

CUSTOMER CASE STUDY



Some industries demand reliable energy for long running production periods. The scope of their projects may require months or years of development and planning before a single, final event takes place or final product is produced. Will their project succeed or fail? Energy and utility companies provide the necessary infrastructure support to clients undergoing these types of critical activities.

Long before these major events occur, the power system for these operations must be maintained, reconfigured and stabilized.

A power system control room within this type of facility can be a high-pressure setting as preparations begin. The configuration of the electric system is carefully scrutinized and any anomalies must be quickly identified, understood and rapidly addressed.

Information overload can become a potential problem for control room operators. Clear visualization and the ability to monitor critical equipment is crucial during all pre-event electrical operations. For one such facility, monitoring the existing electrical system had reached its limits. A massive amount of data was available but they had no clear way to visualize and manage it efficiently. Choosing the correct supplier with most promising solution was essential for their vast complex and extremely critical operating conditions.

Primate Technologies, Inc. (Primate) was the clear solution. With Primate as the leading provider in safety, reliability and efficiency for control room operations, this company's power system modeling solution answered the need for real-time situational awareness for the management of their electric system.

Primate deployed a control center visualization system that models power distribution on a video wall utilizing forty 55" HD LED monitors and multiple operator consoles. For fail-proof operations, the system features a two-server cluster and redundant feeds from data sources.

When lines or devices are added or moved on the display, the power system network configuration is calculated from the display definition with no additional administrative work required. The network model is

used to determine the energized status of all 4,000 line segments using the real-time state of 3,000 points defined in the Energy Management System (EMS) and another 2,400 points that are manually toggled within the Primate environment.

The customer's campus is perfectly architected for their needs. There are research laboratories, production buildings and staging environments. With the new Primate Visualization System, any electrical disruptions can be quickly identified and corrected. Additionally, the chances of expensive delays are significantly reduced and greater service is provided through the advanced design of the power distribution system.

For better protection and improved reliability, almost all of their electric system is located underground. An important innovative feature of the Primate Visualization System is identification of the over 375 manholes and the lines, circuits and devices routed through them. Previously when technicians entered a manhole, identifying lines and circuits was labor intensive and potentially dangerous. With the new visualization solution, control room operators quickly identify circuits, highlighting manholes on the display making it much easier to establish a switching strategy. This new process has drastically increased the speed and safety of work for the customer.

The Primate Visualization System was under development, design and testing for 8 months. The initial phase deployed a digitized map on a video wall replacing the physical mapboard with a video display. The second phase provided automated status changes and automatic line updates based upon changes from SCADA telemetry, combined with retention of status for the customer's non-telemetered devices. Primate also trained the customer's staff to be self-supporting for future display management operations.

Monitoring requirements for power distribution are extremely complex and this facility requires reliable electric power. The majority of the power lines run underground, making accurate monitoring critical for all of their buildings and event sites. Primate's Visualization System will play a key role in the customer's future success.

"For this customer, the operational electric system undergoes frequent changes and reconfiguration to accommodate ever-evolving missions".

*Bill Snavelly,
V.P. of Operations*

"In response, Primate developed an innovative technique that automatically generates a complete network topology".