

Enterprise Services

Telecom Infrastructure Design and Support

Customer: Department of Transportation (DOT) | Period: 5/12/2006 – 5/12/2008

Customer Profile

The United States Department of Transportation (DOT) is a federal Cabinet department of the United States government concerned with transportation by sea, air, and land. DOT has been one of the fastest growing agencies of the U.S. federal government. Their mission is to keep the traveling public safe and secure, increase their mobility, and have the nation's transportation systems contribute to economic growth. It does this through the 60,000 employees that comprise the Office of the Secretary of Transportation (OST) and its operating administrations and bureaus.

Business Challenge

DOT has occupied its current headquarters location on Seventh Street in Washington, DC for 30 years. This location has been the site of the largest concentration of DOT employees, as well as its facility for all networks and IT assets that support the Office of the Secretary of Transportation and its operating administrations and bureaus. With increases in the Department's overall responsibilities through the merger of new agencies into the Department, the number of DOT employees has grown, as have the IT infrastructure support requirements.

Over the past five years, DOT has conducted a number of studies regarding its projected growth. DOT determined that its current facility would no longer meet its future needs and sought a new location for its employees and all IT resources.

The move to Southeast Federal Center at M Street and New Jersey Avenue in Washington, DC will be the largest single move of a federal agency in 30 years, calling for massive infrastructure planning and build-out of DOT's telecom operations. Fail-safe telecommunications systems are vital to DOT, which has a number of national security roles through some of its bureaus, such as the FAA, the Maritime Administration, and the Pipeline and Hazardous Materials Safety Administration.

Our Solution

As part of a much larger infrastructure planning and design scope of work for DOT, Triple-i planned and managed the build-out of DOT's telecommunications operation. Triple-i completed this project in two and a half years instead of the anticipated five, and came in under budget.

The planning and build-out of the telecommunications operations of a Cabinet level agency is a vitally important undertaking. The effort represents one of the largest telecommunications planning and implementation projects undertaken by a federal agency to date. The build-out had to factor in DOT's 40,000 telephone numbers and 4 exchanges that produce 37,000 dial tones. Ultimately, the system will benefit 5,600 DOT staff in its headquarters alone, in addition to personnel in DOT's Operating Administrations that will interact with it on a regular basis or in crisis situation.

Triple-i contributed important subject matter expertise and practical solutions to DOT during the infrastructure planning and design phases of this project and determined that DOT's telecommunications must not only be state-of-the-art, but must also factor in

Why Triple-i?

Qualified civilian and defense industry experience with enterprise services and telecom infrastructure

Secret and top secret security clearance

Implementation of leading-edge telephony technologies

Planning and redundancy systems for operational threats

Systems administration for migration and consolidation

A Service-Disabled Veteran-Owned Small Business

future and anticipated technologies. For example, the build-out called for the core of DOT's switch to be an IP-based PBX phone system—the latest technology—that will be able to interact with any type of telephony platform. Another example is that the infrastructure was designed to accommodate 200,000 phone lines at any time in the future, should DOT need them.

DOT's infrastructure build-out involved more than just making sure that each desk had a telephone line. Triple-i also planned and built out:

- TDM phones and IP phone sets for all staff
- 238 different circuits throughout the building
- Infrastructure and facilities for satellite communications operations
- Cable TV networks
- Video conferencing (VTC) capabilities

Fail-safe and back-up systems (otherwise known as redundant systems) were a critical factor in DOT's telecommunications build-out. Triple-i recommended and installed a Carrier Class Switch System, which provides a dial tone even when the power is down. This means that the phones are always on at DOT and that the department's telecommunications would be minimally affected by a man-made or natural disaster. The system Triple-i designed has backed this up with 70,000 pounds of batteries, which ensures that the system is up all the time.

Triple-i also built out a private SONET ring to reach some of DOT's bureaus that come into play during emergency situations, such as FAA. The SONET ring features dual rings with 4 nodes and is restricted solely to DOT traffic. This keeps the lines open when they are most needed and free from non-essential communications. It also saves taxpayers' money because it is owned by DOT and the agency doesn't have to lease space from a private company.

In keeping with the full planning and anticipation of any eventuality that may impact DOT, Triple-i understood that the building's blast-proof design prohibits first responders, security personnel, and executive protective detail from receiving normally transmitted cellular, UHF, and VHF signals, rendering them completely cut off. To solve this, Triple-i built out a distributive antenna system throughout the building to carry the signal to these important personnel. This also means that all staff will be able to receive mobile phone calls.

Other Customers

In addition to providing telecom infrastructure services to DOT, Triple-i has also provided services such as systems administration, interface development, portal and oracle development, storage area network (SAN) utilization services, help desk support, Web design and development, software development, and independent verification and validation to various Department of Defense agencies.

To find out more about these and other contract services, visit our website at www.iiinfo.com or contact sales@iiinfo.com.