"Lightning-fast" wi-fi nears, but companies must prepare

The latest standard and fifth-generation in wi-fi protocols, the 802.11ac, promises to deliver speeds on wireless LAN sites of up to three times faster than the previous 802.11n standard, finally making true high-definition vide streaming at 500 Mbps possible.

With the demand for wireless bandwidth ever increasing, more users today use wireless access as their primary source of connectivity, accessing bandwidth-hungry services such as iCloud, videoconferencing and radio-streaming sites. Additionally, there are more wireless devices than ever before. Users sometimes have two or three devices, which has created a great demand for new wi-fi design considerations.

This is according to Martin Ferreira, executive head: technology and operations of Jasco Carrier, who said that South Afr follows the International Telecommunication Union (ITU) recommendations as outlined by Europe and the local market car expect it to be legal at the same time as when the standard is ratified.

The 802.11ac project was approved in September 2008. The Draft 2.1 is currently available and the final third version is expected to go out for ballot shortly. Final ratification of the standard is expected in the latter part of 2013. However, the wi Alliance is aiming to have the certification process in place in Q1 of 2013.

Migrate to the new standard

However, Ferreira said that 802.11ac won't deliver the enhanced speeds and performance if organisations are still using older technologies that are not Gigabit enabled.

"Companies must have a strategy in place to migrate to the new standard. The reality is that the standard does offer the benefits of unprecedented speeds, but there are a few considerations that organisations need to address before upgradin to this latest wi-fi development."

Ferreira explained that these super-fast speeds may not be experienced by the ordinary end-user in a company.

"In order to harness the performance benefits of the 802.11ac standard, end-user equipment, such as PCs and notebooks must be 802.11ac ready," added Ferreira.

He said that 802.11ac network equipment will have limited backward compatibility and as many end-user devices still opera at the 802.11n standard, lower speeds and performance will be experienced.

"Organisations will have to exclude slower modes, such as 802.11b and g, by not allowing these devices on the network. However, operational requirements will have to take precedent in order to implement this strategy.

"If correctly implemented, 802.11n devices should get throughput close to the maximum of the device capability," he added

Less prone to interference from appliances

Ferreira explained that the 802.11ac environment offers many benefits, but, importantly, is less prone to interference from appliances, such as microwave ovens, electric fence energisers and remote-control devices, to name a few. Better modulation techniques have also been implemented with the 5GHz standard.

Companies should have a strategy in place to migrate to 802.11ac. This entails identifying the road map by an infrastructu provider, as well as allocating a budget for the switching infrastructure and LAN cables, followed by a phased approach to implement the standard.

"We will definitely start seeing improved automation in factories, to include real-time monitoring. What's exciting is the efficiencies and productivity that will reach the end-user, as well as the enterprise. It paves the way for more intelligent wi-enabled devices, such as IP-enabled fridges, televisions and other appliances.

"Cloud-based applications are gaining popularity and, as a result, high bandwidth requirements from end-user devices, a critical link in the communications chain to the cloud," he concluded.