HIGH DENSITY & CHALLENGING DESIGNS – WI-FI 7

#WiFiDesignDay
by Ekahau and Open Reality

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What we want to avoid…

Poor deployment configurations ie high transmit power

- ”1 AP could cover an entire floor” aka "green is good"

Capacity-based over-designing

- Often see Omni APs 5 to 8 metres apart for 'high density'

Let's not forget

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COOPER DEMO

Why Did We Do an AP47D

- Increasing desire for high AP density Wi-Fi in everyday environments
  - Today, typically we use AP45E
  - Feedback from customers - external antennas are more expensive – antenna and installation costs
  - And more difficult to make aesthetically pleasing

- Expected Use Cases – anywhere with high AP density
  - Auditorium/Lecture halls
  - Enterprise
  - Some retail environments

- AP47D provides better signal control (60x60)
  - Reduces impact of co-channel contention
  - AP has better interference rejection due to smaller "listening" azimuth
  - Clients also don't hear as many APs

- For high-racking warehouse - we're expecting to continue to use a warehouse style external antenna. In other areas of the warehouse the AP47D may be useful

- Also in niche environments, such as large public venues we expect to continue to use external antennas

AP47

-67 dBm grey cutoff

213

AP47D

-67 dBm grey cutoff

213

≤ -90 dBm   -67   ≥ -40 dBm

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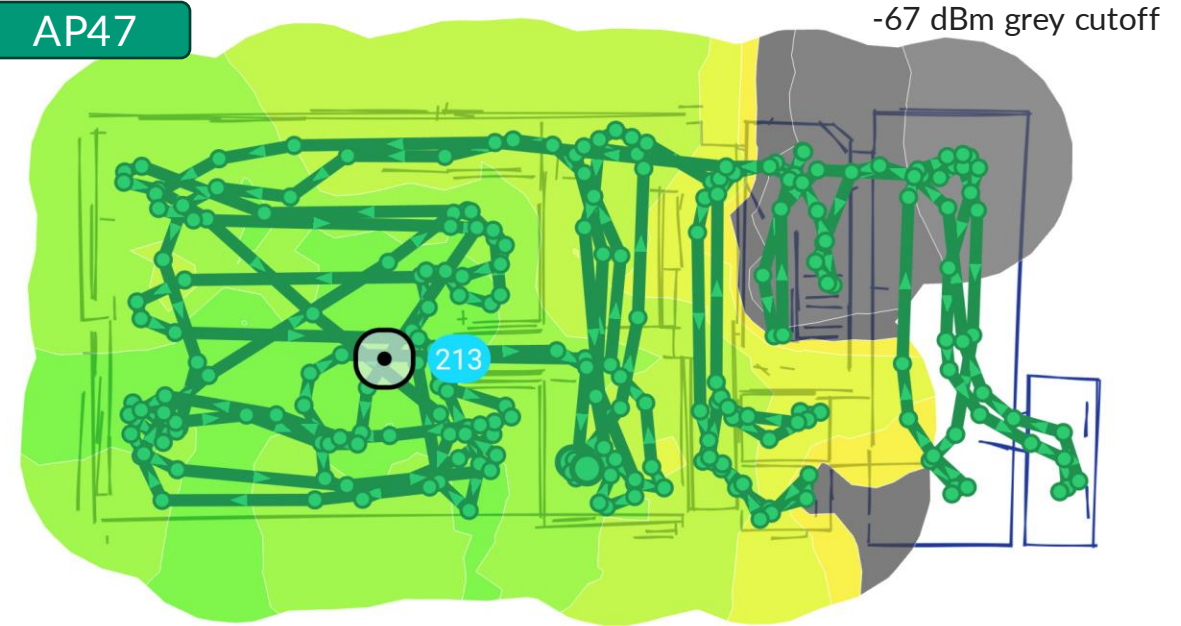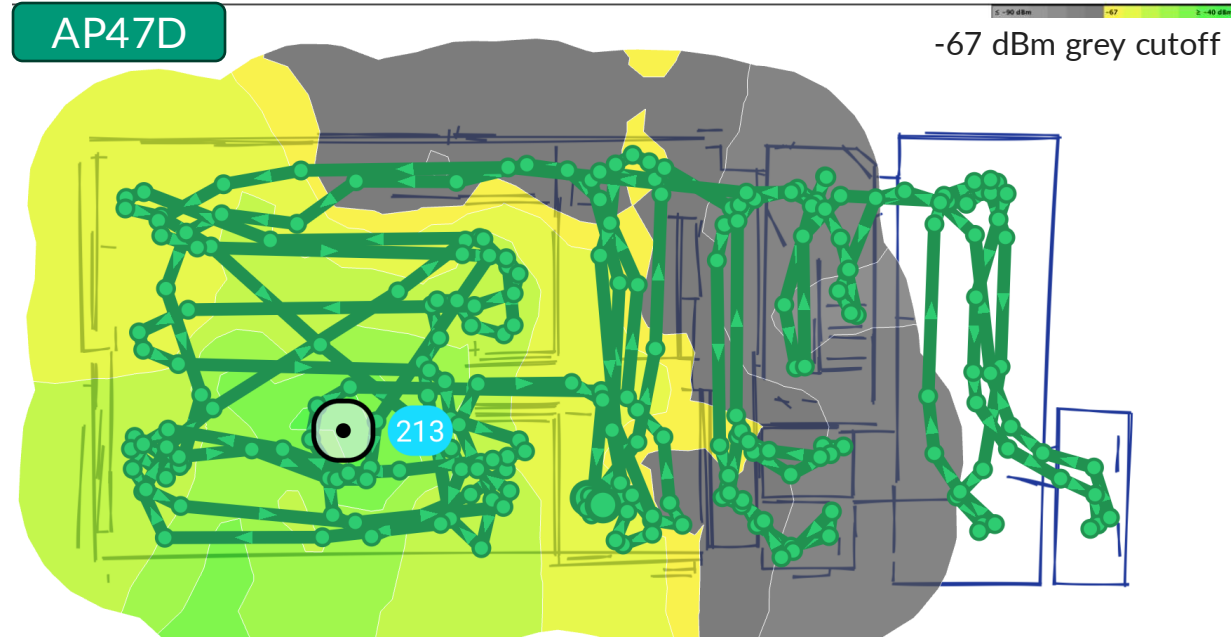
Boardman Demo

Dual 5 and Dual 6 Info

2.4 GHz + 5 GHz + 6 GHz	5 GHz Low + 5 GHz High + 6 GHz	6 GHz High + 5 GHz + 6 GHz Low
• 2.4 GHz - ISM (Channels 1-13) • 5 GHz - UNII 1-4 (Channels 36-177) • 6 GHz - UNII 5-8 (Channels 1-233)	• 5 GHz Low - UNII 1, 2a (Channels 36-64) • 5 GHz High - UNII 2c-4 (Channels 100-177) • 6 GHz - UNII 5-8 (Channels 1-233)	• 6 GHz High - UNII 7, 8 (Channels 117-233) • 5 GHz - UNII 1-4 (Channels 36-177) • 6 GHz Low - UNII 5 (Channels 1-93)

Dual 6 GHz mode not useful for countries with 500 MHz of spectrum where UNII 7 and 8 are not allowed*

*OFCOM are working on opening up the upper band

SSID Strategies

Use 6 GHz as an opportunity to reimagine your SSIDs

5+6 GHz recommended in most cases

If you do 6 GHz only, ensure another 5 GHz SSID is enabled for the RNR

Many corporate environments can move to 5+6 GHz enterprise SSIDs

Guest can be enabled on 6 GHz with OWE Transition

IoT and legacy SSIDs mostly stay on 2.4/5 GHz

Now we just need to avoid...

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Thank you

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