DR and DER Interoperability: Test Tools, Training, Support and GridEdge Intelligence
For Those Who Don’t Know QualityLogic...

- **30-year-old provider of test products and services**
  - Software QA, test planning and testing
  - Software test tools for standardized communications protocols – conformance, interoperability, performance
  - Data quality assurance
  - 100+ staff headquartered in Boise, ID
QualityLogic’s Role in the Smart Energy Industry

- **DR and DER Interoperability**
  - Standards development, especially test standards
  - Test tools for development and certification
  - Training and technical support for standard implementation
  - Consulting on standards and implementations

- **QualityLogic Works with**
  - OpenADR
  - IEEE 2030.5
  - IEEE 1547/UL 1741
  - IEC 61850
  - And others
Current OpenADR Solutions

- **OpenADR Advanced Training**
  - For engineers and implementers
  - Virtual 2-day [workshop](#)
  - [Online workshop](#)

- **Official OpenADR Test Harness**
  - For both VTNs and VENs

- **Implementation Consulting**
  - Applying the [OpenADR Demand Response Program Guide](#) to specific use cases
  - Development of custom implementation guides
  - Development of sample XML payloads
Introducing GridEdge Intelligence

Hello there!

Welcome to GridEdge Intelligence! We're excited to have you join our community and look forward to your involvement.

Our goal is to help you accelerate selection, adoption and implementation of standard communications protocols for grid edge resource integration into grid operations.

Here's What's Inside:

- DER Protocols
  - GEI is the source for everything you need to know.

- Interop Essentials
  - How to select the right protocol.
  - Catalog of Standards and Smart Grid Interoperability.

- Participate in GEI
  - Read our blog, provide feedback, become a contributor.

- What's Happening
  - DER protocol events, workgroups, conferences and more.

- GEI News
  - Stay up to date on the latest GEI news.
Gosh! Which DER Protocol Do I Use?

OpenADR

- DNP3, TCP/IP, Modbus, CAN bus
- 2030.5, Multispeak, OCPP, 15118
- IEEE 1547, JDBC, SunSpec Modbus
- IEC 61850, MESA
The Protocols That Will Be Covered

- Note: Rolf Bienert is one of our 12 Advisors
An Invitation to Participate!!

- Become a Founding Subscriber
- Take a survey
- Become a Contributor
  - We are looking for Protocol Eco-System experts for each covered protocol
  - Potential compensation
  - Contact contributions@gridedgeintelligence.com
- Something to add? Product or training listing? Use case? Protocol article? Other? Send to contributions@gridedgeintelligence.com
- Questions? Contact info@gridedgeintelligence.com

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- Influence on protocol priorities and future features
- Protocol Specific Database – 6 initial protocols
- Additional Protocols based on interest
- Periodic Newsletter (Monthly/Quarterly Digest of News)
- New Flashes
- Expert insights on Protocols
- Resources for Training and Development
- Ask the Expert Service
- Open Source Code Information
- Free webinars for subscribers

Become a Founding Subscriber
**OpenADR Virtual Summit: Implementation Workshop**

- **Speaker OpenADR Observations/Conclusions – Matt**
  - OpenADR is very capable and flexible – at the expense of interoperability
  - Continuing implementations with proprietary communications to devices – risks of stranded assets
  - Cloud implementations and aggregation not well defined using OpenADR – e.g., targeting, groupings not really standardized
  - Reporting flexibility a major interoperability issue
  - Certified VENs can have differing optional capabilities
  - Implementing specific use cases results in unique/custom solutions

- **Speaker OpenADR Observations/Conclusions – Denver**
  - Utilities regard OpenADR certification as a minor requirement compared to others
  - Because of OpenADR flexibility, SMUD needed to create own implementation profiles for OpenADR
  - Current OpenADR certification does not cover many use cases
What is Next for OpenADR?

- If we want to improve interoperability of OpenADR, how do we do it?
  - Develop more specific application profiles and test specifications?
  - Incorporate popular use case validation tests in the certification program?
  - Create a portfolio of certification programs that are use case specific?
  - Develop interoperability testing, events or other process to insure interoperability between vendors and products?

- Open Standards Compete!!
  - The risk to OpenADR is that other standards like IEEE 2030.5 keep refining and improving interoperability
  - OpenADR is in a clear leadership position – let’s keep it that way!!

- Comments? Discussion?