OPC Foundation
The Business Value Proposition & Achieving Technical Excellence through Interoperable International Open Standards

Thomas J. Burke
OPC Foundation President & Executive Director
Agenda

- OPC Foundation
- Members
- Technologies
- Adoption
- Future
OPC Foundation

Michel Condemine
OPC France President and TAC member
## OPC Foundation: Who We Are

### Community:
- The OPC Foundation is the world’s leading community for interoperability solutions based on OPC specifications that deliver universal connectivity.

### Collaboration:
- The mission of this community is to advance the development, adoption and certification of OPC based products through global collaborations.

### Compliance:
- The OPC Foundation is the official source for the OPC Certification Program, ensuring that OPC products plug-and-play in real-world application.
OPC Foundation Advisory Councils

Technical
- 26 companies
  - All board member companies
  - Automation suppliers
  - Industry liaisons

Marketing
- Director of Marketing
- Member Companies
  - End-user and suppliers volunteers
  - Media
  - International
### OPC Technical Advisory Council
**Chairperson:** Karl-Heinz Deiretsbacher - Siemens

- Michel Condemine - 4CE Industry
- Wolfgang Mahnke - ABB
- Matthias Damm - ascolab
- Stefan Hoppe - Beckhoff
- Paul Hunkar - DSInteroperability
- Dirk Thiele – Emerson Process Management
- Dave Hardin – EnerNOC, Inc
- Eric Oursel - Euriware
- Alisher Maksumov – GE Global Research
- Betsy Hawkinson – Honeywell
- Jan Burian - ICONICS
- Jim Luth - Invensys
- Aron Semle – Kepware
- Liam Power - MatrikonOPC
- Rod Stein - MatrikonOPC
- Thomas J. Burke - OPC Foundation
- Nathan Pocock - OPC Foundation
- Ondrej Flek - Rockwell
- Ruediger Fritz - SAP
- Thomas Rummel - Softing
- Dave Emerson - Yokogawa
- Toshio Oono - Yokogawa
OPC Foundation Members

Michel Condemine
OPC France President and TAC member
**Membership**

- +450 members *
- 4200 companies create products based on OPC technologies *
- +25000 referenced OPC product *
- +32 million installation daily used OPC*

*Source Arc Advisory Council*
OPC Foundation
Technology
Michel Condemine
OPC France President and TAC member
The two aspects of OPC UA

1. **Plumbing**
   Is the original problem fixed by OPC

2. **Modeling**
   Was the new challenge for OPC technology.
International Standards

- IEC 62541 Unified Architecture Release
- SGIP Catalog of Standards

OPC UA is IEC 62541.
IEC 62541 Unified Architecture

Achieved

- January – April: CD Phase
  - Parts 1-10: Maintenance
  - Parts 11, 13, DI: New work items

May – August: Comment Resolution
  - Resolutions returned end of July

Next

- CDV has started in October (decided in meeting on 09/30)
  - Updated documents end of August

- CDV approximately 5 months (includes translation into French)
### OPC Foundation Collaborations

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OGI Ecosystem Simplified Systems Architecture

Enterprise Business Systems

- Engineering Design
- Construction Procurement
- Standardized Interoperability Register
- Operations Management
- Operations Risk Management
- Maintenance Management

OpenO&M Information Service Bus Model

- Construction Management
  - ISBM services
  - ISO 15926 SPARQL
  - OPC Interfaces
  - Deterministic interface

Industrial DMZ

Automation and Control

HSE and Operation Monitoring

Prognostic and Health Management

Automation Control Bus

- Device
- Sensor/Transducer

Enterprise Mirrored Reference Data Library/Enterprise Specific Reference Data Library

EPC/OEM Reference Data Libraries

PCA Reference Data Library
Companion Specifications

MTConnect Completed
ISA S95 Completed
MDIS Under Development
PLCOpen Released
BACnet In Progress
• Joined working group between
  – BACnet Interest Group Europe
  – OPC Foundation
  – Result will be a joined, public mapping document owned by both organizations

• Release
  – Release Candidate specification available
  – Prototype implementations available
  – Release planned for March 2014
MDIS

MCS-DCS Interface Standardization ("MDIS")

- MDIS Features
  - Standardize low level Communication Protocol
  - Standardize Information Model

- OPC UA features:
  - Subscription
  - Security
  - Robust Communication
  - Redundancy

OPC Unified Architecture MDIS Companion Specification
MTConnect - OPC UA Companion Specification

- Compatible with MTConnect Version 1.2, 2.0
- Compatible with OPC UA Version 1.02
- 100% complete
  - MTConnect embedded profile
  - Sample Implementation
  - Additional models to be developed
OPC Foundation Adoption

Michel Condemine
OPC France President and TAC member
OPC Unified Architecture

The Key markets for OPC Technology include:

- Industrial Automation
- Building Automation
- Energy management
- Manufacturing Enterprise
- M2M
Benefits from OPC UA Adoption

- Vendors were no longer required to maintain extensive device protocol libraries
- High-quality and affordable device-drivers (Servers) emerged
- More specialized Clients emerged
- Developer toolkits and Open Source codebase emerged for rapid development of custom applications that could also integrate with the OPC infrastructure
- End-users could mix-and-match numerous vendor products to achieve the best overall solution
OPC UA Certified products
OPC Foundation
Future

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OPC France President and TAC member
OPC Unified Architecture

Possible future initiatives for 2014 and beyond

- New technology mapping for low-bandwidth networks (Zigbee, Bluetooth, 6LoWiPAN)
- DX for UA
- Safety technology mapping – joint effort with OMAC (UDP based)
- XMPP technology mapping (required by 61850)
OPC Unified Architecture

MOF representation

META OBJECTY FACILITIES MOF

OPC UA META MODEL Part 3

Companion Specification

Model
Questions?

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