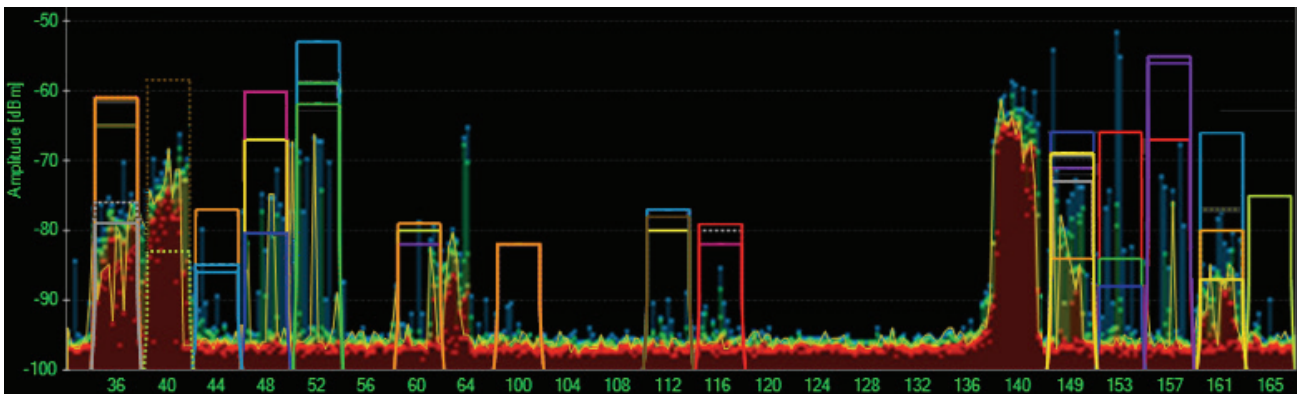


## 5) WiSA Networks and the 5 GHz U-NII Band

The Wireless Speaker and Audio Association, or WiSA Association, is an industry group established in 2011 to promote the adoption of interoperable wireless audio communication between multiple vendors. WiSA was founded to address the need for a common compliance platform, especially for the 5 GHz U-NII band, which delivers high-definition wireless audio to the home while ensuring interoperability between any WiSA-compliant devices.

Most computer networks avoid the DFS band because the process of monitoring channels and waiting the requisite one minute to acquire a clear channel can cause performance problems for those networks. This leaves a lot of free bandwidth in the DFS band in channels 52-64 and 100-140 as illustrated in Figure 2 which was taken at the same convention center during an industry trade show.



5 GHz Channels | Figure 2: 5 GHz U-NII band

A WiSA-compliant transmitter deals with DFS requirements more seamlessly. Uncompressed audio is transmitted in packets at a constant rate and so, since not all of the bandwidth is used, radio monitoring can be hidden between packets and have no impact on performance. This means there is virtually no interference, which allows the clean transmission of eight channels of 24-bit uncompressed audio at up to 96 kHz. As a bonus, DFS monitoring on WiSA-compliant devices means any type of interference, not just radar, is avoided by the technology. There are plenty of DFS channels, so there is room for multiple systems. If convenient or necessary, the system may still use non-DFS frequencies, but DFS rules are still used to achieve interference-free operation.

Source:

CEDIA. (2013). *Wireless Audio Solutions: Technologies and Best Practices*.

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