communication topology – switch and router configuration?  
    Need to check that SCTs support it.
  + SED exchange between SCT.
  + 7-420 Testing (DER)
* Areas we don’t need separate testing areas
  + R-GOOSE/R-SV - still might need a separate area depending upon number of participants and network design.
  + PTP – Need to discuss with ComEd and requesting utility.
* Areas for Separate Testing
  + SED Exchanges – Christoph to lead
  + SCL Validation- Bruce to lead
  + Security (clustered but as part of the Integrated App).
  + Leap Second Testing (maybe) – all participants to evaluate if they desire to test their devices and applications. If interested, send Herb and email.

### Boot Camp:

* Targeted to witnesses of the IOP
* Major topics
  + Introduction to IEC 61850 – Christoph (lead)
  + Utility Business Case – (e.g. ConED, SCE, StateGrid, AEP, RTE)
  + SCL Engineering (of the IOP) – Sterin (lead)- to coordinate with Helinks (2.5 hours)
    - Concepts
    - Show re-arrangement of current engineering processes
    - Small substation design hands-on for people that bring laptops (1 hour)
    - OSMOSE project feedback (lower priority)
  + Network design – Herb (lead)
    - Based upon Integrated Application design
    - Debugging PRP and HSR
  + Integrated Application Introduction
  + Maintenance and Testing Isolation – Jun (lead)
    - Concepts
    - Linkage of Concepts in the standard to the demo
    - Demo
  + Security – Scott (lead) – Steve Kunsman to give.
  + CIM/IEC 61850 Harmonization – Herb (lead)
  + Overview of recent changes (standards update) – Christoph to give
    - 61869-9 instead of 9-2LE (legacy) – Karen Leggett
    - New Tissue Process
  + Futures:
    - System Management – Aurelie (lead)
  + UCA Conformance Testing Update – Herb
    - End-of-Life Edition 1 Conformance Testing
    - ITCA progress – certification bodies
    - Status of conformance test development
* Presenters (planning board consensus 7/7):
  + Utility – UCA Members (1)
  + Utility – non-UCA Members (2)
  + Vendors/Consultants – UCA Members (3)
  + Vendors/Consultants – non-UCA members (5)
  + Other organization – UCA Members (4)
  + Other organization – non-UCA Members (4)
  + Regulatory Entities – (e.g. NERC) (1)