

# Union Pacific Railroad

Union Pacific is the largest railroad in North America, covering 23 states across two-thirds of the United States and linking every major West Coast and Gulf Coast port. Union Pacific provides service to the east through its four major gateways in Chicago, St. Louis, Memphis and New Orleans, as well as operating key north/south corridors.

The railroad is also the only one to serve all six major gateways to Mexico and interchanges traffic with the Canadian rail system.

The landmark Harriman Dispatch Center, housing the main train dispatch and operations activities, was extensively refurbished, with a complete renovation of the main operations floor called the "Bunker". A high tech Morning Briefing conference room was added as well as a Visitors Gallery where multi-media video presentations are made



to four groups. Both of these overlook the main operations floor.

## The Challenge

An exhaustive organizational effectiveness review conducted in 2006 led to the implementation of several initiatives, one of which was to organize personnel into pods

or teams, with each having responsibility for a specific section of Union Pacific's 23,000 mile rail network. Each team would consist of a Train Dispatcher, Corridor Manager, Locomotive Manager and Crew Resource Manager.

This was a major driving force influencing every aspect of the renovation design, and information display requirements specifically: each pod needed their own display area separate from others, with the flexibility to dynamically access, display and re-compile integrated information views as situations unfold.

The daily Morning Briefing sessions represented another requirement because several of the executives and key personnel taking part are located in remote offices. Union Pacific wanted to enhance their remote participation beyond audio conferencing.

## The Solution

Activu designed and built a visualization and collaboration solution which links the Operations floor, Morning Briefing Conference Room and the Visitors Gallery into an integrated system, and also puts a highly powerful yet easy-to-use tool into the hands of users.

pixels. The combination of screen size and a high pixel density enables the display of large quantities of information while retaining visual clarity. By replacing older projection technology, the new display walls allowed Union Pacific to reclaim over 6100 square feet of space without expanding the Bunker footprint.

The facility boasts a high tech Briefing Conference Room (located on a mezzanine level overlooking the Bunker floor) where daily Morning Briefing sessions are held, while also serving as a Situation Room during a crisis. Activu software enables the meeting leader to dynamically access any information (individual windows or compiled views) from the floor and displayed in the conference room. Devices such as the overhead projector, ten small LCD panels integrated into the round conference table, the cable TV tuner and wall mounted 46" plasma panel are also controlled through the Activu system.

With Activu's Remote View capability, personnel in multiple off-site locations benefit from a richer level of participation

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On the Bunker floor, the Activu solution provided a dedicated display space to each pod team. Using the Activu software, each team can dynamically access and display real time monitoring of operations conditions, key business and operational metrics, SCADA systems, train management alert displays, national/ local news and weather, and compiled information views on their team wall. For added ease-of-use, information can be compiled in any combination and user-defined layouts. Since Activu allows operators to create, save and recall any number of these layouts, they have instant access to broad sets of critical information with a single command. The visualization solution designed, built and powered by Activu enhances each team's ability to recognize and respond quickly to changing conditions.

Activu Services installed ten display walls, five on each side of the room: each wall composed of a 2x6 matrix of 67" SXGA+ Mitsubishi DLP™ cubes, measuring roughly 7 feet by 27 feet with a combined resolution of over 175 million

with the ability to remotely view and interact with information being displayed in the Conference room. Activu installed two arrays of six NEC 40" LCD panels in the Visitors Gallery which are used to show a complex, multi-screen video presentation to tour groups about the history of Union Pacific. Activu enables presenters to pull up information shown on any of the Bunker floor pod walls onto the panels for closer viewing by the audience.

As an IP solution utilizing UP's network infrastructure, Activu eliminated the need for miles of cable throughout the Harriman Center, resulting in significant cost savings and reduced complexity.

Activu's installation process was flexible to conform to the construction schedule. In the early stages, the system was pre-built and tested at Activu's facility prior to a phased installation at the Harriman Center as the renovation progressed.