Amtrak

Amtrak operates a nationwide rail network, serving more than 500 destinations in 46 states on 21,000 miles of routes. Amtrak's Northeast Corridor is the busiest passenger line in North America, with more than 1,700 trains operating over some portion of the Boston-New York-Washington route each day, carrying more than 9 million passengers annually.

The Challenge

In the mid 1990's, Amtrak had installed a large display wall in their New York Penn Station Central Control (PSCC) facility to display their Centralized Traffic Control (CTC) system for the Amtrak and Long Island Railroad (LIRR) route systems. The display wall was driven by rear screen projectors which, after 10 years of use, were no longer reliable or visually clear, and required spare parts that were both expensive and difficult to source.

Amtrak was intent upon resolving a notable problem with their current system which used 30 projectors to make up an integrated wall. In order to replicate their entire route grid on the wall, the CTC system image had to be divided into sections which were then routed to individual computers driving each projector. Each projector's image had to be matched pixel-to-pixel to the next one. This created significant difficulties when any changes were required, because a change in one section affected everything else.

For example, adding a new route that crossed over several sections required a complicated and time consuming reconfiguration of the entire wall.

As part of the upgrade, Amtrak wished to install a new display system for Power Traction management in another area of the operations theater.

The Solution

Activu was selected for its ability to provide dynamic and flexible display that both eliminated current problems as well as provided a greater range of functionality. Since Activu is a networkbased solution, it transports and displays the route grid image as a complete entity, enabling dynamic changes to be instantly displayed. Activu enables greater visibility by allowing control room operators to crop and enlarge specific areas of information during alarm conditions, and these can then be easily shared with other colleagues across the room or in another location.
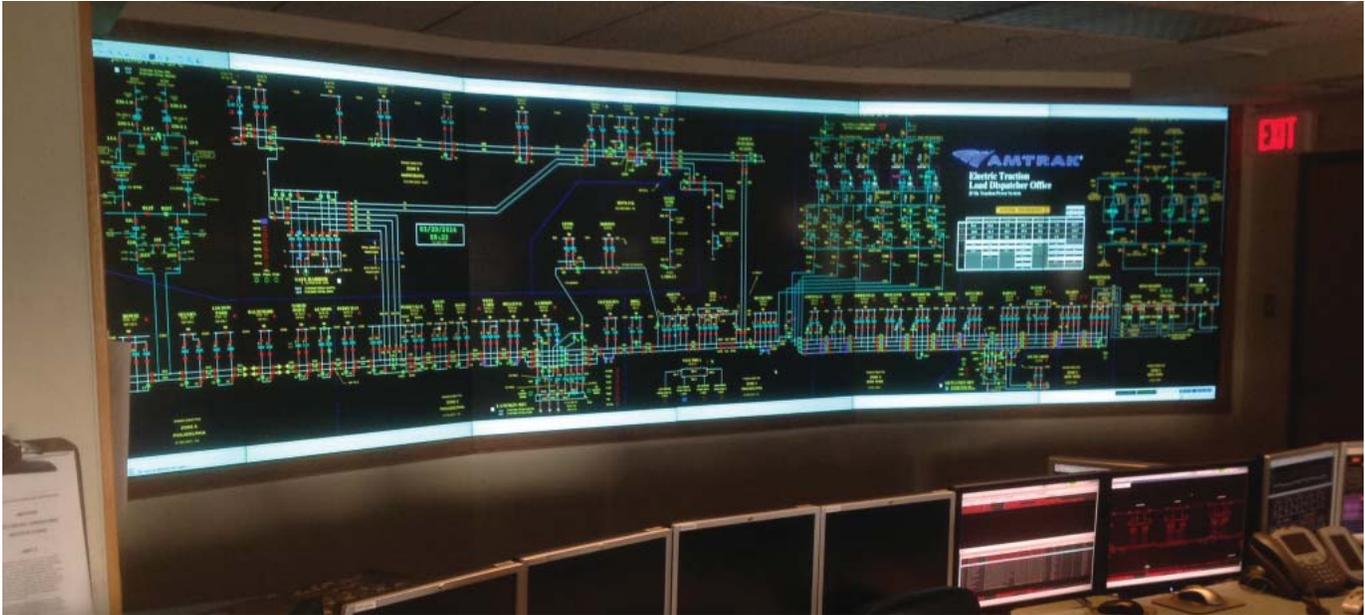
The bulky projector system was replaced by a display wall (of the same size) using Mitsubishi MegaView™ rear projection display cubes with DLP® technology. Due to the low profile of the projection cubes, a considerable amount of space was made available behind the wall for other uses. We installed a large 30 display cube wall composed of 67″ Mitsubishi DLP cubes in the train control area, which was divided two sections: a 2 x 10 wall for the Amtrak route grid, and a smaller 2 x 5 adjoining wall for the LIRR. A separate display wall, consisting of 18 Mitsubishi DLP 50″ cubes, was installed for power traction.

The Activu team coordinated the phased dismantling and removal of the old display wall. The new system was pre-built and staged in company's facility where it was thoroughly tested prior to installation. This significantly shortened the implementation process, sustained efficient and effective operations while it also reduced potential safety risks.