

DSA sees unlicensed potential in US at 600 MHz

Jun 13, 2014 by Toby Youell

The Dynamic Spectrum Alliance has welcomed the unlicensed aspects of the FCC's plan for the 600 MHz band.

One aspect of the Report and Order (R&O) released recently by the Federal Communications Commission (FCC) has set in motion a new ecosystem for unlicensed devices in the 600 MHz band. That's according to H Nwana, chief executive of the Dynamic Spectrum Alliance (DSA).

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“The DSA is pleased that the Commission has plans to enable both licensed and licence-exempt access in the 600 MHz band,” he said in a statement. “While the FCC’s plan doesn’t provide as much spectrum as we had hoped, it creates the potential and lays the groundwork for investment in the band.”

Nwana told *PolicyTracker* this would encourage manufacturers to look at this band when designing licence-exempt Wi-Fi chips. He said: “At the summit we had in Ghana, it was absolutely amazing to have a tier one player like MediaTek embracing 802.11af, which is the emerging Wi-Fi standard for sub-1 GHz frequencies.”

As much as 34 MHz of unlicensed spectrum

The new chipset, which should be available in the next 12 to 18 months, may be able to take advantage of between 20 MHz and 34 MHz of unlicensed spectrum in the 600 MHz band in the US following the FCC's planned incentive auction.

According to the R&O, the FCC intends to auction the 600 MHz band in specific paired uplink and downlink bands comprised of 5 MHz “building blocks”. The guard bands between these blocks will be available for unlicensed users. Therefore, depending on how much spectrum is sold at the auction, between 14 MHz and 28 MHz of spectrum should be made available for unlicensed use.

Additionally, 6 MHz in channel 37 can be used by unlicensed devices in areas where the spectrum isn't needed for incumbent medical telemetry and radio astronomy services. Unused channels and TV white spaces that are available after the auction will also be open for unlicensed use. The DSA had originally lobbied for a minimum of 24 MHz of 600 MHz band spectrum to be made available to unlicensed users.

Nwana is upbeat about the future use of sub-1 GHz spectrum for licence exempt devices, and the possibility of a broader ecosystem. He said: “Qualcomm is already beginning to look at unlicensed access; they are already looking at LTE-U in the 5 GHz band. They are in principle beginning to acknowledge the fact that unlicensed spectrum is also going to play a significant role, so over time they may also convert to 802.11af.”

"Just enough investment"

Other advocates of unlicensed spectrum also welcomed the FCC's initiative in the 600 MHz band. The Wireless Innovation Alliance called the decision “an important step forward” and said that the “world is watching.” Wi-Fi Forward said: “we strongly support the FCC’s efforts so far and look forward to working together to ensure a robust wireless economy.”

Google, which is also a member of the DSA, said: “While the plan doesn’t provide as much unlicensed spectrum as we recommended, it should provide just enough unlicensed spectrum to attract investments in equipment and operations in the new band.”

The R&O was supported by the three Democrat commissioners, including chairman Tom Wheeler, but opposed by the two Republicans. Democrat Mignon Clyburn said the initiative “is sure to spur new innovations in unlicensed broadband services worldwide,” while her colleague Jessica Rosenworcel said she was “particularly excited” about the rules they had made on unlicensed spectrum because they meant the FCC had ditched “the tired notion that we face a choice between licensed and unlicensed spectrum”.

However, on the Republican side, Ajit Pai expressed concern over the proposal to make 6 MHz available in the duplex gap for unlicensed use without analysing how feasible this is. “I am worried that we may be making promises that the laws of physics won’t allow us to keep,” he said. His colleague Michael O’Rielly called the unlicensed aspects of the plan “a political solution” that may restrict how much money the auction raises. •

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