



CIGRE Study Committee

PROPOSAL FOR THE CREATION OF A NEW WORKING GROUP (1)

WG* N° D2.33	Name of Convenor: Mehrdad Mesbah (FR) E-mail address: Mehrdad.mesbah@alstom.com
Technical Issues # (2): 8	Strategic Directions # (3): 2
The WG applies to distribution networks (4): Yes	
Title of the Group: Operation & Maintenance of Telecom network and associated information systems in the Electrical Power Utility	
<p>Scope, deliverables and proposed time schedule of the Group:</p> <p>Background: The tremendous growth of information exchange and communication requirements for the operational applications of the electrical power utility result in an extensive and complex infrastructure whose operation and maintenance necessitates specific processes and tools well beyond the ad hoc management previously employed in most cases. Moreover, the technological diversity of installed systems in the power system and the diversity of required skills increase the need for the field worker to be supported remotely. The adopted processes, tools and field communication systems depend also upon the organizational issues in the power company: fusion or separation of operational and corporate services, of IT and telecom systems, and of local and wide area communications, as well as the adoption of in-house or contracted maintenance services with specific security issues in the latter case. This working group aims to provide a comparative study of experiences and targets among Utilities for the operation and maintenance of their telecom infrastructure, the associated remote supervision as well as communication facilities for the remote support of the field worker in the power system environment.</p> <p>Scope :</p> <p>The scope of the Working Group shall include the following aspects which may be treated concurrently through parallel workshops or sequentially by the whole Working Group depending upon the number of participants and their complementarities. In any case, work shall be organized in such a way as to allow partial contributions and participations:</p> <p>Impact of Organizational Perimeter on Telecom Operation & Maintenance process</p> <ul style="list-style-type: none"> ⇒ Scope and scale of the organization, impact on O&M Process and adequate tools ⇒ Limit of Telecom O&M in the substation and control centre, LAN/ WAN management and O&M ⇒ Separate Telecom & IT or Merged? In-house or external? <p>Telecom Operation Support Systems (OSS) and associated management tools</p> <ul style="list-style-type: none"> ⇒ Fault Management, Incident Management, Inventory systems, etc. <p>Communication technology and networking for enhanced management of Power System Assets</p> <ul style="list-style-type: none"> ⇒ Field Area Networking <ul style="list-style-type: none"> • Mobile and nomadic data systems and related applications • Use of wireless in the Substation for O&M (WiFi, etc.) 	

- ⇒ Communications for Real-time remote monitoring and visualization of assets and Tele-maintenance
- ⇒ Remote access of external contractors and on-duty staff to infrastructure in EPU premises
- ⇒ Access of contractors in EPU premises to their remote support base

Deliverables: Technical brochure with summary in Electra

Time Schedule: start: January 2012

Final report: December 2013

Comments from Chairmen of SCs concerned:

Approval by Technical Committee Chairman: Klaus Fröhlich

Date:30/03/2012

- (1) Joint Working Group (JWG) – (2) See attached table 1 – (3) See attached table 2
- (4) Delete as appropriate

Table 1: Technical Issues of the TC project “Network of the Future” (cf. Electra 256 June 2011)

1	Active Distribution Networks resulting in bidirectional flows within distribution level and to the upstream network.
2	The application of advanced metering and resulting massive need for exchange of information.
3	The growth in the application of HVDC and power electronics at all voltage levels and its impact on power quality, system control, and system security, and standardisation.
4	The need for the development and massive installation of energy storage systems, and the impact this can have on the power system development and operation.
5	New concepts for system operation and control to take account of active customer interactions and different generation types.
6	New concepts for protection to respond to the developing grid and different characteristics of generation.
7	New concepts in planning to take into account increasing environmental constraints, and new technology solutions for active and reactive power flow control.
8	New tools for system technical performance assessment, because of new Customer, Generator and Network characteristics.
9	Increase of right of way capacity and use of overhead, underground and subsea infrastructure, and its consequence on the technical performance and reliability of the network.
10	An increasing need for keeping Stakeholders aware of the technical and commercial consequences and keeping them engaged during the development of the network of the future.

Table 2: Strategic directions of the TC (cf. Electra 249 April 2010)

1	The electrical power system of the future
2	Making the best use of the existing system
3	Focus on the environment and sustainability
4	Interactive communication with the public and with political decision maker