

Major Conference Supports Attendees with Wireless Net

Intel kept its annual developer meeting online and productive using a Cisco Unified Wireless Network solution.

EXECUTIVE SUMMARY	
INTEL	<ul style="list-style-type: none"> • Industry: High Tech • Location: San Francisco • Number of Users: Approximately 6000
BUSINESS CHALLENGE	<ul style="list-style-type: none"> • Deliver wireless Internet access to over 6000 attendees who use many different devices • Offer a stable wireless environment for demos of new devices with embedded Wi-Fi chips • Enable attendees to stay productive at a three-day technology event
NETWORK SOLUTION	<ul style="list-style-type: none"> • Intelligent RF and network management and wireless services provided by wireless LAN controllers • One-console network management technology to manage RF resources and simplify deployment • Spectrum analysis technology to locate, identify, and remedy RF interference
BUSINESS RESULTS	<ul style="list-style-type: none"> • Reliable, pervasive wireless network provided in a challenging, high-density client environment • Network access provided to over 5000 unique devices with nearly 1000 simultaneous devices at any given time • High satisfaction reported by show attendees

Business Challenge

Large-scale events like conference and trade shows have traditionally been difficult for wireless networks to handle. First, attendees generally occupy the full extent of a limited geographic space, which means the wireless network must be densely deployed to be reliable. Second, the wireless network must support a variety of device types including laptops, handheld devices, and phones, from numerous manufacturers running a variety of device driver versions. Third, wireless networks are mission critical for these events: In addition to supporting the needs of attendees, these networks also provide connectivity for concepts and demos that are presented to customers, partners, press, and analysts. Any faults in the show network can be seen as a problem with the product itself and may damage the messaging that those running the event are trying to send.

When Intel hosted its annual Intel Developer Forum (IDF) in August 2008, the company needed to provide a robust network that could meet the event's demands. The IDF show network would need to be pervasive, delivering wireless connectivity to more than 6000 attendees, along with show vendors and

staff, throughout the 500,000-square-foot Moscone Center in downtown San Francisco. Certain areas, including a new blogger lounge, would need Wi-Fi service available to hundreds of attendees in a confined area. In addition to providing Internet access for attendees, Intel also required the WLAN to power live interactive demonstrations on the exhibition floor. The network needed to be highly resilient and fault tolerant in order to provide reliable, constant connectivity.

Network Solution

Intel employed the Cisco Unified Wireless Network solution to power the IDF wireless network. Connectivity was provided by a mix of Cisco Aironet access points; next generation APs served areas of high client density while others provided supplemental coverage. Because a large number of users needed coverage in a limited space, approximately 70 access points were used to provide Wi-Fi connectivity, with 10 access points used to cover the keynote auditorium alone.

The high density of access points required for the IDF network was enabled through Cisco M-Drive technology. Cisco M-Drive managed radio resources and allowed the IDF network to automatically adjust radio output power and channel selection to adapt to any changes in RF conditions without significant administrator intervention. It also automatically configured the network to allow clients to prefer 5 GHz channels. With more channels available for the Wi-Fi deployment, the use of 5 GHz channels plus the ability to have clients prefer this medium were crucial to providing a highly scalable network for a large number of clients, particularly in the crowded keynote area.

The IDF network also had to deal with sources of RF interference. The notoriously challenging environment of conferences and trade shows present various sources of interference, some of which can't be controlled. This interference can come from many different sources including non-Wi-Fi devices like microwaves, Wi-Fi equipment brought in by show exhibitors or attendees, and wireless signals from the surrounding area, particularly in downtown urban environments like that at the Moscone Center. Cisco Spectrum Expert spectrum analysis technology allowed administrators to monitor the RF spectrum for sources of interference, easily determine the interferer type, and locate its source to remedy the situation.

Because a wireless deployment is only as good as the wired network it is connected to, maintaining a reliable, fault-tolerant connection to the wired show network was also imperative. Here, Cisco Wireless LAN Controllers established a robust platform for delivering WLAN connectivity across the Moscone Center through the use of multiple, fault tolerant uplinks to the show's wired network.

The IDF network administrators managed the show network using the intuitive, holistic management interface of the Cisco Wireless Control System. Intel staff could monitor network statistics, as well as adjust controller and access point configurations, from a single console. The display gave a graphical view of the coverage provided by the show network and helped staff easily identify issues needing to be addressed.

The wired portion of the IDF network relied on Cisco Catalyst switches with Power over Ethernet (PoE) to connect the supplemental access points. Cisco power injectors with enhanced PoE were used to power the access points in high-density areas. More Cisco Catalyst switches powered the network distribution layer and provided core switching and routing services.

Business Results

The Intel IDF wireless network easily provided the reliability, scalability, and performance required to meet the demanding needs of the Intel Developer Forum. More than 5000 unique devices were connected over a three day period with a peak of close to 1000 users connecting simultaneously. Users were able to share videos, conduct web chats, upload files, and use other applications on the network throughout the duration of the conference. Media outlets were able to take advantage of the show's wireless network to provide accounts of what was happening at IDF across the globe in real time through live blogging. The wireless network also easily supported product demonstrations both during the live keynote and in the technology showcase.

Intel's business goals were easily met due to the sophistication of the Cisco Unified Wireless Network. Most importantly, Intel was able to deliver a rich wireless experience that allowed users to stay connected and productive, resulting in increased attendee satisfaction.

PRODUCT LIST

Network Management

- Cisco Wireless Control System (WCS)
- Cisco Spectrum Expert

Wireless

- Cisco Aironet 1250 Series Access Points
- Cisco Aironet 1240 Series Access Points
- Cisco 4400 Series Wireless Lan Controllers

For More Information

To find out more about the Cisco Unified Wireless Network, go to <http://www.cisco.com/go/wireless>.



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