IEEE PC37.86 Working Group fall 2022 conference Minutes
October, 18, 2022

Online
Meeting Minutes Recorded by:
Chair: Jianmin Xue
Vice Chair: Shuai Zhang
Secretary: Jingjing Huang

1. Call to Order

The meeting was called to order at 8:00 pm (UTC+8) by the Working Group Vice Chair, Shuai Zhang.

2. Roll call and Declaration of Affiliation

Non US Attendees present stated their name and affiliation.

US Attendees present did not state their name and affiliation. Reported that there were approximately 20 persons in attendance from Burlington, VT conference.

Attendee details are included with these minutes.

3. Approval of the Agenda

Chair Jianmin Xue presented the agenda PC37.86 WG Agenda for Oct 18 2022.docx

Motion #1

Approve the agenda for [October 18, 2022] meeting as presented in PC37.86 WG Agenda for Oct 18 2022.docx.

Moved: Panke Hou, ABB (China) Limited

Second: Dege Li, State Grid Corporation of China (SGCC)

(Procedural, required ≥ 50%)

Motion passed by voice vote without opposition.

4. Approval of the minutes of last meeting

Chair Jianmin Xue presented the minutes 2_WG Draft Meeting Minutes.docx

Motion #1

Approve the minutes for [April 12, 2022] meeting as presented in 2_WG Draft Meeting Minutes.docx.

Moved: Chao Wang, State Grid Corporation of China (SGCC)

Second: Shuai Zhang, China Southern Power Grid, Ltd.

Third: Liang Guo, State Grid Corporation of China (SGCC)

(Procedural, required ≥ 50%)

Motion passed by voice vote without opposition.

5. **IEEE Patent Policy:** Call for Patents.

The call for patents was issued; none raised.

6. **IEEE Copyright Policy**

The copyright policy was presented. There were no questions or concerns.

7. **IEEE Entity Participation Behavior**

The entity participation behavior was presented. There were no questions or concerns.

8. **Report on the draft framework**

Technical expert Jiefeng Pang introduced the standard draft framework.

9. **Technical discussion**

Some experts have raised some questions about the scope of draft framework, and the timeline of the draft framework.

10. **Future Working Group Meetings**

The next meeting is scheduled for December 2022.

11. **Adjourn**

Adjourn the meeting.

IEEE PC37.86 Working Group fall 2022 conference Minutes

October, 18, 2022

C37.86 WG Attendance Roster

Name (Last, First)	Employer	2022-10-18 Attendance
Xue, Jianmin	Xuji Group Co., Ltd.	Chair - Entity Member
Shuai, Zhang	China Southern Power Grid, Ltd.	Vice-Chair - Entity Member
Jingjing, Huang	Xi'an Jiaotong University	Secretary - Entity Member
Dege, Li,	State Grid Corporation of China (SGCC)	Entity Member
Jihua, Hu	Beijing Sifang Automation Co. Ltd.	Entity Member
Panke, Hou	ABB (China) Limited	Entity Member
Wang, Longtian	Siemens Ltd., China	Entity Member
Wei, Lu	Tianjin University	
Yang, Lifan	Schneider Electric	Entity Member
Edwards, Doug	Siemens	Ex-Officio Member
Flowers, Keith	Siemens	
Beseda, David	S&C Electric Co.	Observer
Bingxin, Wu	Xuji Group Co., Ltd.	
Blake, Randy	Schneider Electric	
Burns, Robert	Eaton	
Bush, Kelsey	ABB Elastimold	Observer
Carne, Clint	Schneider Electric	Observer
Chao, Wang	State Grid Corporation of China (SGCC)	Observer
Chhabra, Mohit	S&C Electric Co.	Observer
Christian, Michael	ABB	Observer
Davies, Stavey	Siemens	
Doroz, Arkadiusz (Erik)	Eaton	
Duo, Qiu	Xuji Group Co., Ltd.	Observer
Gagnon, Hubert	NDB Technologies	Observer
Grahor, Lou	Eaton	
Guo, Zhaoyan	Siemens Ltd., China	Observer
Hardy, Erin	Eaton	
Hawkins, Tom	Siemens	
Heinrich, Christian	Siemens	Observer
Hill, Douglas	S&C Electric Co.	Observer
Hirz, Harry	G&W Electric	Observer

IEEE PC37.86 Working Group fall 2022 conference Minutes

October, 18, 2022

C37.86 WG Attendance Roster

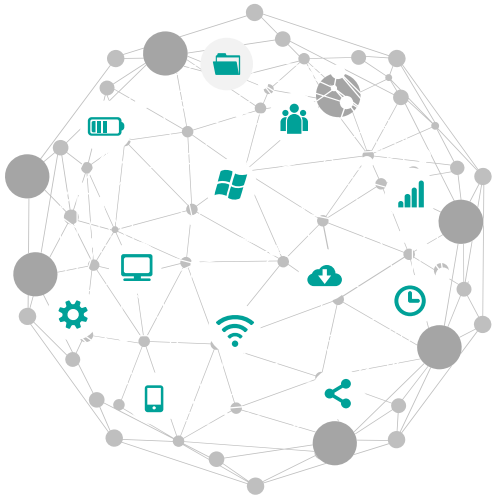
Name (Last, First)	Employer	2022-10-18 Attendance
Hrncir, Dan	Eaton	
Jiefeng, Pang	Xuji Group Co., Ltd.	Observer
Jinsong, He	China Southern Power Grid, Ltd.	Observer
Johnson, Travis	Xcel Energy	Observer
Kaminski, John	Siemens	Observer
Kapitula, John	ABB	Observer
Kelly, John	USBR	
Liang, Guo	State Grid Corporation of China (SGCC)	Observer
Liu, Yang	Xuji Group Co., Ltd.	
Livshitz, Albert	CE Power	
Mizener, Jeff	Siemens	Observer
Pal, Sumitabha	Schneider Electric	Observer
Parks, Owen	ABB	Observer
Santos, Leonel	Schneider Electric	Observer
Santulli, Jen	IEEE SA	Observer
Sauve, Todd	Rockwell Automation	
Sippel, Kevin	Eaton	
Sullivan, Dustin	Hubbell	
Swing, Donnie	Powell Industries	
Thomas, Christo	Schneider Electric	
Trichon, Francois	Schneider Electric	Observer
Trost, Karla	G&W Electric	Observer
Uzelac, Nenad	G&W Electric	Observer
Webb, John	ABB	Observer
Wilkie, Eddie	Eaton	Observer
Xi, Tang	Beijing Sifang Automation Co. Ltd.	Observer
Xuedong, Qiu	ABB (China) Limited	Observer
Yong, Wei	Xuji Group Co., Ltd.	Observer
Zhang, Nuo	Xuji Group Co., Ltd.	
Zhou, Xin	Eaton	Observer

Guide for Internet of Things (IoT) Switchgear Terminals

（52 kV and below）

NOT include 0.4 kV

Xuji Group Co., Ltd. China



- 1、current progress
- 2、working concepts
- 3、Next Step

According to standard schedule, WG have held three internal informal discussion:

July 18,2022
Discussion on framework

Sep 20,2022
Discussion on system structure and functional scope

Oct 14,2022
Discussion about the comments of draft framework

The draft framework of standard is still under discussion, but the preliminary working concepts have been developed.

- Overview
- References
- Definitions
- System framework
- Function scope
- Hardware description
- Software definition
- Performance requirement
- Inspection rule
- Appendix

Scheme

1. Overview

background , purpose , scope

2. References

reference standard

3. Definitions

IoT Switchgear Terminals , Container , Edge Computing

4. System framework

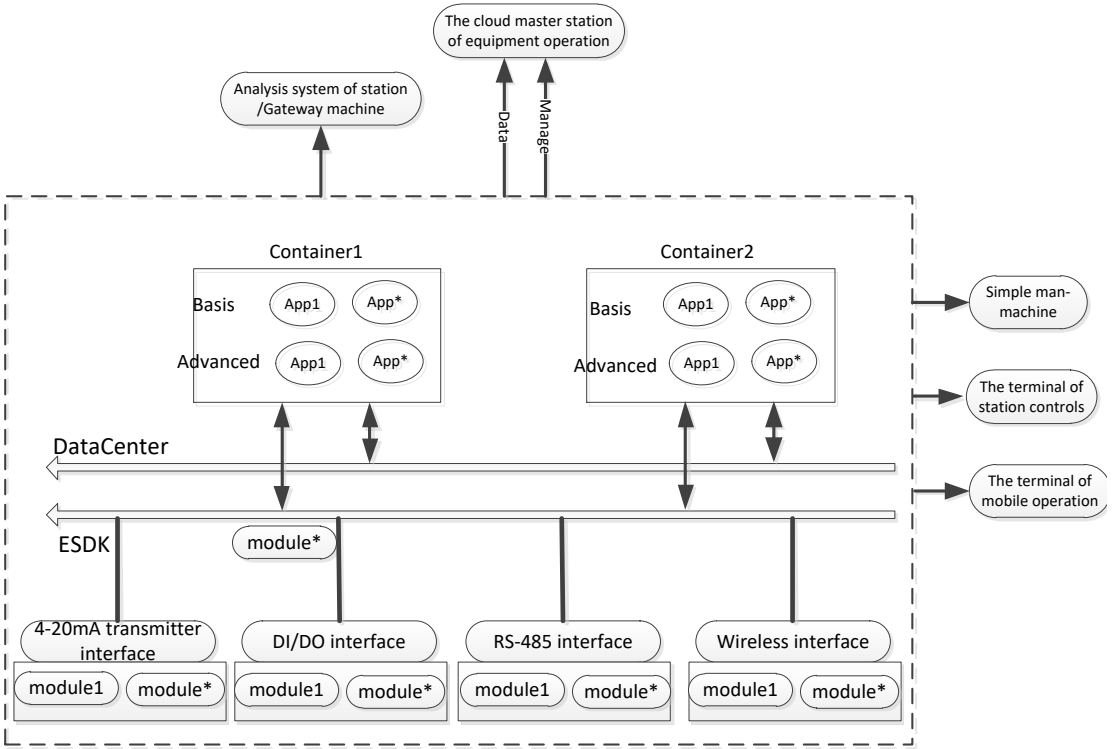
1）New material/principle sensors are used for restraint and guidance.

2）Perceptual information collection is standardized and openness.

3）The sensing data is unique , needn't repeated collection, sharing between App.

4）Hardware module have plug and play capability.

5）Software app, functions could be flexible on demand.



5. Function scope

Data Collection

- Temperature data acquisition
- Air chamber state data collection
- Partial discharge data collection
- Mechanical characteristics data collection
- Electrical gas collection
- Location collection
- Image information collection

Data processing and analysis

- Temperature rise analysis
- Air chamber state analysis
- Insulation state analysis
- Image information analysis

5. Function scope

Comprehensive analysis and forecast of switchgear

- Mechanical characteristics analysis of circuit breaker

Terminal maintenance and upgrade

- Artificial diagnosis and recovery
- Terminal upgrade

Extended application

- Relay protection and control
- Edge Computing
- Distributed collaboration

6. Hardware description

Standardization of interfaces

- Small current transmitter interface
- Input and Output interface
- Serial communication interface
- Wireless sensing interface

Plug and Play

- Unified backplane bus, configuration flexibly
- functions could be flexible on demand，extensible

7. Software definition

Public resource services

- Iot operating system service
- Hardware resource service

App

- Information model of App
- Information model between Apps

Information transfer

- Business channel
- Equipment management

8. Performance requirement

Insulating property, Mechanical property , EMC

9. Inspection rule

Instrumentation , Test requirement

Appendix

Application scenarios and etc

According to standard schedule, we plan to complete the draft framework by December 10, 2022. We will continue this discussion in the coming weeks, combined with expert advices, finalize the draft framework as soon as possible.


THNAKS
Thank You!