



Latest Ruckus Smart Wi-Fi innovations take complexity out of optimising Wi-Fi networks

SmartWay™ and BeamFlex+™ improve performance and administration of mobile devices and traffic over Wi-Fi networks including Apple Bonjour and UPnP protocols

Sydney, 31 January 2013 – Ruckus Wireless, Inc. (NYSE: RKUS) has introduced SmartWay™ and BeamFlex+™, two new Smart Wi-Fi technologies, which simplify the administration and improve the performance of mobile devices and traffic over Smart Wi-Fi networks.

The proliferation of mobile devices within organisations of all types is creating new performance and management challenges for IT administrators. Not only are users now armed with multiple Wi-Fi-enabled devices that are much more mobile in nature compared to traditional laptops, but network infrastructure services and devices, such as printers, projectors, digital media receivers and file servers, are becoming mobile with the integration of Wi-Fi.

Network services devices that have historically been accessible through wired Ethernet connections are now integrating Wi-Fi to provide greater deployment flexibility. For these devices to be accessible by users on Wi-Fi networks, they must advertise themselves. These advertisements, often performed by multicast protocols such as Bonjour or UPnP, create unique challenges that administrators need to solve.

Real problems needing smarter answers

New mobile devices such as Apple iPhones, iPads and AppleTV operating on Wi-Fi networks can generate large volumes of traffic as these multicast protocols constantly advertise the availability of the devices. This broadcast traffic is transmitted at lower speeds and spills across the entire wireless local area network (WLAN), slowing down the performance and capacity of WLANs.

Beyond controlling new mobile traffic on Wi-Fi networks, the use of mobile devices such as tablets and smartphones presents new performance and connectivity problems as the orientation of these devices constantly changes.

"This causes a signal imbalance between the communication of Wi-Fi access points [APs] and client devices, resulting in the degradation of Wi-Fi performance," said Carl Jefferys, ANZ country manager for Ruckus Wireless. "The new Ruckus SmartWay and BeamFlex+ technologies were specifically developed to solve these problems."

SmartWay: beyond Bonjour bridging

Ruckus SmartWay is a new, free software capability supported within the Ruckus ZoneFlex software operating system. The new Smart Wi-Fi software technology not only simplifies the administration and optimisation of service discovery traffic, such as Apple Bonjour and UPnP protocols over Smart Wi-Fi networks, it also supports advanced facilities to restrict or "fence" these services to a given access point, group of access points or a particular geographic area.

Ideally suited for K-12 and higher education environments, SmartWay helps organisations enable users with Apple devices to exploit other resources on their networks. “For example, SmartWay makes Apple Bonjour services such as AirPrint, AirPlay, and the Apple Filing Protocol (AFP) used in wireless printers and multimedia devices usable and controllable across subnets,” said Jefferys.

Current competitive approaches simply bridge all multicast traffic (eg Bonjour) between two virtual LANs (VLANs) or bridge the traffic from a single VLAN to all VLANs on a service-by-service basis creating security concerns as resources are visible in undesired locations.

For example, without SmartWay, a teacher can use AirPlay to transmit from an iPad to the Apple TV in the classroom only if both devices are on the same subnet. Now, with SmartWay support for Bonjour, the teacher can access any AppleTV as well as have any student transmit from their iPad (on the student Wi-Fi network) to the Apple TV (on a different Wi-Fi network).

Wi-Fi deployments supporting multicast traffic such as Bonjour or UPnP can quickly get out of control if not scaled properly. Rather than flooding the network with traffic from all devices and subnets, Ruckus SmartWay selectively bridges this traffic to the subnets of choice.

Ruckus is natively integrating SmartWay support for bridging Bonjour and other multicast traffic directly into its ZoneFlex software system. This allows service discovery traffic to be selectively bridged across subnets to enable large-scale deployments without overloading the network.

BeamFlex+: adapting Wi-Fi signals to changing device orientation

Ruckus BeamFlex+ adds essential technology to Ruckus-patented BeamFlex adaptive antenna arrays. BeamFlex+ is polarisation-agnostic and automatically adjusts to deliver the best performance, regardless of the way in which client devices are sending Wi-Fi signals.

Ruckus BeamFlex+ is available immediately and supported at no cost in select Ruckus Smart Wi-Fi APs that integrate Ruckus-patented dual-polarised adaptive antenna systems.

As mobile devices change their orientation, BeamFlex+ enables Ruckus APs to ensure the highest possible throughput. Simply altering the orientation of a mobile device or the angle of a laptop can cause dramatic changes in Wi-Fi performance and reliable connectivity. “Traditional access points typically don’t have the ability to optimise or adapt to these types of changes within new, mobile device-rich Wi-Fi environments,” said Jefferys.

BeamFlex+ uniquely leverages maximal ratio combining (MRC) technology in combination with polarisation diversity to improve the reception of signals from different orientations for more reliable communication. This enables BeamFlex+ enabled Ruckus Smart Wi-Fi access points to ‘listen’ to Wi-Fi transmissions that are sent in different ways from client devices, ensuring more consistent Wi-Fi connections. With BeamFlex+, customers can effectively optimise the signal strength to realise significant improvements in performance and reliable connectivity.

Recent advances in Wi-Fi standards, such as 802.11n, now allow several parallel data streams to be transmitted from multiple antennas, thereby increasing Wi-Fi network throughput. At the receiver, these streams are effectively combined to gain higher data rates. Unlike conventional access points, Ruckus Smart Wi-Fi APs with BeamFlex+ have complete control over how Wi-Fi signals are transmitted and in what orientation. This improves the chances to increase throughput in virtually any environment.

BeamFlex+ has the unique ability to control the shape of Wi-Fi signals to increase the probability that multiple data streams can be effectively combined within a given environment, improving Wi-Fi performance.

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ABOUT RUCKUS WIRELESS

Headquartered in Sunnyvale, CA, Ruckus Wireless (NYSE: RKUS) is a global supplier of advanced wireless systems for the rapidly expanding mobile Internet infrastructure market. With 2011 revenues of \$120 million, the company offers a wide range of indoor and outdoor "Smart Wi-Fi" products to mobile carriers, broadband service providers, and corporate enterprises, and has more than 18,000 customers worldwide. Ruckus technology addresses Wi-Fi capacity and coverage challenges caused by the ever-increasing amount of traffic on wireless networks due to accelerated adoption of mobile devices such as smartphones and tablets. Ruckus invented and has patented state-of-the-art wireless voice, video, and data technology innovations, such as adaptive antenna arrays that extend signal range, increase client data rates, and avoid interference, ensuring consistent and reliable distribution of delay-sensitive multimedia content and services over standard 802.11 Wi-Fi. For more information, visit <http://www.ruckuswireless.com>.

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