



## WTC Transportation Hub | CASE STUDY

# World Trade Center Transportation Hub's Mass Communications System from AtlasIED Caters to 250,000 Commuters and Tourists Daily

Versatile and massive—that's the only way to describe the AtlasIED communications system installed by Norcon at the newly rebuilt World Trade Center transit facility. As part of a multi-billion-dollar project, the Customer Information System enabled by AtlasIED's GLOBALCOM.IP platform stretches underneath rivers and across state lines from New York to New Jersey. The system communicates a wealth of general audible and visual information to the millions of commuters and tourists who visit the World Trade Center (WTC) Transportation Hub annually. It also supports critical and emergency announcements across the venue.

"The sheer magnitude and logistics of this project, both in physical size, degree of design and configuration, and the amount of information dispatched are remarkable," says Gerry Scheer, Norcon VP/PM. "The AtlasIED GLOBALCOM.IP platform had the brains and brawn to handle every communications task throughout the 80,000 square-foot, five-story transportation hub, numerous concourses and transit lines, 290,000 square feet of retail and dining space, and various interconnecting memorial sites that pay tribute to the thousands of people who lost their lives in the attacks of September 11, 2001."

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**FOR OVER 65 YEARS, NORCON COMMUNICATIONS HAS BEEN THE CHOSEN PROVIDER FOR THE MOST CHALLENGING COMMUNICATION SYSTEMS. CLIENTS LIKE THE US OPEN, THE YANKEES, THE METS, LAGUARDIA AIRPORT, AND JFK AIRPORT HAVE TRUSTED THE HIGH LEVEL OF QUALITY AND SERVICE THAT NORCON PROVIDES.**

## GLOBALCOM Caters to Diverse Communications Requirements

Norcon delivered the GLOBALCOM.IP system to meet the needs of the venue's large and varied audience of 250,000 daily commuters and pedestrians along with millions of annual visitors from around the world. The information delivered by the GLOBALCOM.IP system helps streamline travel, guide foot traffic, and ensure safety. The system also provides helpful information about the facility and its ancillary leisure areas, including the station's main attraction, the architecturally stunning Oculus structure of the main station house.

Throughout the day, the GLOBALCOM.IP system inclusive of connected processors, amplifiers, communication stations, input devices, and speakers and displays provides public address announcements, visual paging, electronic wayfinding, platform information time displays, and general information. Norcon outfitted the facility with 10 computer workstations running AtlasIED's Director system management and 14 AtlasIED microphone-equipped communications stations from which these varied forms of messaging can be initiated. To simplify the initiation process, audible and visual communications are integrated and can be prioritized and scheduled by system operators for dispatch to specific zones.

## Quality Assurance of Messaging Through Ambient Sensing Mics

The building features an incredibly diverse set of acoustical environments. Upstairs, pedestrians move through 112 stores constructed of large amounts of glass and metal. Below the ground, there's a constant flow of visitors and transit departures and arrivals. All of this leads to particularly noisy and varied conditions. To ensure that messages are clearly heard in all of these locations, Norcon installed 39 AtlasIED Ambient Noise Sensors strategically throughout the facility. Based on readings collected by the sensors, the GLOBALCOM.IP system adjusts the volume dynamically to compensate for the ambient noise level. As some areas of the hub are louder than others, Norcon assigned various speaker zones their own set of sensors. This way messages can play at a louder volume in the transit area than in the retail space. To further enhance the audio intelligibility, system operators can configure the equalizers of the GLOBALCOM Digital Signal Processor directly from any workstation.

## Maintaining Mission-Critical Communications

"The efficiency of travel and the safety of visitors were of the utmost importance in this project," says Scheer. "The type of communications to ensure both are considered mission-critical, and therefore required a system of advanced capabilities and an integration team that specializes in transportation markets." GLOBALCOM supports the complex messaging requirements of the WTC

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#### What is ESI?

*AtlasIED Enterprise Solutions Division (Transportation and Large Venue) has strict requirements for channel partner qualification. Norcon Communications has obtained the highest level known as Enterprise Systems Integrator or ESI. They have been trained on hardware, software, and applications management of our flagship Public Address System, GLOBALCOM.IP. Since transportation projects such as airports, rail, subway, and marine terminals required the highest level of systems integration and interface skill, we have developed a training and qualification to match. We currently have 10 ESI partners throughout the USA that must qualify based on financial, time, tenure, number of projects completed in addition to these training requirements.*



Transportation Hub, along with self-monitoring and fault-tolerant features that identify system issues and facilitate fast resolution. Norcon was able to leverage its years of experience designing, installing, and maintaining mass communication systems for large transit facilities, along with the exceptional functionality of GLOBALCOM to make this project a success. It's key projects like this that make Norcon an ESI (Enterprise Solution Integrator) recognized vendor from AtlasIED.

For additional assurance of fault-free system operation, Norcon built redundancy into the WTC Hub's GLOBALCOM system, just as it does with all transportation projects. "System malfunctions and downtime are not an option when it comes to travel. These are mission-critical systems and tie into life safety and emergency evacuation," Scheer says. "For this reason, we utilized three sets of redundant servers, some of which run AtlasIED's GCK software. Should one of the main communications servers go offline, the back-up or lifeline server takes over." Further, to help ensure the safety of tourists and travelers, Norcon integrated the facility's fire alarm system with GLOBALCOM. In an emergency situation, the alarm system automatically takes over the GLOBALCOM communications system, delivering important Fire Alarm Voice Evacuation announcements to speakers within the affected areas.

## A Monumental Success

Under development for more than a decade, the World Trade Center Transportation Hub represents a significant addition to New York City and adjacent communities. It serves the travel needs of millions of people and provides a stunning architectural monument to the city's resilience. Norcon's and AtlasIED's contribution to the multifaceted GLOBALCOM mass communications system enhances the environment by helping to ensure safe, efficient, reliable travel to commuters and an enjoyable, secure leisure experience to tourists. "We spent two years implementing the GLOBALCOM system as the hub rolled out in phases," Scheer says. "Given our huge investment in time, resources, and engineering expertise, this project is one for the record books."

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**UNDER DEVELOPMENT FOR MORE THAN A DECADE, THE WTC TRANSPORTATION HUB REPRESENTS A SIGNIFICANT ADDITION TO NEW YORK CITY AND ADJACENT COMMUNITIES. THE BUILDING FEATURES AN INCREDIBLY DIVERSE SET OF ACOUSTICAL ENVIRONMENTS.**

