MultiSpeak® and IEC 61968 CIM: Moving Towards Interoperability

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Outline

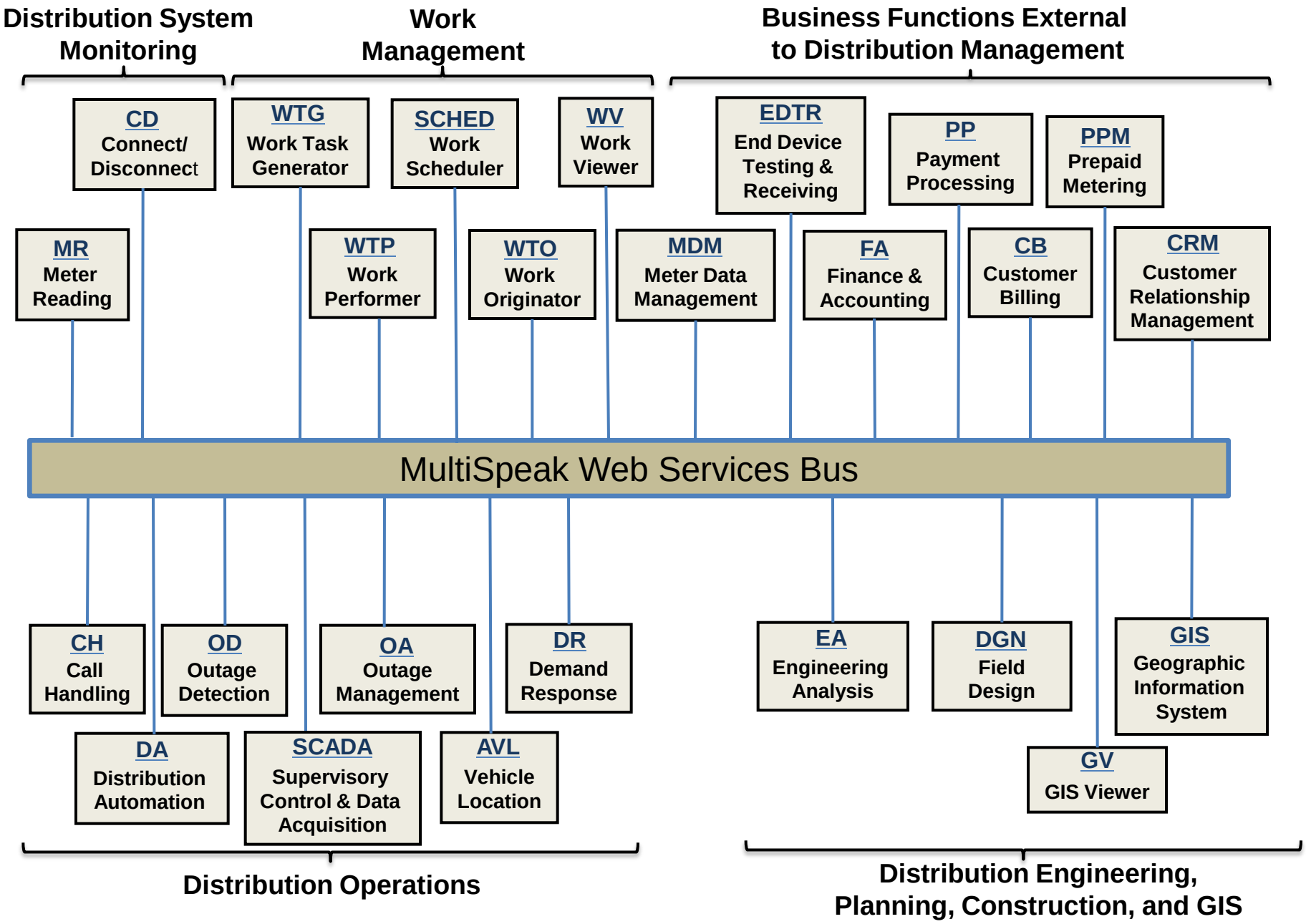
- Introduction to MultiSpeak® and IEC 61968 CIM
- Need for Interoperability
- Plans for 2009 Interop Testing
- Efforts to Promote Interoperation
  - Standards Harmonization
  - Industry Efforts

Introduction to MultiSpeak®

- Developed by NRECA in collaboration with key industry vendors
- Covers applications of interest to distribution utilities
- Standard is mature, but scope is continuing to grow
- In use at hundreds of utilities
- Mature interoperability testing program, applies to all interfaces
- Implemented using XML; web services and batch transport profiles defined
- More information and specification available at www.MultiSpeak.org

MultiSpeak V4 Plans

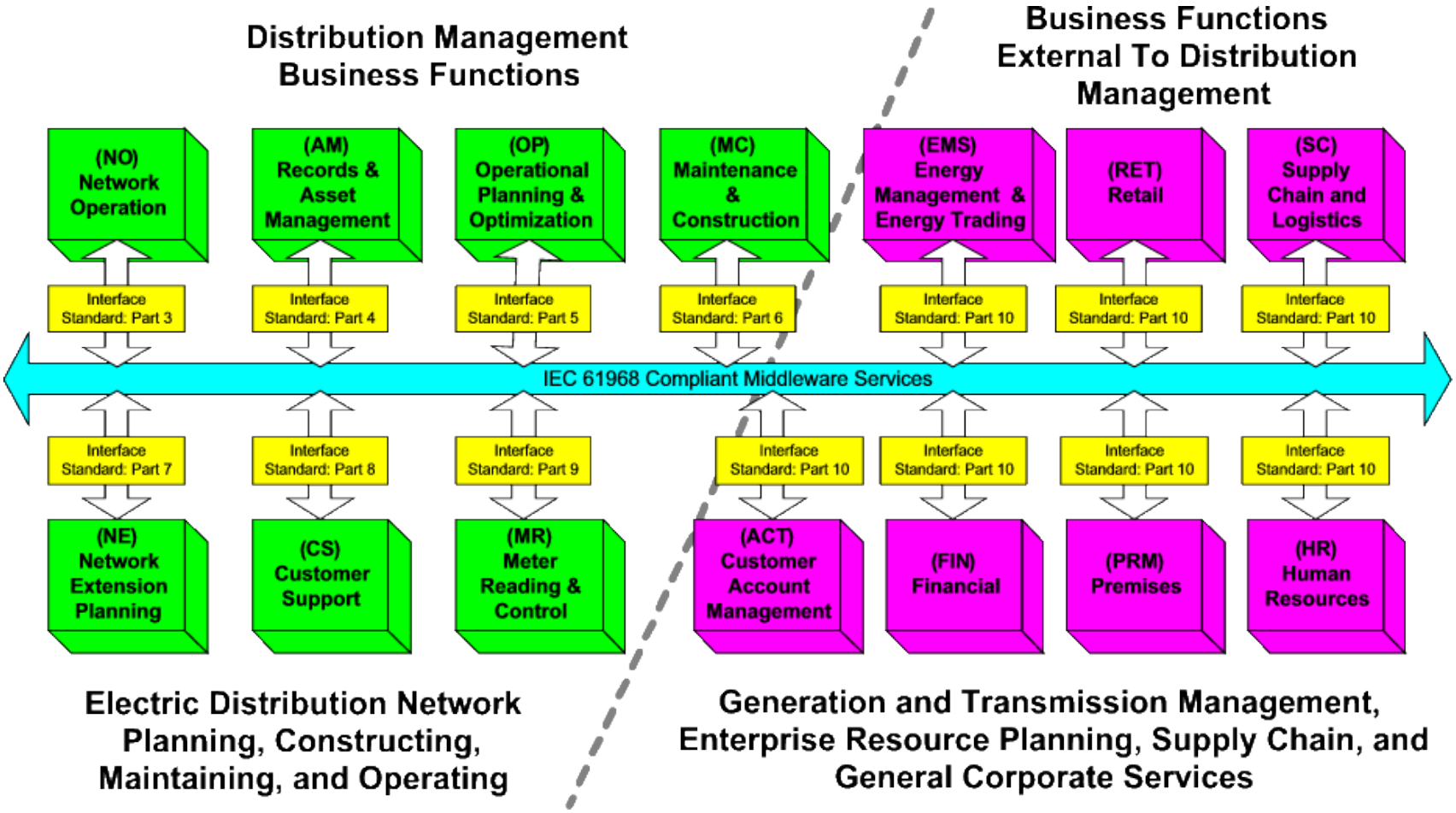
- Internationalization
  - International telephone and address fields
  - Unit/value pairs with wide selection of units
  - Supports all ISO 4217 currency codes
- Adds work management and AVL
- Adds support for engineering model catalogs
- Adds CIM CPSM-compatible transmission model
- Will add in CIM CDPSM as unbalanced profile is completed


Distribution System Monitoring
Work Management
Business Functions External to Distribution Management
CD
Connect/ Disconnect
WTG
Work Task Generator
SCHED
Work Scheduler
WV
Work Viewer
EDTR
End Device Testing & Receiving
PP
Payment Processing
PPM
Prepaid Metering
MR
Meter Reading
WTP
Work Performer
WTO
Work Originator
MDM
Meter Data Management
FA
Finance & Accounting
CB
Customer Billing
CRM
Customer Relationship Management
MultiSpeak Web Services Bus
CH
Call Handling
OD
Outage Detection
OA
Outage Management
DR
Demand Response
EA
Engineering Analysis
DGN
Field Design
GIS
Geographic Information System
DA
Distribution Automation
SCADA
Supervisory Control & Data Acquisition
AVL
Vehicle Location
GV
GIS Viewer
Distribution Operations
Distribution Engineering, Planning, Construction, and GIS

Introduction to IEC 61968

- Maintained by IEC TC57, WG14
- Scope is larger than MultiSpeak, but is less mature
- Implementations based on CIM data model in place at dozens of utilities
- Implementation is messaging-based and transport agnostic, currently no transport profiles defined
- Interoperability testing is in place for two limited profiles (transmission and balanced distribution power system model exchange)
- Core CIM in IEC 61970; distribution extensions in IEC 61968
- For more information see: http://iectc57.ucaiug.org

IEC 61968 Reference Architecture



Need for Interoperation

- Utilities want to implement the best of both standards
- Utilities want to avoid stranded investment
- Vendors want to avoid the need to develop and maintain dual interfaces
- At some utilities both CIM-compatible and MultiSpeak-compatible products will need to co-exist and interoperate
- Standards bodies want to learn from the work done by the other camp and incorporate additional functionality

Harmonizing Data Models

- Approach to include CIM CPSM/CDPSM into MultiSpeak data model:
  - Add optional CIM IdentifiedObject (naming) fields to base MultiSpeak objects
  - Where similar objects exist in MultiSpeak, create superset object to include CIM-specific fields
  - Where objects do not exist, use CIM object extended to have MultiSpeak naming fields
  - Maintain extended CIM objects in separate schema and namespace for maintainability

Plans for 2009 Interop Testing

- Joint CIM/MultiSpeak V4 Interop Testing Planned for Third Quarter 2009:
  - IEC 61968 – 9, Meter Reading and Control Profile
  - IEC 61968 – 13, CIM CPSM Transmission Network Model Exchange Profile

For More Information

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