TALK

How to Make Wi-Fi Go Faster

Keith Parsons · WLAN Pros channel · 2020-10-18

How to make Wi-Fi go faster: Keith Parsons compares how Ethernet was made faster with what might work for Wi-Fi.

Key points

- Ethernet got faster mostly by cutting interference: each new cable category (Cat 3, Cat 5 and beyond) tightened the rules on twists and crosstalk.
- Wi-Fi gets faster the same way: reduce interference.
- A Wi-Fi radio defers to other Wi-Fi at much weaker signal levels than to non-Wi-Fi energy: detecting a Wi-Fi preamble is 20 dB (100 times) more sensitive than energy detection.
- Signal does not stop at the edge of a design target such as -67 dBm; it keeps going, so distant access points and clients on the same channel still make each other wait.
- Only one device on a channel transmits at a time, so the fix is in the design: fewer radios hearing each other on the same channel.

Chapters

1. 00:16 How Ethernet got faster
2. 01:02 Cable categories and crosstalk
3. 02:09 Less interference, more speed
4. 03:13 Preamble detect and energy detect
5. 04:02 Signal keeps going
6. 06:02 One transmitter at a time

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

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