

The Evolution of Interoperability at the California ISO

H. Walter Johnson

Principal, Technology Strategies

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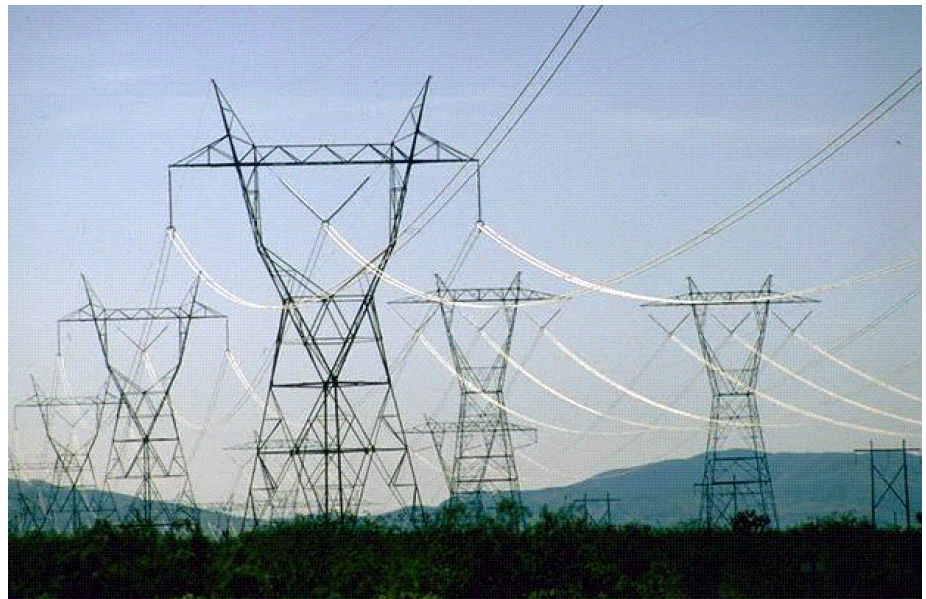
The California ISO

A not-for-profit,
public-benefit corporation,

The California ISO

manages the flow of electricity on

the long distance,
high-voltage
transmission lines
that make-up
75% of the state's
power grid.



The California ISO has employed at least four different interoperability approaches in its history:

- A “monolithic integration” using shared databases
- A tactical deployment of Publish-Subscribe middleware
- The strategic deployment of an Enterprise Application Integration (EAI) tool
- The pending release of a Web Services SOA integration using an Enterprise Service Bus

Evolving Interoperability Maturity

As the CAISO interoperability solutions have evolved, they have gradually addressed more and more of the GW Framework categories

Shared
DB

Pub-
Sub

EAI

SOA/
WS/
ESB

Interoperability Categories

8: Economic/Regulatory Policy

7: Business Objectives

6: Business Procedures

5: Business Context

4: Semantic Understanding

3: Syntactic Interoperability

2: Network Interoperability

1: Basic Connectivity

- Interoperability of CAISO systems with external entities has historically relied on an *ad hoc* collection of point-solution protocols, reverse-engineered approaches, and “accidental APIs”
- With the upcoming release of an entirely redesigned set of market applications, formal B2B Web Services based on documented, shared business processes have been defined and are being implemented

- The interoperability experience has been a source of unhappiness for our market participants
- The new B2B interfaces have been developed with active participation by the stakeholders and promise to be a great improvement over the current mechanisms
- The California ISO has become a very active supporter and contributor in interoperability standardization activities at the national and international levels