

Extraction of Distribution Automation Activities from WG17 Minutes

September 15-17, 2008

Process

The following steps are envisioned for WG17 on developing IEC 61850 logical nodes for distribution automation.

1. Develop list of distribution equipment that could have IEC 61850 Logical Node models.
2. Then review the existing IEC 61850-7-4, IEC 61850-7-410, IEC 61850-7-420, and IEC 62400-25 (wind logical nodes) to see what already is there, what might be added, what might be modified.
3. Only changes will be developed as new 61850 logical nodes or modifications to existing logical nodes.

During the WG17 meeting, the following action item was developed:

Action item: Item 1 – Assignment of responsibilities for drafting/analysis of agreed upon models.

Priority 1 – First Phase,

Priority 2-3 lower,

x – not to be addressed,

INV – no work anticipated investigation only.

Priority	Category	Task	Assigned to
1	Current Interruption Devices	<ul style="list-style-type: none"> • Automated switches 	Alex Apostolov
		<ul style="list-style-type: none"> • Circuit breakers 	Jean Goulet
		<ul style="list-style-type: none"> • Reclosers <ul style="list-style-type: none"> – Ganged – Unganged—three controllers (modeling approach) 	Jim Stoupis
		<ul style="list-style-type: none"> • Sectionalizers <ul style="list-style-type: none"> – Ganged – Unganged—three controllers 	Salman Mohagheghi
1	Passive Compensators	<ul style="list-style-type: none"> • Switched capacitor banks <ul style="list-style-type: none"> – Ganged – Unganged—three controllers 	Brent Duncan
1		<ul style="list-style-type: none"> • Voltage regulation devices <ul style="list-style-type: none"> – Ganged – Unganged—three controllers 	Brent Duncan
1		<ul style="list-style-type: none"> • Transformers---Monitoring them; also consider special cases like open delta (2 phase to 3 phase) 	Frank Goodman

Priority	Category	Task	Assigned to
1		<ul style="list-style-type: none"> Fault detectors, indicators, anticipators, locators---retain in first wave of modeling; there is something on fault distance in 7-4 	Frances Cleveland
1	Fuse	<ul style="list-style-type: none"> Fuses (added to list) 	Salman Mohagheghi
1		<ul style="list-style-type: none"> Fuse Cut-out – maybe a just topological element. Needed to differentiate, graphically, fuses that are in “cutouts” vs underground fuses vs transmission level fuses. May need to be added as a LN. 	Salman Mohagheghi
2		<ul style="list-style-type: none"> Static VAR compensators 	
2		<ul style="list-style-type: none"> Network protectors—start with PDOP, PDPR---?????Needs to be examined; and consider allowing reverse current from DER 	Frances Cleveland
3		<ul style="list-style-type: none"> Power quality enhancement devices, such as voltage sag correctors—treat as was done with SVC in Herb’s example 	
2		<ul style="list-style-type: none"> Local subnet (or distribution cell) controllers-- -treat as client—Not included in 61850 	
2		<ul style="list-style-type: none"> Protection systems, relays 	
2		<ul style="list-style-type: none"> Real-time monitoring sensors and systems for distribution automation support—retain and step back and identify what we want to monitor and the use 7-4 as the starting point 	
2		<ul style="list-style-type: none"> Newly emerging electronic and power electronic components for use in distribution systems, such as power electronic replacements for distribution transformers, etc. –Include solid state transformer 	
2		<ul style="list-style-type: none"> Widespread real-time distribution system monitoring based on new sensors and sensing functions embedded in other equipment-- retain and step back and identify what we want to monitor and the use 7-4 as the starting point 	
3		<ul style="list-style-type: none"> Information exchange with distributed data concentrators containing local distribution system information—proxies, not included in 61850 	
3		<ul style="list-style-type: none"> Loads (added to list) – maybe as just a topological element needs further examination. May also need to address positive and negative flow direction as well. 	