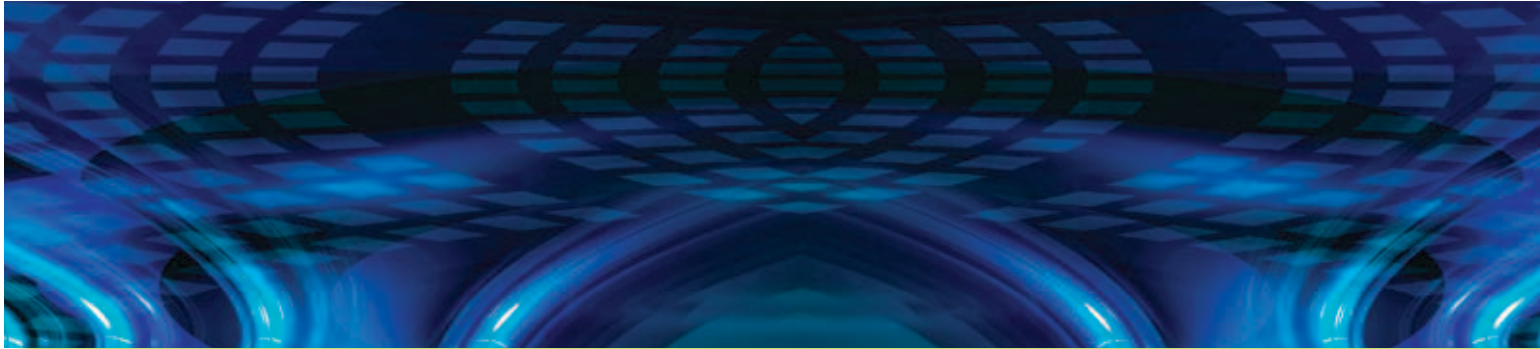


Deploying New Supervision Tools on the Distribution Network



The Distribution Challenge

Today's utility can face difficult choices for the optimum supervisory control and data acquisition systems (SCADA), Distribution Management System (DMS) and Outage Management System (OMS) for its distribution network. While SCADA has a long history of productive use on the transmission grid, the predominantly radial distribution network has not generally benefited to the same extent: there was prohibitively expensive monitoring equipment, too much data, and little incentive to deploy distribution SCADA, since the prevailing regulatory perspective required excess capacity, not smart distribution.

That landscape has changed dramatically, starting in Great Britain with deregulation/privatization in 1990. North American and European regulators now want to see that utilities are utilizing their entire infrastructure – from generation, through transmission and distribution, to customer service – as close to full capacity as they reasonably can. The forces of cost control, performance based rates and deregulation are driving better operations management, as is the quest for optimized and profitable assets by companies through merger or acquisition.

Now distribution SCADA/DMS/OMS are viewed as some of the most important tools for utilities to take control of the distribution network, as they never have before.

The adoption of distribution SCADA/DMS/OMS in Great Britain is a worthwhile example. There's tremendous evidence of lower operating costs (Opex) showing how an aging infrastructure can be better managed with distribution SCADA. The lesson: a tightly integrated SCADA/DMS/OMS system outperforms other alternatives.

Further, if a company is just starting to deploy smart meters then it will not have to wait 4-5 years to measure a gain in operational value. Using smart meters as part of a distribution SCADA initiative can start to yield benefits with only 1 to 2% of the meters deployed provided the deployment plan includes the correct approach to key/strategic locations.

The Vision

Tomorrow's distribution infrastructure must deliver. First, the distribution SCADA must give customers more power to manage their energy consumption, given the eventuality of smart metering. Outages should also be communicated *to the customer*, with concomitant notifications of the repair schedule. The new data that's created in terabytes by an intensified distribution SCADA must be reported and analyzed, for access by the corporate offices and eventually by shareholders and regulators. Given today's systems, this is a pipe dream. While there's no shortage of distribution SCADA monitoring equipment, software or IT system options available, how does the utility wisely choose?

Accomplishing Now

The Smart Energy Alliance™ (SEA™), comprised of six of the world's leading technology companies, was created in 2006 to help utilities turn such transmission and distribution challenges into opportunities.

The SEA believes that there are nine primary benefits to installing a Distribution SCADA system: monitoring and control; advanced power flow analysis; network switching; load management; fault detection, isolation, and restoration; volt/VAR control; integrated outage management systems; integrated trouble call system; and mobile workforce management. And since regulators are beginning to assign penalties against power quality indices and distribution metrics, there's no incentive not to invest in the types of systems that will deliver these benefits.

The Smart Energy Alliance has the right mix of deep industry experience coupled with a broad understanding of the technology solutions needed for tomorrow's utility distribution SCADA. It has a very defined process for engaging with a utility to understand its current situation, its goals and tolerances for change, and its investment limitations. Using a collaborative process with the utility and the six SEA members – Capgemini, Cisco, GE Energy, HP, Intel, and Oracle – there is a proven methodology for creating a distribution SCADA system that makes sense.

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>.

For more information please visit us online
<http://www.smart-energy-alliance.com>.

The Smart Energy Alliance from Capgemini, HP, Intel Corporation, GE, Cisco Systems, and Oracle Corporation. © Copyright 2009, Capgemini, HP, Intel Corporation, GE, Cisco Systems, and Oracle Corporation. All rights reserved. The Capgemini logo is a registered trademark of Capgemini. HP and the HP logo are registered trademarks of HP. Intel and the Intel logo are trademarks or registered trademarks of Intel Corporation or its subsidiaries in the United States and other countries. GE and the GE logo are registered trademarks of GE. Cisco Systems and the Cisco Systems logo are registered trademarks of Cisco Systems, Inc. and/or its affiliates in the U.S. and certain other countries. Oracle and the Oracle logo are registered trademarks of Oracle Corporation. *Other names and brands may be claimed as the property of others.

GEA17622 (06/2009)