

dobleARMS™

Asset Risk Management System



Changing the Face of Asset Management - Going Beyond Condition Based Maintenance

TOGETHER WE POWER THE WORLD®



Through advanced analytics and integration with Doble's 80-year old historical knowledgebase of asset performance, dobleARMS™ sift through all the data looking for the low frequency events that have a high-cost to the business while also providing a strategic, long-term view of asset health, which feeds into plans for CAPEX and O&M spend. In either the short- or long-term, asset condition and risks are presented in a meaningful way, so the user can take immediate action.

Doble's **Asset Risk Management System** (dobleARMS™) brings decades of knowledge and experience with power systems diagnostics and data analysis to the areas of online monitoring, condition assessment and the strategic management of assets. It's a new breed of application offering real-time event notification around a sophisticated suite of analytics that are infused with Doble's expertise in asset life-cycle and associated risks. dobleARMS™ provides intelligent alerts and event notification so utilities can make more informed decisions between times of crisis and long-range operational planning. With dobleARMS™, companies can move beyond traditional notions of CBM allowing employees to think more strategically about managing risks.

dobleARMS™ is a cost-effective tool for monitoring assets across the enterprise and providing the needed information to maintain and optimize assets - thereby reducing unplanned shutdowns, boosting production, increasing operational efficiency and decreasing maintenance costs.

The dobleARMS™ Difference

Too few or too many details - those are the typical complaints about most asset management systems. Asset managers need to know when a "notification" is a real or developing problem, and which asset needs the most attention. That's why dobleARMS™ marries real-time with online and offline data sources and then compares the analytic results to Doble's decades-worth of benchmark data on asset performance. Doble's knowledgebase contains 80 years of information and over 25 million records from equipment around the world, and offers a considerable advantage to enhanced interpretation and analysis of asset issues.

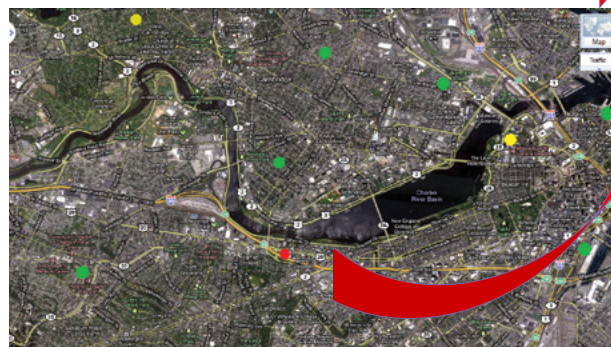
A Consolidated View

dobleARMS™ is transformational by providing a clear view of asset health from the convenience of your workstation. Instead of wasting critical time searching for the right information, dobleARMS™ searches for the needle in the haystack which is an asset event, and rolls up the salient details to a higher level - offering a consolidated geospatial view with clear, visual understanding of asset condition, criticality and risks. dobleARMS™ gives you the power to drill down to the specific details you want and need to see. Views are customizable so engineers and managers with different responsibilities can focus on assets specific to their roles. It's also a collaboration tool, allowing colleagues across the globe to simultaneously investigate a problem using the same data and views. And when you need additional support, work with experienced Doble Apparatus Engineers to investigate and solve challenging scenarios.

Understanding Asset/Site Risks

Moving beyond CBM toward a more strategic view of asset risks

Station/Asset Risks					
Site	Equip	RiskE	dScoreE	%Capacity	RevImpact
Norwood	TR2	20	840	95%	\$5M
North	TR4	15	790	96%	\$2M
Green	TR5	17	790	40%	\$1M



Asset alerts and details are rolled up to high-level views

dobleARMS™ Offers a Common Sense Approach to the Smart Grid

- Meets FERC, NERC and NIST security and Smart Grid Standards
- Flexible, secure and scalable infrastructure supporting offline and real-time data collection from a variety of data sources
- Harmonizes IEC 61850/CIM model management
- Places a non-proprietary layer of model management on top of “point-based” protocols
- Eliminates the need to manually manage interface points and changes

Collaboration and Participation

dobleARMS™ is designed to withstand industry changes, leverage standards and allows flexible configuration instead of the proprietary methods and hard-coding methods of the past, providing answers and cost-savings now and in the future. Doble is making considerable investments in the area of standards-based integration, asset-based analytics and the future of asset management. We invite you to participate in the evolution of dobleARMS™ and the value it will bring to your business today and tomorrow.

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dobleARMS™ offers traditional one-line and geospatial views of asset condition within the substation with links to drill down to asset views.



Alerts and notifications are summarized in dynamic views of transformer health with links to component details such as DGA and bushings.



dobleARMS™ seamlessly integrates data from multiple sources and presents alerts and notifications in a consolidated data view.

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Doble is an ESCO Technologies Company
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