

## 2019 CIM IOP Kick-Off

August 5, 2019

### Attendees:

Frank Wilhoit, Martin Miller, Karen Robinson, Ralph Mackiewicz, Herb Falk, Tom McDermott, Feng, Gerald Grey, Daniel Lowe, Margaret Goodrich

### Agenda Items:

- 61968 - Testing for Messages
- 61970 - Testing for Model exchange - CDPSM and CPSM
- UCA Testing and certification - ITCA and accreditation body
  - Quality audits required by a governing body (conformance/compliance)
  - UCA to continue their responsibilities for the technical audit reviews (interoperability)
- EPRI hosting this event and providing facilities
  - Head count for participants two weeks prior to event (9/9/19)
- Submission of Models so they can be tested - 4 models for the CPSM (CIM v. 16) and 2 models for the CDPSM (CIM v 17 - if available)
  - ABB Model
  - Siemens Model
  - GE Model
  - Alstom Model
- Review test procedures
  - Discuss and issues with the model, standard or any issues there were in the past
  - UCA will publish a report after testing is complete
- Goal of testing:
  - Find problems in the standard
  - Find problems in implementation
- Participants will receive, on UCA Participation Certificate for CIM IOP testing (based on the test in which you participated)
- Deadline for sign-up September 9, 2019 for all participants

### Action Items:

1. **TBD** - Willing to test CGMES if we have a minimum of two vendors participating.
  - a. Will need an RDF schema
  - b. Will need modelsWill not participate – Olivier (ENTSOE)
  - Need to get planning people involved
2. **MG Action Item** - determine which version of CIM is the latest model
  - a. CIM 17 v23 - check w/Eric Stephan – MM – Confirmed – but waiting for IEC to make this a standard. – Complete (will use if testing CDPSM)
  - b. CIM 16 v34 - check w/Eric Stephan – MM - Confirmed
3. **MG Action Item** - contact Eric Lambert and confirm participation in CDPSM testing – message sent to Eric Lambert
4. **Sutton Action Item** - work with Tony to get CIM IOP landing pages created

- a. 2019 CIM IOP attendee's registration landing page - Completed
- b. Test procedures landing page - Completed
- c. Landing page for all IOP documents – will be determining shortly
  - i. Schemas
  - ii. Models
  - iii. UML
- 5. **MG Action Item** - post latest CIM 16 and 17 versions on the CIM IOP test site
  - a. UML on the CIM IOP test site - TBD
- 6. **Tom McDermott Action Item** - check with Eaton to see if they are interested in participating
- 7. **TBD** - 61968 for DER (part 5) messaging (Jerry Gray) - PNNL wants to test this
  - a. Part 6 - TBD (EPRI has identified companies to test this?)
  - b. Part 9 - it appears part 9 will not be participating in this test

## Meeting Minutes

August 12, 2019

Attendees: Avnaesh, Margaret Goodrich, Feng Chen, Chris Kardos, Frank Wilhoit, Gerald Grey, Herb Falk, Karen Robinson, Daniel Lowe, Martin Miller, Sutton Sutherin, Ralph Mackiewicz, Rob Ward

**AI – Sutton** – Schedule a call on Wednesday's 9-10am CST for the 61968 – Message exchange

- Include EPRI and PNNL
- Part 5
- Send out link for CIM IOP landing page for Document (folder)
  - CPSM
  - CDPSM
  - DER – Part 5
- Send out link for CIM IOP Models (folder)
  - Include Models
  - XSD's – 3<sup>rd</sup> edition

**AI – Margaret** (CIM 16 models)

- Get smaller models from Alstom and Siemens – CIM 16
  - GE Alstom – 60 bus model – will follow-up with Avnaesh
- Ask AEP for a 60 bus redacted model??
- ERCOT?
- TBD - SISCO – may only be interested in testing the full import ICCP data Transfer

**AI – Gerald Grey** – to send Word doc for part 5 – DER to Margaret and Sutton

### **61970 - CPSM**

Testing for the Model Exchanges – 61970:

- 1. Full Model Exchange
  - a. Solution test

- b. Solution exchange
  - c. Full model export
- 2. Incremental Exchange
  - a. Solution Test
  - b. Solution Exchange
  - c. Incremental Exchange Export
- 3. Model Authority Set
  - a. Model authority Exchange

Which tools will be used for the model validation and schema creation?

- 1. CIMtool
- 2. CIMspy

### **61970 - CDPSM – Model**

We will need to get models to do testing

- 1. Eaton
- 2. PNNL

## Meeting Minutes

**8-19-2019**

61970 – CPSM – Model

**AI – Sutton/Margaret** – Determine which IEC 61970-452 edition 3 document is most current published version, this will be used as the standard for testing.

- The standards document the is the most current published version for IEC 61970-452 that is being used requires the following: RDFS and UML
- In the edition published from IEC on 1-19-2017 a paragraph was added by IEC with a notable change – “voltage levels cannot be zero”

**AI – Participants** – Anyone wanting to test ENTSO-e has sent 61970-456 (CGMES)? The latest version [CGMES 2.4.15/IEC TS 61970-600-1/2:2017](#) was sent to us with a corresponding UML and RDFS (older version) with some read me files

**AI – Feng** (GE) to provide a 252 bus model (CIM v16)

**AI – Alstom** to provide a 60 bus model (CIM v16)

## Meeting Minutes

September 16, 2019

61970 – CPSM – Model

Attendees: Sam Phillipson, Yang Feng, Margaret Goodrich, Sutton Sutherin, Feng Chen, Martin Miller,

Agenda:

1. Review who will be testing
2. Review the benefits of testing
3. Discuss Logistics for testing
  - Determine a date for testing
  - Discuss Recruiting utility witnesses for this test
  - Determine who is supplying which model
4. Discuss which tests will be run at the event – begin working on a test plan

#### CIM IOP Testing (61970 – CPSM and CDPSM)

- New Date for Testing is week of March 24-26 (9-5)
- Meeting sent out to WG 13 &14 for IOP testing (we need more than 2 participants for IOP CIM testing)
  - Looking to push 61970 – 452 and part 13 out to Q1 2020 March 24-26)
    - Tell David Bogen we are changing the date.
  - Companies looking to test:
    - Siemens PTI
    - PNNL
    - GE
    - Alstom
    - OSI - TBD
    - ETAP – TBD
    - Eaton
    - ABB – contact for participation
- Going to utilities to find participants
  - ~~Seada?~~
  - ICCP (457)?
  - 61970- 453?
  - 61970 – 452 (D.L.)
  - Part 13 – CDPSM (needs to include GIS models)
  - CGMES – (456) – CIM 17
  - Models need to be fixed prior to testing (in order to be compliant to the standard)
  - Use these models going forward.
    - Model Authority and Boundary sets
- Need to identify CIM17 models for:
  - Models will need to be updated to CIM17
  - 23 bus model (PTI)
  - 40 bus (ABB) Follow-up to see if this model can be used???
    - This model has 2 model authority sets and 1 boundary set
  - 60 bus
  - 252 bus (GE)
  - Get ENTSO-E models from EU and update – TBD

- Small grid node/breaker model (Follow-up to see if we can get this model)
- Date: ~~March 24-26 (reserved from 3/23-3/27)~~
  - Several dates proposed (1<sup>st</sup> choice - March 30, 2<sup>nd</sup> choice – March 9, 3<sup>rd</sup> choice – March 2)
- Location: ONCOR - downtown
- Need 8 – 6 ft tables – in a U shape – 3 chairs per table (with testers back to the wall)
- Need about 2-3' between tables
- 2 tables in front of room
- Location for storage -
- UCA to bring laptop
- What other hardware is required?

## Meeting Minutes

October 21, 2019

Confirmed: CIM IOP 2020 (61968 and 61970)

Where: Dallas, TX

Host: ONCOR

When: week of March 30, 2019 – Days are TBD

Attendees:

Gary Ockwell (advance control systems), Feng Chen, Yang Feng, Martin Miller, Herb Falk, Sutton Sutherin, Tom McDermott

CIM17 – CDPSM and CPSM

Action Items:

1. Create Test plan for CPSM
  - a. need profiles created for CIM17
  - b. 61970 – 301 – currently out for ballot
  - c. Include CGMES as part of the test plan and profiles
2. Create Test plan for CDPSM
  - a. Use current draft
  - b. Utilize the existing CIM 17 profiles
3. Network Infrastructure needed
  - a. SharePoint for file exchange
  - b. Participants should be responsible for bringing whatever is required to hook up to on-site wifi
  - c. Wifi availability in room – Sutton to confirm

4. Premise of test plans:
  - a. Round trip of files – import/export to look if enough information is maintained
  - b. Solve Powerflow
  - c. No graphics profile exchange
  - d. No dynamics
  - e. CDPSM: – test Power electronics connection? (Participants to evaluate if they want to test this)
  - f. DER? (participants to evaluate if they want to test this)
  - g. No ICCP Testing
  - h. Unbalanced testing
  - i. Chuck and Margaret – check wire spacing info – updates made to the UML for CIM17
5. Develop initial instance files and incremental files for the profiles

Meeting next Monday, October 28, 2019 at 10 am EST

## Meeting Minutes

October 28, 2019

Confirmed: CIM IOP 2020 (61968 and 61970)

Where: Dallas, TX

Host: ONCOR

When: March 30, 2020 - April 2, 2020

Chuck DuBose will be test director for 61968-13 and 61970 testing

- Participants also wanted to know if SCADA and ICCP (457?) will be included as part of testing
  - o If so, who will be participating in the SCADA and ICCP testing?

Herb Falk will be test director for 61968-5

- Participants wanted to know if part 4, 6 and 9 will be included in testing
  - o If so, who will be participating in testing those parts?

## Meeting Minutes

November 11, 2019

Attendees: Yang Feng, Gary Ockwell, Ralph Mackiewicz, Mike Stanislawski, Tom McDermott, Chuck DuBose

61970-301 UML link sent out to the group of people on this call

The new group email for this testing IOP is: [2019-IOP-attendees@cimug.org](mailto:2019-IOP-attendees@cimug.org)

<https://cimug.ucaiug.org/WG13/Forms/AllItems.aspx?RootFolder=%2FWG13%2FPart%20301%20CIM%20Base%20%5BKendall%20Demaree%2C%20Kurt%20Hunter%2C%20Lars%20Dola%20Osterlund%5D&FolderCTID=0x012000BAC29B02F4E39F4BAB80847D74C7EF8E&View=%7B3C4BDE6F%2D7A3F%2D474E%2D8F96%2D33CCE2A72999%7D>

Test mutual coupling – as determined by the testing group

CDPSM (61968-13) –CIM v 16 - changes need to be incorporated when they are available – meetings are next month.

CPSM (61970-301, 452, 456) CIM v17

ICCP testing -

AI – Chuck – need to look at Asset info section (61970-100)

AI – Chuck – add in tests for the mutual coupling

AI – Chuck – merge documentation for CIM 17 v35 (61970-100) – UML

AI – Tom to send 3 updates to the 61970-100 UML that need to be updated

AI – Chuck to produce a list of action items that can be referenced to make sure all testing activities are accounted for.

## Meeting Minutes

November 18, 2019

Meeting Attendees: Gary Ockwell, Gerald Gray, Yang Feng, Tom McDermott, Chuck DuBose, Ralph Mackiewicz, Xihui Yan, Sutton Sutherin

- 301 profile has not yet been completed but it is being worked on and will be submitted shortly
  - After the 301 is submitted, the 452 will be updated.
- Cim v 16 (CDPSM) is posted to the old site and will be transferred to the new site by Friday, November 22, 2019.
- Example data files – need help working on this from this group
- Test Plan – to be adapted for CPSM and CDPSM
  - Determine Scope of testing with the Monday testing group
  -

AI – Siemens (Yang Feng) will work on these files as exports from P/SSE  
AI – Chuck – will follow-up with Kurt to identify the change log of the CIM 16 to CIM 17 UML – **COMPLETED and Uploaded 11-22-2019**  
AI – Sutton will post this on the SharePoint Site  
AI – Chuck – Test Plans (2 – CPSM and CDPSM) will make any required changes  
AI – Sutton – Contact Ralph after the sharepoint page is up and tested (will post on linkedin)  
AI – Sutton – post a message about the IOP testing to all users  
AI – Sutton – post the latest edition of the 61970 – 452 ed. 4 in word doc format – **Completed and uploaded 11-22-2019**  
AI – Chuck – UML for CIM 17 – **Completed and uploaded 11-22-2019**

## Meeting Minutes

December 2, 2019

Meeting Attendees:

Yang Feng, Chris Kardos, Chuck DuBose, Martin E. Miller, Tom McDermott

Take a look at the changes that will be posted by Chuck DuBose on the SharePoint Site for your review and feedback.

Will be testing CIM 17 for 61970

AI – Sutton to send Chris Kardos an updated meeting invite (make sure Chris is on this CIM IOP 2020 distribution list) - **complete**

AI – Sutton Send Yang Feng my contact information to create an invoice for Siemens - **Complete**

AI – Sutton contact Tom Mc Dermott re: contact person in Eaton - **Complete**

AI – Requesting a RDF (example file) for 61968-13

AI – Siemens is working on the RDF example file for 61970 (CIM 17)

AI – Chuck will contact Scott to get a copy of the comments for 61968-13 – **completed and loaded on site**

- get comments posted to SharePoint Site as quickly as they are available for 61968-13\_edition 2 this is based on:  
iec61970cim17v24\_iec61968cim13v11\_iec62325cim03v14.eap
- These comments need to be posted on the SharePoint site and most people will want to test CIM 100
- Post the link Tom McDermott sent on 12-2-2019 (see link below)  
<https://github.com/GRIDAPPSD/powergrid-models/tree/develop>

AI – Sutton – get copy of test scripts used at last IOP for 61970 and 61968-13

- Need this in word document format to make changes for the next IOP