

Blogs

Latest smartphones add dual-band Wi-Fi

A

By Antar posted Jun 20, 2012 01:34 PM

2 Kudos

In the enterprise WLAN world, we've been building dual-band (2.4GHz and 5GHz) networks for a while now – I'd hazard an uninformed guess that 90% or more of the APs we have shipped over the past five years have been simultaneous dual-band. But many of the truly mobile devices – like smartphones - that are most affected by the congestion and interference we encounter at 2.4GHz have remained stubbornly single-band. At last we are seeing some movement, as the newest Android smartphones from [HTC](#) and [Samsung](#) have dual-band Wi-Fi. There is [speculation](#) that the next iPhone will have dual-band Wi-Fi. Like nearly all PCs and tablet devices these new smartphones have only one Wi-Fi radio chip, but can use any channel in either band.

There will be consequences - opportunities - for RF management in the WLAN. Thus far, our usual policy has been to steer all 5GHz-capable devices to that band, leaving single-band devices in 2.4GHz because they had no alternative. But when we can assume the majority of devices is dual-band, we will be able to use other criteria to groom devices to particular channels. For a couple of examples, think about integrating band-steering, channel-steering or AP-steering features with mobile device management that can identify device models or owners and spectrum management that keeps track of interference and noise. As the constraints of single-band devices are relaxed, the WLAN can become more efficient and provide better application performance.

Of course every new feature brings some complexity, and our testing indicates that handover performance for a fast-moving device is not quite as good when both bands are enabled as it was for 2.4GHz only... this is probably due to the larger number of channels that must be scanned. The chip vendors will need to tweak their probing and selection algorithms to tighten this up, and there are some new standard features coming that will help. But this is a minor concern.

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advice from the enterprise WLAN industry is responsible for phone and OS vendors moving to dual-band Wi-Fi, but it's more likely due to the penetration of simultaneous dual-band access points in the consumer market and the success of dual-band tablet devices. And the low cost of Wi-Fi hardware, low-power Wi-Fi chips and more space for antennas behind those big touchscreens will have helped. Either way, we are very happy to see this trend, and we expect it to continue.

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cdelarosa

C

Hello Antar i got a question regarding this...

Im working with the TAC with a issue we got with S3 roaming(they got dual band)

When you say "fast-moving device is not quite as good when both bands are enabled as it was for 2.4GHz only"

This could cause issue when roaming?

Should i turn off the Band steering?

Apr 22, 2013 07:51 PM

misterix2

Dual band means we can use 2.4 GHz or 5GHz frequency at the same time.

Jul 05, 2012 01:42 AM

AndrewBrown

A

Thats interesting, dual band means we can utilize GPRS or other data services on either 0.85/0.9 GHz or 1.9 GHz radio frequencies which is amazing. I guess Apple already started implementing it.

[3rd party link removed per Guidelines]

Jun 30, 2012 01:37 AM



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