

# Case Study

## Environmental and Structural Monitoring



**Customer:** Dulles Int'l Airport

**Web Site:** <http://airport-dulles.com>

**Country/Region:** United States

**Application:** Real-time data transport across multiple wireless instruments

### Customer Profile

Washington Dulles International Airport is a public airport located 25 miles (40 km) west of the central business district of Washington, D.C., in Dulles, Virginia. It serves the greater Washington, D.C. metropolitan area. In 2007, Dulles saw 24.7 million passengers through the airport. The airport occupies approximately 11,000 acres west of downtown Washington, DC.

### Products Utilized in Solution

Intuicom Navigator™ II

Intuicom Communicator™ II

Intuicom CommPro™ software



## Automatic Deformation Monitoring at Construction Site Requires Reliable Communication Without Interfering with Airport Instruments.

### Situation

A major expansion effort at Washington DC's Dulles International Airport included new parking facilities, terminals, towers, runways and an underground train system to transport passengers throughout the airport. The extensive tunneling and construction was taking place in close proximity to active taxiways and airport buildings that were to remain operational throughout the construction project.

It was decided that a real-time deformation monitoring system was required to insure that the project was completed safely and without disruption to existing infrastructure. Leica Geosystems provide a deformation monitoring systems that utilized robot total stations that took continuous real-time measurements to strategic locations throughout the facility. These measurements and additional data utilized an

Intuicom wireless network to consistently and reliably manage the mission critical data transport across the project area.

### Communication Solution

Leica Geosystem's deformation monitoring system took continuous real-time measurements of strategic locations throughout the facility. These measurements and the data generated utilized an Intuicom wireless network based upon Navigator II transceivers to consistently and reliably manage the communications across the project area. Data was processed and monitored at a central location where it could be accessed by airport, construction or engineering personnel. In addition, the system provided automated alarms when movement exceeded pre-determined thresholds.



# Intuicom Case Study

## Automatic Deformation Monitoring at Construction Site Requires Reliable Communication Without Interfering with Airport Instruments.

### Results

Each Navigator II carries the commands from the software to the robotic instrument and then returns the instrument's measurement data in real-time back across the network to the processing location up to several miles away. The process is then continued at this instrument while it is also simultaneously taking place at several other instruments simultaneously. The Navigator II utilizes its proprietary Adaptive Multipoint Protocol™ to efficiently manage the data transport across the network. The robust RF performance of the Navigator II provides for effective data transport despite the airport's challenging RF environment and does so without interfering with any of the airports other communications or instruments.