TALK

The Green Diamond

Keith Parsons · WLAN Pros channel · 2020-09-17

The "green diamond" is Keith Parsons's picture of how a client decides which access point to join. The diamond stands for a decision made only in the client device itself.

Key points

- The green diamond is the decision a client device makes about which access point to join; it lives only in the client, not in the AP.
- A client learns about APs from beacons or from probe responses, then sorts them by its own rules, which differ from device to device.
- Factors can include the network name (SSID), signal, security type, channel switch announcements and 802.11k, v and r information such as neighbor reports.
- Some devices also use history and context, such as location, time of day and the last AP they joined.
- After the decision come 802.11 authentication and association, then security, IP addressing (DHCP) and, last of all, any captive portal.

Chapters

1. 00:02 What the green diamond is
2. 01:00 Why it lives in the client
3. 02:08 Probes and beacons
4. 03:07 How a client ranks APs
5. 04:00 Security, 802.11k, v and r
6. 05:10 History and context
7. 06:05 After the decision: joining the network
8. 07:01 Captive portals come last

Watch on YouTube (https://www.youtube.com/watch?v=i4xofCkfk-U). More conference talks: wlan-talks.net (index by Victor Gatuna).

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