

Agents on the Grid



Real-time decision-making. A central command console that provides improved data awareness. Control through intelligent processes, rather than manual ones. It all sounds futuristic, but agents on the grid – intelligent devices capable of sending and receiving event data – are available now, with capabilities that can make your system run smoother and more profitably.

Just What are Agents on the Grid?

Today, the world is rapidly entering a period in which significant and ongoing new investments in electricity capacity will be required to keep supply in line with demand. The modern grid – often called the smart grid or intelligent grid – needs to generate and distribute electricity more effectively, securely, and economically.

Agents on the grid will detect and immediately address emerging problems on a system before they impact service. They respond to local and system-wide inputs, while providing more information about broader system issues.

They use extensive measurements, rapid communications, and centralized diagnostics to provide quick feedback control so the system can return to a stable state after disturbances or interruptions. Agents will automatically adapt protective systems to accommodate changing conditions by re-routing power flows,

changing load patterns, improving voltage profiles, and taking other corrective steps within seconds of detecting a problem.

Agents on the grid also enable loads and distributed resources to participate in operations and provide system operators with advanced visualization tools to enhance their ability to oversee the system. Finally, they are designed and operated with reliability and security as key factors.

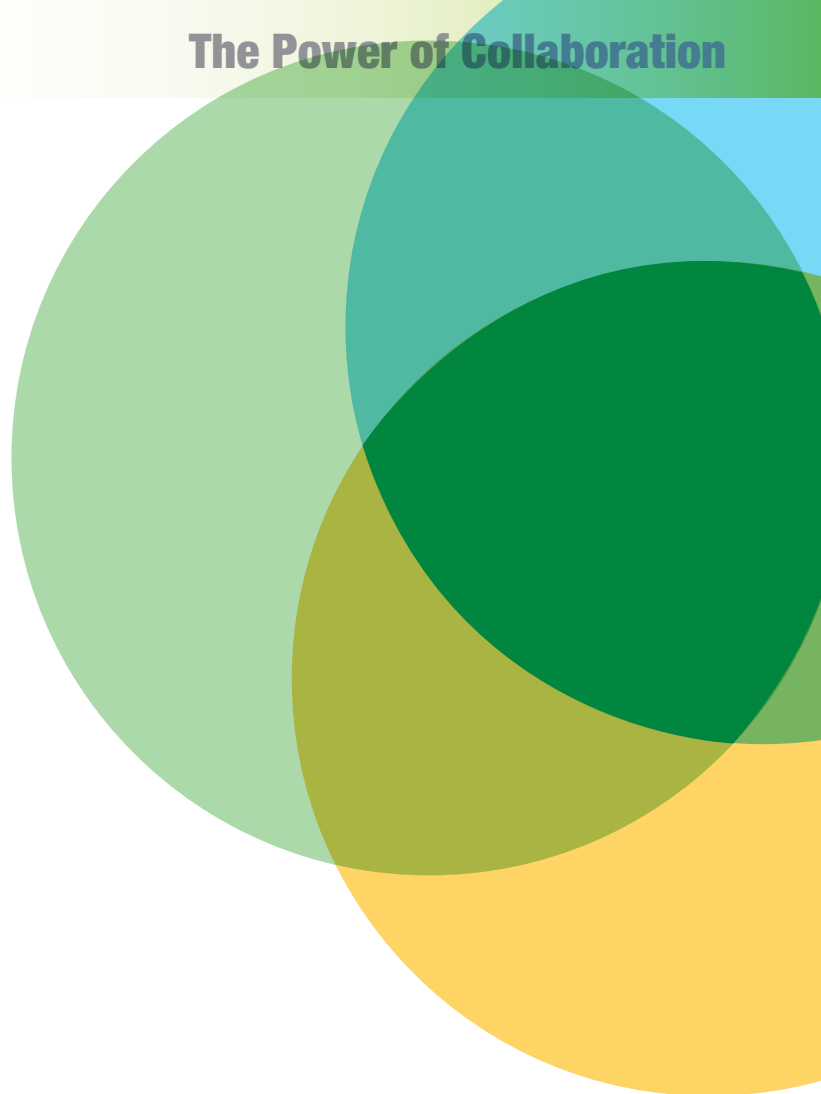
The SEA Solution

The Smart Energy Alliance™ (SEA™), comprising six of the world's leading technology companies, was created in 2006 to help utilities turn operational planning challenges into opportunities. The SEA Solution:

- Provides the backbone of communications to handle agents anywhere and anytime.
- Can communicate with a variety of agents such as smart meters, cell phones and PDAs, through e-mail, text messages, voice and data exchange.
- Recognizes that agents are intelligent, can make decisions and report on what they did.
- Provides a repository of information and rules to handle agent events in real-time.

- Provides a real-time distribution of messages to agents so they can handle issues as needed.
- Provides a history of agent events so that analysis may be done thoroughly.
- Provides a secure platform for data by authorized use only.
- Provides high system and database reliability.
- Provides a system that offers “openness” for ease of enhancements and new features as needed by the utilities.
- Provides the foundation for a service-oriented architecture (SOA) methodology.

As the SEA assists in establishing the communication infrastructure, agents can be added more easily, costs will be reduced, and more and better data will be collected and analyzed in near real-time.



The Smart Energy Alliance combines deep industry experience with a broad understanding of technology solutions from Capgemini, Cisco Systems, GE Energy, Hewlett-Packard Company, Intel and Oracle Corporation to accelerate adoption of new technologies in the utility industry worldwide.

For more information on the Smart Energy Alliance, visit <http://www.smart-energy-alliance.com>.

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