0 What: CIM for Distribution Grid Management (6.2.6, 11.6.1)

0.1 Abstract:

This work defines strategies for integrating standards for distribution operations across different environments. Strategies call for defining key applications and evaluating the available standards for meeting the applications. Field equipment can supply the raw data for objects and measured parameters used across the enterprise.

0.2 Description:

This work develops an approach for integrating the application level communications from three standards. The IEC 61968 and Multispeak provide the structure and semantics for integrating a variety of back office applications. The IEC 61850 standard provides a basis for field equipment communications and provides semantics for communications with field equipment including both real time operations as well as non-operational data such as condition monitoring. Integrating these standards provides a basis for powerful integration for both real time operations as well as support for a variety of back office applications.

0.3 Objectives:

- Develop strategies to integrate and expand IEC 61970-301, IEC 61968, Multispeak and IEC 61850 for Smart Grid applications
- Scalable strategy to integrate other identified standards
- Evaluate the contents of each standards for a Best fit to meet the requirements of key applications that span the environments of these standards
- Agree on an approach to integrate domain knowledge represented in each standard

0.4 Why:

This work can enable the effective integration of field equipment data and information with that used for enterprise back office systems. This integration can enable many new applications that may not be possible by just operating in one environment.

0.5 Where:

The integration of these standards would take place across the enterprise where field equipment operations need to integrate with back office systems. Several interfaces will be involved through the development of the standards that are targeted for their environment.

0.6 How:

The task will identify and/or develop key requirements and use cases that define the type of integration needed across these standards. This work is followed by analysis of the standards developed to date as well as work items in progress. This analysis should be used to identify synergy with the other standards and propose to build either a mapping or new extensions to existing standards. Preferable pathways are to minimize translation and reach agreement on shared or similar terms.

0.6.1 Task Descriptions

0.6.1.1 Task 1

Create UML model for MultiSpeak; but first, resources need to be indentified. The task has to be done by a MultiSpeak UML expert.

0.6.1.2 Task 2

Develop a team to investigate / develop tools to generate flexible messages / schemas from UML. That needs to be done by CIMIug CIM Tools WG and by MultiSpeak.

0.6.1.3 Task 3

Develop interoperability testing team. Needs to be done by UCAIug CIMug compliance and testing TF.

0.6.1.4 Task 4

CIM Modeling team (T. Kostic) will host a webcast for those interested to present status.

0.6.1.5 Task 5

Create a team to identify and develop Smart Grid focused master list of critical use cases. This shall be done by the T&D DEWG.

0.6.1.6 Task 6

The team created as result of task 5 shall create Smart Grid focused master list of critical Use Cases with suggested priority.

0.6.1.7 Task 7

The team shall based on the list and priorities defined in task 6 create and/or refined the Smart Grid use cases.

0.6.1.8 Task 8

WG19 Smart Grid TF shall review the use cases from task 7, confirm the priority and shall assign them to the appropriate WGs or other entities.

0.6.1.9 Task 9

The appropriate WG shall develop the requirements and build the models for the use cases assigned from Task 8. It is important that, in the case that a use case requires updates and extensions of models in e.g. both CIM and IEC 61850, that these updates are done in parallel and coordinated.

0.6.2 Deliverables

The deliverables are the following:

- UML model for MultiSpeak as result of task 1

- Master list of critical use cases as result of task 6
- New / refined use cases as result of task 7
- Updates of models as result of task 9

0.7 Who:

Project Team
NIST Lead: Jerry FitzPatrick
EPRI Lead: ChristophBrunner, Grant Gilchrist, Frances Cleveland
SDO Leads: Greg Robinson, Gary McNaughton, Frank Goodman/Jean Goulet
SDOs: IEC TC57 WG10: Christoph Brunner, UTInnovation IEC TC57 WG13: Terry Saxton IEC TC57 WG14: Greg Robinson, Xtensible Solutions IEC TC57 WG17: Frank Goodman, SDG&E IEC TC57 WG19: Paul Skare, Siemens Paul.Skare@siemens.com IEC TC57 WG15: Frances Cleveland, Xanthus fcleve@xanthus-consulting.com IEEE Power Systems Relay Communications Committee: Miriam Sanders T&D DEWG: Joe Bucciero IEEE PES DAWG: Larry Clark, Georges Simard OGC: Louis Hecht MultiSpeak: Gary McNaughton
Users Groups: UCAIug: Mark Adamiak USB: Forrest Small
Technical Team:

0.8 When:

Task Description	Completion Date
Task 1: UML model for MultiSpeak	Q2-2010
Task 2: Team for UML tools	10/11-2009
Task 3: Team for interoperability testing	10/11-2009
Task 4: Webconference CIM Modeling team	Aug 12, 2009
Task 5: Create SG use case team	09-2009
Task 6: Use case master list	Q4-2009
Task 7: Use cases refined	Q2-2010
Task 8: Review and assign use cases	Q2-2010
Task 9: Develop models	continuous; all by Q4-2010