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Case Study: How Long Island Power Authority (LIPA) leverages industry standards as part of its Enterprise Information Management initiatives, specifically supporting Semantic Integration.

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Abstract:

LIPA has embarked on a SmartGrid program that comprises the implementation of new applications and the integration of these applications with legacy applications.

Key business drivers are to reduce the cost and complexity of the development and maintenance of integration solutions and data repositories, enable the ability to integrate LIPA data among multiple service providers and implement “Best of Breed” applications.

LIPA’s architectural goals are (a) an event-driven enterprise and (b) provide a robust yet agile and de-coupled architecture along service-orientated architecture (SOA) principals. LIPA avoids proprietary integration solutions, rather targeting and embracing semantic interoperability that leverages standards-based architecture to drive down effort and cost for new integration and integration maintenance. This semantic interoperability is key to enabling this de-coupling of the architecture.

The LIPA approach is consistent with the goals from the IEC TC57 WG14 specifications. What LIPA have done is solve many of the challenges that utilities will face when adopting the “common model” approach and implement a scalable solution for the governance, processes and methodology of managing this solution in a real-world environment with multiple changing pieces.

In addition, LIPA have implemented a Solution Development Life Cycle (SDLC) used on projects, enabling LIPA to control projects and ensure that the LIPA architectural goals are not subverted.

Semantic interoperability is achieved by establishing:

- (a) the centrally-managed LIPA common Enterprise Semantic (Data) Model with supporting methodology (the “dictionary” for all interface definitions) supporting all integration- and database projects and management of version changes to industry standard models
- (b) centralized semantic mapping and transformation rules (mapping heterogeneous data sources to the ESM) and the development, testing and deployment of canonical data services (i.e. based on the ESM)

The development- and extension of the enterprise semantic model (ESM) supports all integration- and database projects as well as the management of version changes to industry standard models (e.g. IEC CIM, Multispeak).

The semantic mapping solution provides the ability to do impact analysis of changes across all deployed and in-development data services (including changes to the semantic model or any one of the proprietary data sources).

Presenter Bio: Phillip Jones

(Also see attached Business Resume)

Mr. Jones is the Director Solution Development for Xtensible Solutions. He is a professional electrical engineer with over 20 years' experience and has extensive knowledge of the electricity supply industry and information systems pertaining to the electricity transmission & distribution industry (T&D).

Mr. Jones is an expert in enterprise information management (EIM), semantic integration, SOA, information systems architecture and strategy and implementation planning. Additionally, he has experience in engineering design, project management, power system master planning, refurbishment planning, economic evaluation, tariff modeling, asset assessment and valuation, and corporate and market restructuring of the electric T&D industry.

Mr. Jones also participates in industry standards committees and is a member of IEC TC57 WG14 and other engineering organizations.