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MeshDynamics Scores with Outdoor Sports Network

Third-Generation WiFi Wireless Mesh Powers Scoreboards Bringing Fans Closer to the Game

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SANTA CLARA, Calif.--(BUSINESS WIRE)--Every week during the season, fans gather at a different outdoor venue for events scheduled by a global professional sporting organization. Besides a glimpse of their favorite players, fans want access to constantly updated scores and standings. The sporting organization positions large scoreboards around the event to provide these statistics, but connecting the displays to the scoring computers required a high performance wireless network that was fast to set up and easy to manage.

Dozens of MeshDynamics MD4000 WiFi Wireless Mesh nodes are now being deployed each week around the event locations, creating a high-performance, low-latency and low-jitter infrastructure connecting the scoreboards to powerful computers processing scoring data from around the venue. The sporting organization maintains multiple sets of nodes: while one is being set up and used, another is in transit to the next event.

High performance and fast set-up key to application

When the sports organization began to consider a change from the existing First-Generation wireless mesh supplier, higher performance was the goal. But because the equipment must be installed, tested, and operated for one event, and then removed and transported weekly to the next location on the schedule, fast set-up was mandatory. Although the network was initially intended to support only a single application, the sports organization was pleased to find that the MeshDynamics network installed even more quickly than the First-Generation WiFi mesh it was tested against and will also provide the higher performance needed to support additional new applications.

MeshDynamics MD4000 Wireless Mesh nodes use dynamic distributed radio intelligence technology that allows each node to choose its best channel and connection path to minimize interference from other MeshDynamics nodes or external interference sources. "Multi-radio Third-Generation wireless mesh is a must for demanding data and video applications," noted Francis daCosta, Founder and CTO of MeshDynamics. "But where mobility or fast set-up is also required, only wireless mesh with intelligent channel management and dynamic topology makes sense."

This is just one of numerous competitive situations where MeshDynamics has won against a deployed competitor or in a competitive head-to-head test. "When we have the chance to compete, we usually win," claimed daCosta. "The performance gain over earlier technologies is just that compelling for the typical outdoor enterprise."

Managing spectrum in a busy environment

The outdoor scoreboards are distributed around the venue so that they may be viewed from many vantage points. Depending on the topology of an individual location, from 15 to 30 wireless mesh nodes are needed to provide complete coverage. In order to avoid the most common interference sources and to provide access to the largest number of unlicensed channels, 802.11a WiFi at 5.8GHz is used for all connections. MeshDynamics wireless mesh nodes constantly monitor the RF environment, seamlessly moving segments of the network to new channel maps if necessary. The integrity and timeliness of data delivery is critical to fans, broadcasters, and corporate partners, so it's important that the MeshDynamics equipment manages very congested RF Spectrum more reliably than did the sports organization's earlier solutions.

And while it's obvious that there are no wired Internet connections at an outdoor sporting event, even AC power can be in short supply. The sporting organization appreciated the small footprint of MeshDynamics' MD4000 wireless mesh nodes. The units are physically small and their power draw is low, so some are powered from batteries and solar cells, helping speed network deployment.

Expanding future applications on MeshDynamics wireless mesh infrastructure

While the primary application today is connecting the outdoor scoreboards, the sporting organization plans to move many of its wireless applications away from costly licensed spectrum and onto the MeshDynamics MD4000 wireless mesh networks. Consolidating all of the wireless connectivity on the MeshDynamics wireless mesh will save recurring costs and set-up time while increasing reliability.

Pricing and availability

MD4000 family of third-generation wireless mesh node prices begin at \$2400 and the product is shipping today.

About MeshDynamics

MeshDynamics delivers one of the only third-generation wireless mesh networking solutions for high-performance outdoor data, voice, and video networking, providing Wireless for the Outdoor Enterprise™. Based on sophisticated dynamic channel-agile networking algorithms, MeshDynamics' MD4000 family of Structured Mesh™ wireless nodes deliver very low-latency and -jitter performance, even over multi-hop topologies where many earlier generation wireless mesh networking products fail. MeshDynamics' products are in use worldwide in industrial and hastily-formed networks, homeland security/defense installations, transportation applications and metro/municipal networks. MeshDynamics, Inc. is privately held and headquartered in Santa Clara, CA.

Contacts

MeshDynamics, Inc.

Byron Henderson, 408-398 6395

news@meshdynamics.com