

# Case Study

## University of Oregon's Autzen Stadium

### The Opportunity

When it comes to making sports fans happy, it takes more than a win by their favorite team - an enjoyable atmosphere and good food and drinks is also important. Today's sports fans expect to share the experience real-time with their friends, family and social networks and the wireless networks are the enablers. These networks are the key to access, speed and the ultimate user experience. Around the world, sports venues are enhancing the fan experience by expanding mobile wireless coverage; ensuring it is as consistent and reliable as possible.

The University of Oregon's Autzen Stadium, an outdoor football stadium located in Eugene, Oregon, north of the university campus, is the home field of the Oregon Ducks of the Pacific-12 Conference. With an official capacity of 54,000, and a current streak of 101 straight sellouts dating back to the 1999 season, it is important for Autzen Stadium management to maintain the facility and meet the standard's set by the best sports facilities in the world. Along with recent structural upgrades and renovations, the University required an in-building wireless system integrator to make significant technology enhancements that included designing a Distributed Antenna System (DAS) solution for Verizon Wireless that was to be deployed at the stadium. The overall goal of the project was to improve mobile wireless coverage, call reliability, and provide more consistent network access for the stadium and all of its occupants.

As such, the University underwent a formal vendor bidding process, putting forth a request for proposal that required each of the interested companies to list out its service offerings and features.

As part of the process, Verizon Wireless commissioned a well known DAS Integrator to design and a long-time industry DAS Vendor to install a Distributed Antenna System (DAS) throughout Autzen Stadium. The DAS Vendor's equipment was recommended because it is a premier solution for both the low-power and high-power needs throughout the bowl, interior, and exterior of the 48-year-old venue.



Upon being selected for the project, the DAS Vendor looked to Westell to support its DAS with the Westell ClearLink Universal DAS Interface Tray (UDIT) solution, an active radio frequency (RF) DAS conditioner and management system that optimizes signal performance between a small cell or high power base station transceiver (BTS) and a DAS. By providing active versus passive DAS, Westell trumps competitors by using fiber optics to move the signals long distances before going into coaxial cable for the final transmission, making the process scalable and extremely flexible.

The DAS Vendor, along with the University also valued Westell's commitment to customer service and motto of "we don't install the equipment and forget about it."

The Westell ClearLink UDIT system provides consistent, comprehensive remote monitoring of DAS alarms, RF parameters, and configurations via a web-based graphical user interface (GUI). This helps improve response time to issues, maintain operating efficiency, and improve technician productivity.

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### The Solution

The Westell team with assistance from Verizon Wireless engineers and the DAS integrator, began the process to facilitate the distribution of a limited number of operator BTS feeds (sectors) to multiple DAS zones.

Autzen Stadium presented a unique challenge to Westell due to its size. The team had to split sectors 8 to 1, meaning Westell could take one signal and divide into eight zones, with splits of 2, 3, 4, 5 and 7-ways adequately supported. Prior to this project, the 4 to 1 ratio was all that could be done in a split; the 8 to 1 ratio had never been accomplished before, thus marking a great achievement for Westell. By using multiple passive power dividers installed in rack-mountable enclosures, space and convenience were optimized. Coupled with the DAS and the Westell's ClearLink UDIT, the ZMI's were a hit with all parties involved in the installation and commissioning of the system.

Additionally, the compact design of Westell's UDIT minimizes rack space required, which can be critical in installations where space is limited, such as in the telecom room for Autzen Stadium where four major carriers need to share space. The installation of Westell's UDIT resulted in an overall space savings of 60 percent.

Finally, the ClearLink UDIT is also Network Equipment Building System (NEBS) compliant, ensuring reliability for long-term use in all environments.

*"In-building wireless deployments are growing substantially as mobile devices, most notably smartphones, become an increasingly pervasive communications tool. What's more, users increasingly demand quality and reliable services wherever they go - this includes sporting events, malls, the grocery store, you name it. Westell's solution allows staff to monitor the stadium and observe traffic patterns remotely, improving network safety and significantly reducing site visits and operating costs." - Mark House, Westell*



### Westell ClearLink UDIT Highlights:

- Web-based graphical user interface (GUI) to provide comprehensive remote monitoring of DAS alarms, RF parameters and configurations
- Built-in spectrum analysis and power meters
- Permits up to 12 Point of Interface of POI modules per chassis
- Provides up to a 60% space saving over passive solutions
- Plug and play POI is hot swappable with automatic detection

### The Results

The University of Oregon's Autzen Stadium system is fully commissioned and running, providing University of Oregon Ducks fans with the mobile coverage they need to text, tweet, Snapchat, Facebook and stream while connected to their smartphone devices.

In addition to the tremendous benefits that the DAS and Westell's ClearLink UDIT solution delivered to the stadium, which include cost- and space savings, the collaboration between the multiple vendors and partners resulted in a successful technology upgrade for consistent, enhanced mobile Internet service.

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As the network needs expand for Autzen Stadium, a stadium with additional room and poised for expansion, Westell's ClearLink UDIT will continue to provide the scalability and flexibility required.

*"In our ultra-connected society, at football games, many fans are attached to their phones, posting photos of the action, capturing the perfect 'selfie,' commenting on the game via social media outlets; or obtaining the latest stats, replays and scores...sometimes all of the above. The installation of this new DAS system further enhances this technology capability by improving mobile coverage and increasing network access, greatly improving the game day experience for each Oregon Duck fan," concludes Rick Good Senior Vice President, In-Building Wireless*

## About University of Oregon's Autzen Stadium

Oregon's Autzen Stadium, consistently ranked among the nation's top 10 venues to watch a college football game, only got better in 2002. Now in its 45th season, the facility, which originally was completed for a remarkable bargain of approximately \$2.5 million in 1967, underwent a \$90 million facelift prior to the 2002 season that not only added 12,000 seats and 32 luxury boxes to the stadium's south-side skyline, it improved the amenities that allows spectators to enjoy a better game-day experience in one of the loudest collegiate stadiums in the country. The renovation encompassed much-needed restroom and concession facilities, a 10,000-square foot entertainment center (Club at Autzen), widened walkway and concourse areas to better accommodate the increased capacity from 41,698 to 54,000 fans, as well as new ticket distribution centers and guest services windows to cater to the needs of its patrons. Learn more at [http://www.goducks.com/ViewArticle.dbml?DB\\_OEM\\_ID=500&ATCLID=205174790](http://www.goducks.com/ViewArticle.dbml?DB_OEM_ID=500&ATCLID=205174790).

## About Westell

Westell Technologies, Inc. is a leading provider of in-building wireless, intelligent site management, cell site optimization, and outside plant solutions focused on innovation and differentiation at the edge of communication networks, where end users connect. The Company's comprehensive set of products and solutions enable service providers and network operators to improve performance and reduce operating expenses. With millions of products successfully deployed worldwide, Westell is a trusted partner for transforming communication networks into high quality, reliable systems.

For more information, please visit [www.westell.com](http://www.westell.com).

