

IN-BUILDING RADIO COVERAGE TESTING



Integrator Saves Time and Money Testing Public and Life Safety Systems

A Fortune 100 company with a 2.3 million-square-foot manufacturing and data center facility needed to improve its campus-wide, in-building, Bi-Directional Amplifier/Distributed Antenna System (BDA/DAS) due to a lack of critical public safety and private two-way radio coverage in key areas. The system serves both the operation-critical, on-site 900 MHz 'Life Safety' security and manufacturing communication system, and the local jurisdiction's P25 700 MHz public safety system for external fire and police emergency response. Day Wireless Systems, a wireless integration company serving California, Idaho, Oregon, Washington, and Wyoming, received the contract to build out the new BDA/DAS.

"We were able to integrate both 900 MHz and 700 MHz into a single DAS for a more cost-effective solution that simplified the customer's operations," stated Jason Chambers, Day Wireless Area Service Manager.



In-building Baseline Testing

Day Wireless was committed to delivering equal or better coverage with the new DAS than the old system. However, there was no historical data available to make a comparison. Day Wireless had recently purchased the PCTEL in-building Public Safety Network Testing Solution, which streamlines coverage testing with a fast, accurate, repeatable process. They decided to conduct a baseline coverage test of the old system. Chambers explained the result of the test: "There were quite a few spots where either the DAS wasn't covering, or there was an issue with the existing DAS, so they weren't getting the 900 MHz life safety coverage needed. The baseline test made it easy to demonstrate the improvements achieved with the new system we installed."

Efficient Testing and Optimization

Day Wireless was given two days, during a scheduled plant shut down, to bring the new DAS system online. Testing coverage across two different frequencies on a system of this size using a manual process can often take 20 man hours. With the PCTEL equipment, it took 1 tech 5 hours, reducing the man hours by 75%. Chambers explained, "Cutting it over [to the new DAS] was one thing, but testing it and validating it, that's a whole other story. And what we found was as soon as we'd cut it over, we were able to go around and do spot checks or testing and provide feedback to a technician to optimize that particular area of coverage. That was key to the success of this project, and us being able to turn it around."

"We did the coverage testing in about 25% of the time planned."

– Jason Chambers, Day Wireless Area Service Manager

Timely, Accurate Information

PCTEL's SeeHawk® Touch software provides instant on-screen results, and printable reports are available within minutes of testing. "With the PCTEL equipment, there is no room for error in transcription," explained Chambers. "This greatly improves confidence in the accuracy of results over the traditional process, where you have a floor plan with a bunch of grids on it and then a spreadsheet of hand recorded signal levels for each of the grids."

Fast Delivery of Certification Reports

When using a manual coverage test process, it usually takes 3 days to complete each report for a project of this size. Using PCTEL equipment, Day Wireless delivered both the life safety and public safety certification acceptance reports the next day. The public safety report provided to the Authority Having Jurisdiction (AHJ) contained 110 pages of data, with additional information such as extracts from the fire code, test procedures, and tech certifications. "The AHJ loved that he was seeing a direct extract from the PCTEL test equipment," said Chambers. "It is mapped right there on the grid and included in one report." The facility met requirements for occupancy related to public safety radio coverage 17 days ahead of schedule.

Game Changer – A Trusted Solution

"[PCTEL's testing solution] really has changed the way we do business, and not only just how long it takes to do things, or generate reports, but the confidence we have when we sit down with an AHJ or customer," stated Chambers. "We've started to use it more and more, not just for system coverage tests, but to help determine if a system's needed. It helps our engineering department to do pretesting on a retrofit or a remodel of a building. We can give our customers 'no kidding' data on what you should anticipate getting: the areas that need coverage, and the areas that are doing fine with coverage."

PUBLIC SAFETY NETWORK TESTING SOLUTION



PCTEL's Public Safety Network Testing Solution is a grid-based testing system that streamlines the way engineers and inspectors test radio coverage for cellular, public safety and private life safety networks. For public safety coverage, it complies with local jurisdiction codes, National Fire Protection Agency standards (NFPA 1221) and International Fire Code (IFC 510). The solution's tablet-based SeeHawk® Touch software and IBflex® scanning receiver replace a manual process with accurate indoor and outdoor walk test data collection, performance analysis and reporting that improve accountability while saving time and money.



PCTEL, Inc.

T: +1 301 515 0036 | pctel.com | NASDAQ: PCTI

Learn how you can improve accountability while saving time and money using the Public Safety Network Testing Solution at:

> pctel.com/public-safety-testing-solution