

CASE STUDY

DEPARTMENT OF
TRANSPORTATION

THE STORY

Land Mobile Radio (LMR) coverage may have its limitations, but it has a proven track record. Over the decades, governments of all sizes have budgeted significant funds to keep these radio systems capable and ready for anything. That's why when the Department of Transportation (DOT) needed to connect the wide area land mobile radio systems serving their headquarters and several other regional offices into one system, a "forklift" complete overhaul of the entire system was not an economical or a realistic option.

INDUSTRY

Transportation

APPLICATION

Communications Interoperability
Wide Area Communications

THE CHALLENGE

Each of the DOT's regions are served by several VHF repeaters throughout their districts. They are stand-alone radio sites providing coverage to the various propagation areas. However, they were unavailable to dispatch or cross-connect across regions. Not ideal in a large state with an extensive highway system.

The DOT wanted to gain the ability to dispatch – from DOT headquarters and/or from any of their regional offices – to multiple repeater sites in any region. Additionally, the DOT wanted field offices to have the ability to dispatch or to cross-connect multiple radio sites across regions when increased radio coverage was needed, such as for highway incidents, maintenance, and inclement weather. This aspect was critical, as the DOT did not have 24-hour dispatch or the ability to crosspatch the systems from their headquarters or regional offices, nor could they dispatch state-wide due to the limited radio coverage.

STORY

The DOT needed to connect their headquarters and remote offices into one system. A "forklift" complete overhaul of the entire system was not an economical or realistic option.



Challenge

Dispatch or cross-connect across regions.



Solution

Provide wide area interoperability with dispatch.



Benefits

Integrate existing systems.
Radio agnostic.

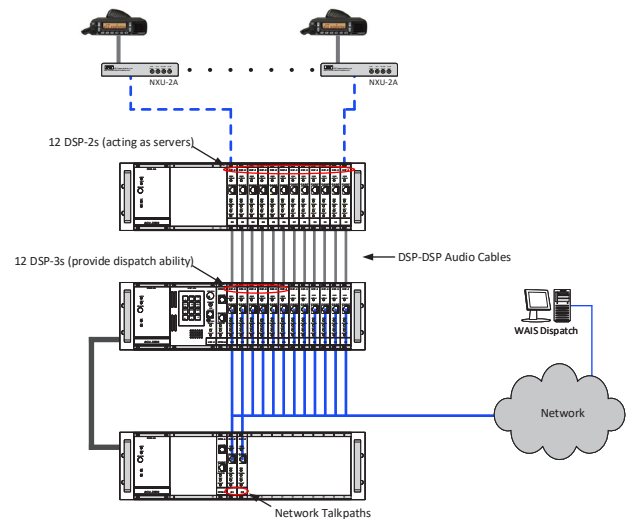
THE SOLUTION

Wide area interoperability with dispatch. JPS provides several gateway solutions, but in this case the DOT chose a JPS WAIS Enterprise system that uses JPS Radio over IP (RoIP) to digitize radio audio to be sent over a network. The solution was phased in over time, at their own pace and with much less expense – especially when compared to a full overhaul. Headquarters and the regional offices have WAIS workstations providing command and control over IP networks. Dispatching to one or more sites as well as cross-connecting from regional and/or headquarters workstations is now possible. DTMF tones from field personnel radios can also provide crosspatching multiple sites for expanded radio coverage with that region's repeater sites.



THE RESULT

At their own pace and without the upheaval or expense of a complete overhaul or interruption to the fully functional radio system repeaters and regions, the DOT gained exactly what it needed: a more flexible dispatch and cross-connection solution to connect the regions with multiple repeaters in the wide area radio system.



KEY BENEFITS

- + Add wide area communications capabilities.
Integrate existing systems.
Radio agnostic.
- + Reduce reaction time in cases of emergencies.
- + Provide monitoring and remote access to hardware in remote locations.