TALK

The Future of Wi-Fi 6 and Beyond with Keith Parsons

Keith Parsons · 7SIGNAL, Inc. · 2023-11-02

A November 2023 webinar in which Keith Parsons reviews the past, present and future of Wi-Fi, from Wi-Fi 6 onward: its complexity, its technologies and the difficulties they bring.

Key points

- Explains the Wi-Fi Alliance names (Wi-Fi 6, 6E and 7) and how they map to the 802.11 amendments, with a timeline of how often each new version arrived.
- Covers what a transmitter decides for every frame: when it can talk, which MCS (modulation and coding scheme) to use, and the overhead that comes with it. Higher-order modulation needs a high signal-to-noise ratio (SNR).
- Shows how much of each exchange is overhead rather than payload, and why that limits real-world speed.
- Discusses 6 GHz client adoption, licensed and unlicensed spectrum, and whether multi-gigabit Ethernet and more PoE (Power over Ethernet) are needed at the next switch upgrade.
- In the Q&A: Keith says he has not yet seen MU-MIMO (multi-user MIMO) shown to work outside a lab, and he still recommends the CWNA (Certified Wireless Network Administrator) study guide as the reference.

Chapters

1. 00:11 Wi-Fi 6, 6E and 7 names
2. 02:10 How often 802.11 changed
3. 06:07 What the transmitter decides per frame
4. 07:59 Antennas and wavelength
5. 10:09 Sharing 2.4 GHz with Zigbee and Bluetooth

6. 12:02 Modulation and SNR
7. 18:14 Overhead in every frame
8. 20:17 6 GHz clients
9. 22:05 Licensed and unlicensed spectrum
10. 24:01 Multi-gig Ethernet and PoE
11. 26:19 Q&A
12. 28:09 MU-MIMO
13. 30:13 Where to keep learning

Watch on YouTube (https://www.youtube.com/watch?v=NXnSiGyvVrE). More conference talks: wlan-talks.net (index by Victor Gatuna).

By Keith Parsons, CWNE #3, Wireless LAN Professionals. Free to read and share. Facts