

TechBuzz

Wi-Fi Best Practices

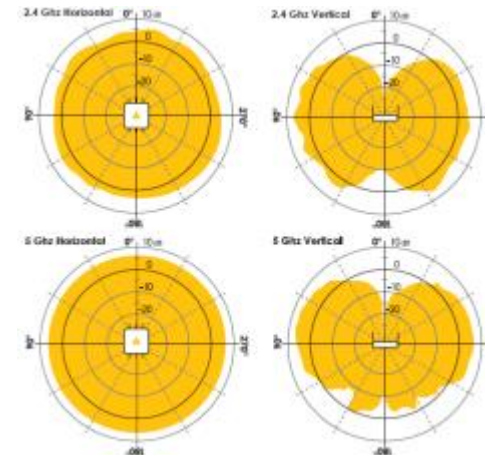
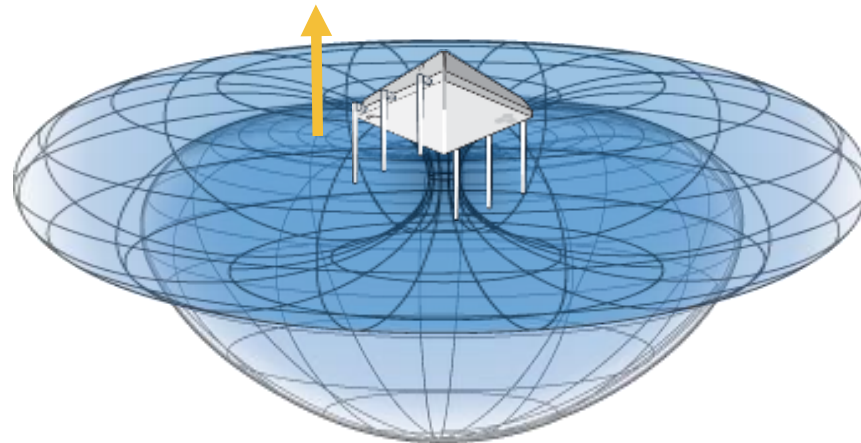
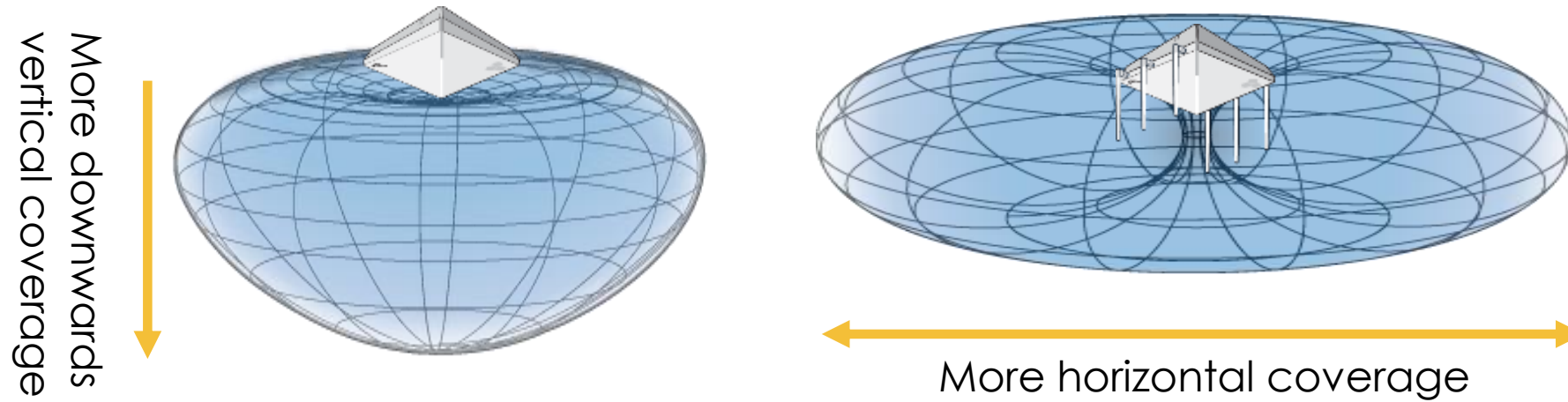
Gianluca Silvestri – System Engineer, Exclusive Networks



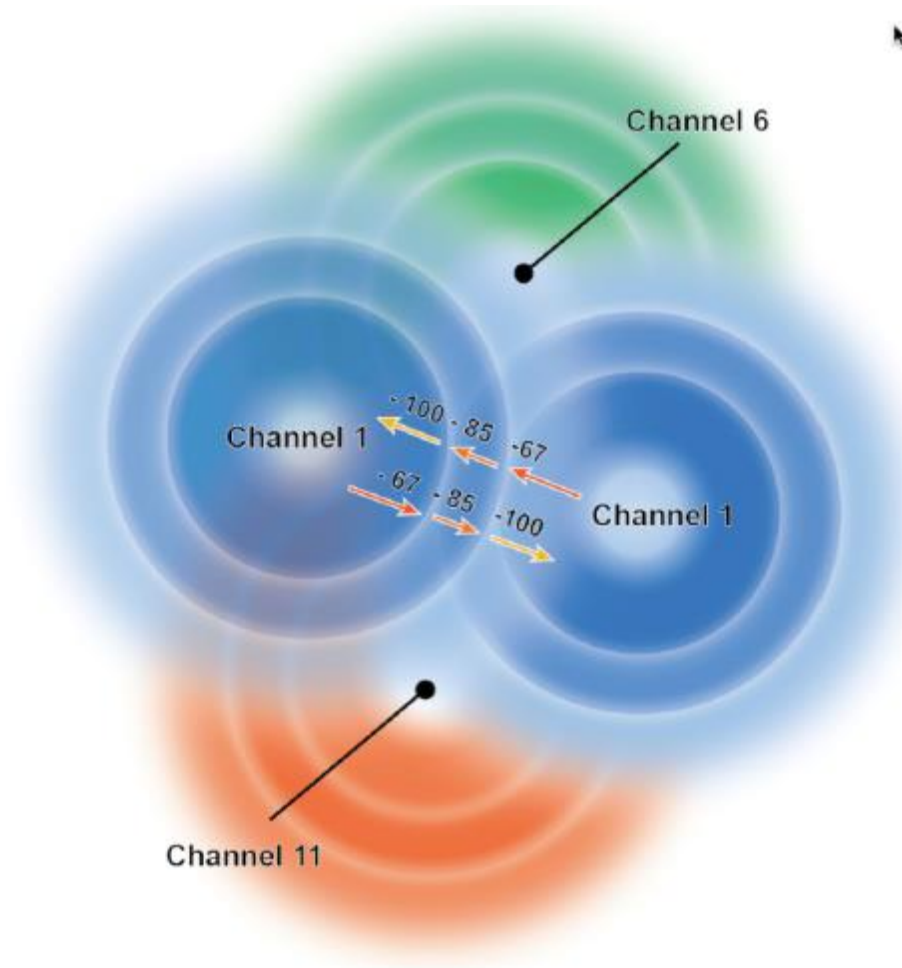
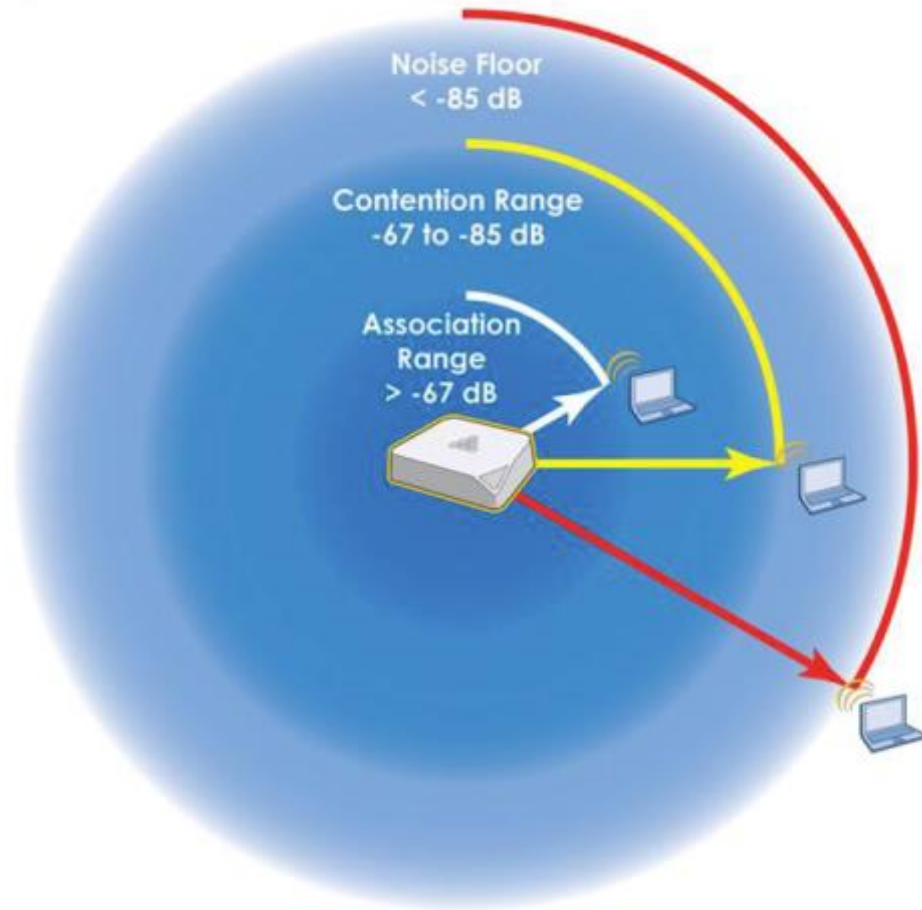
Introduction to the course

- Short
- Simple
- Easy to follow
- There are always exceptions to the rule

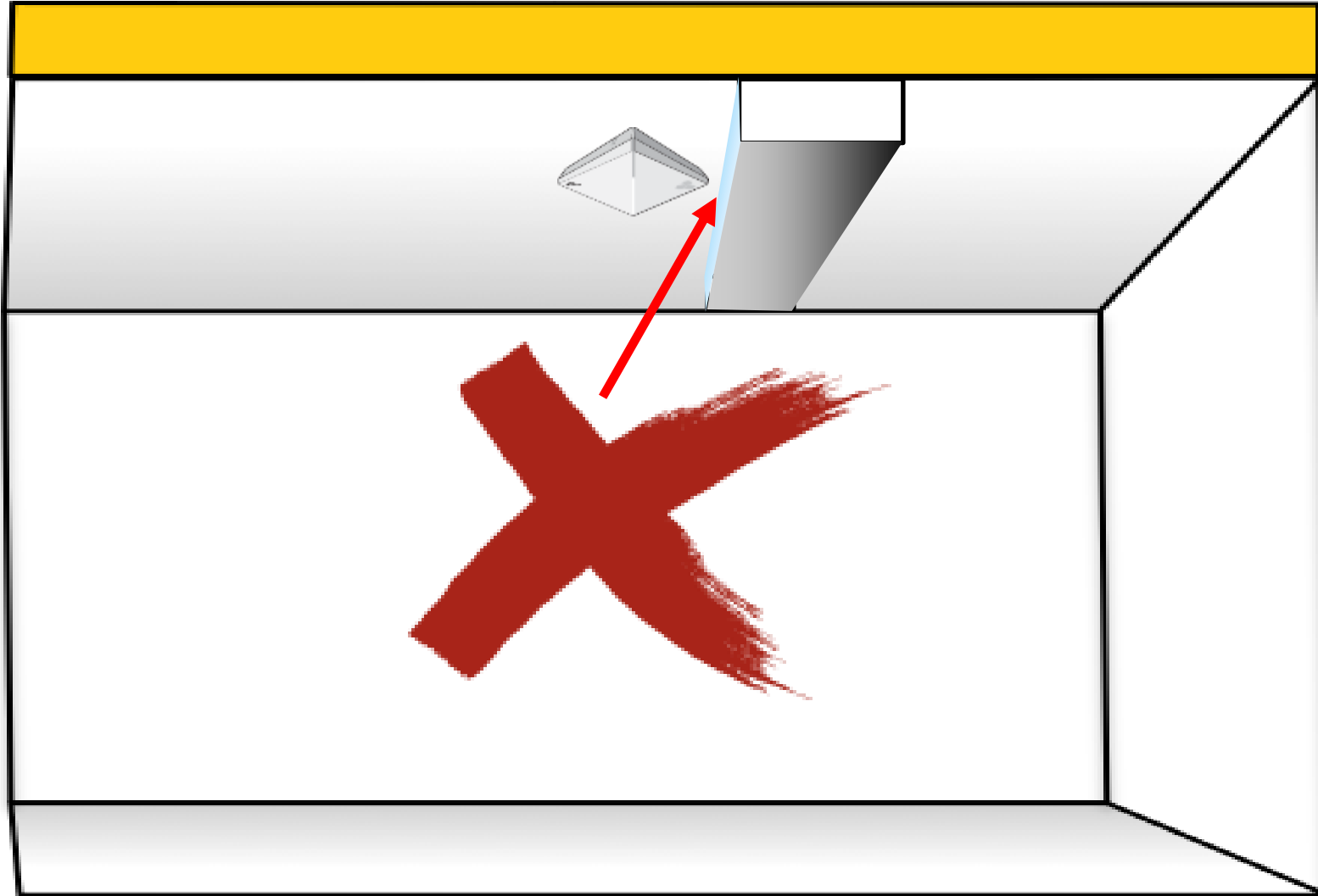
Pattern Comparison



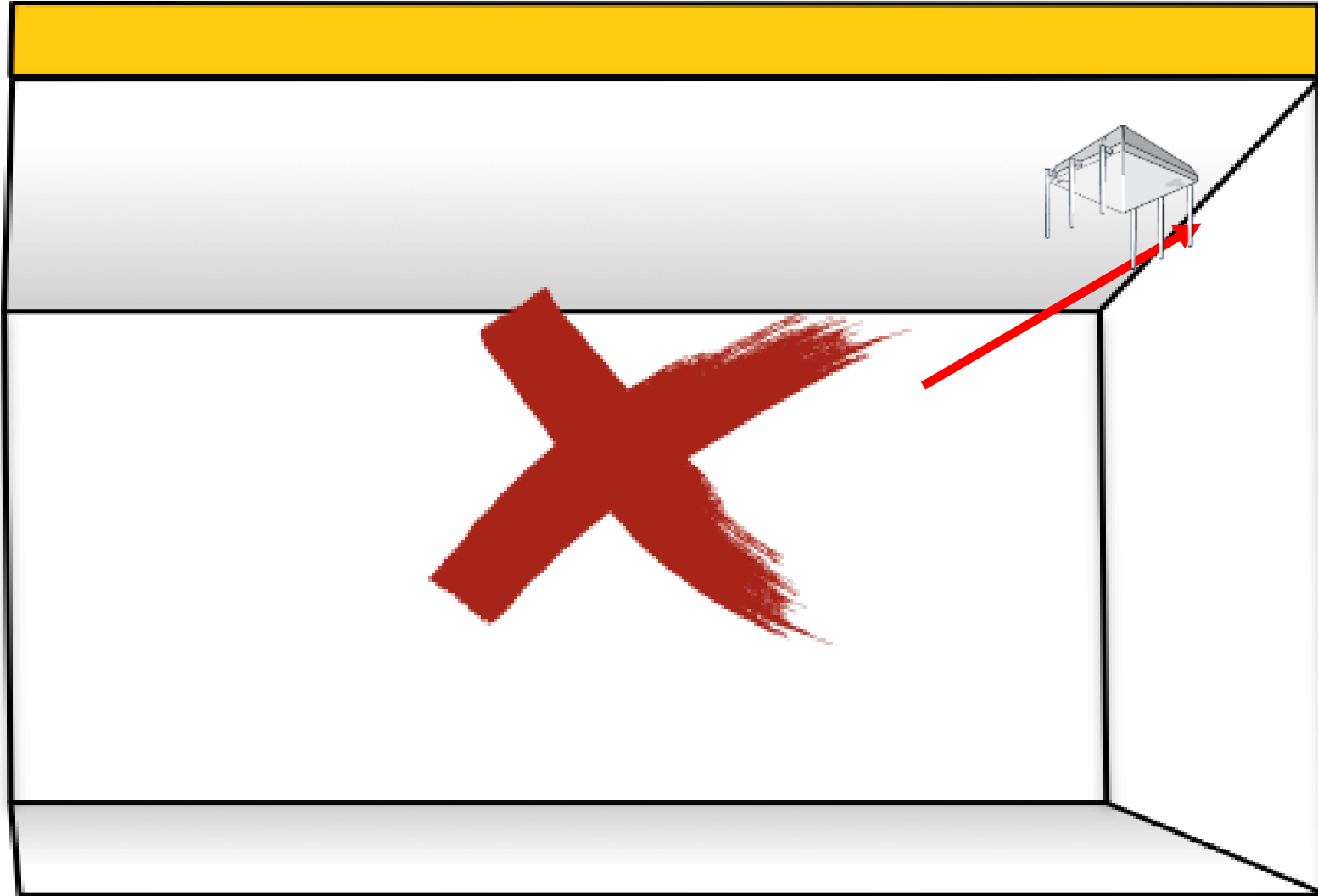
Association vs. contention



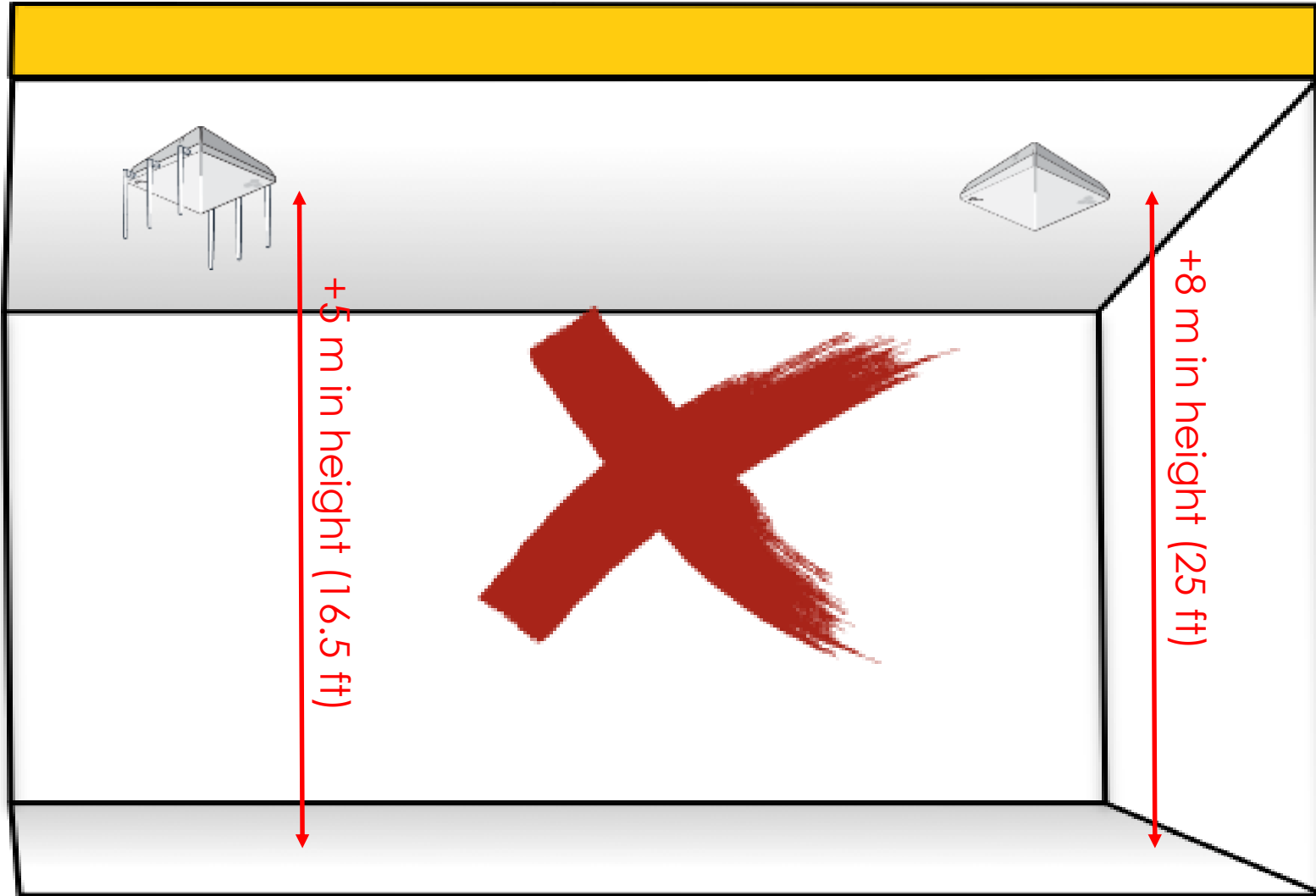
WiFi Don'ts



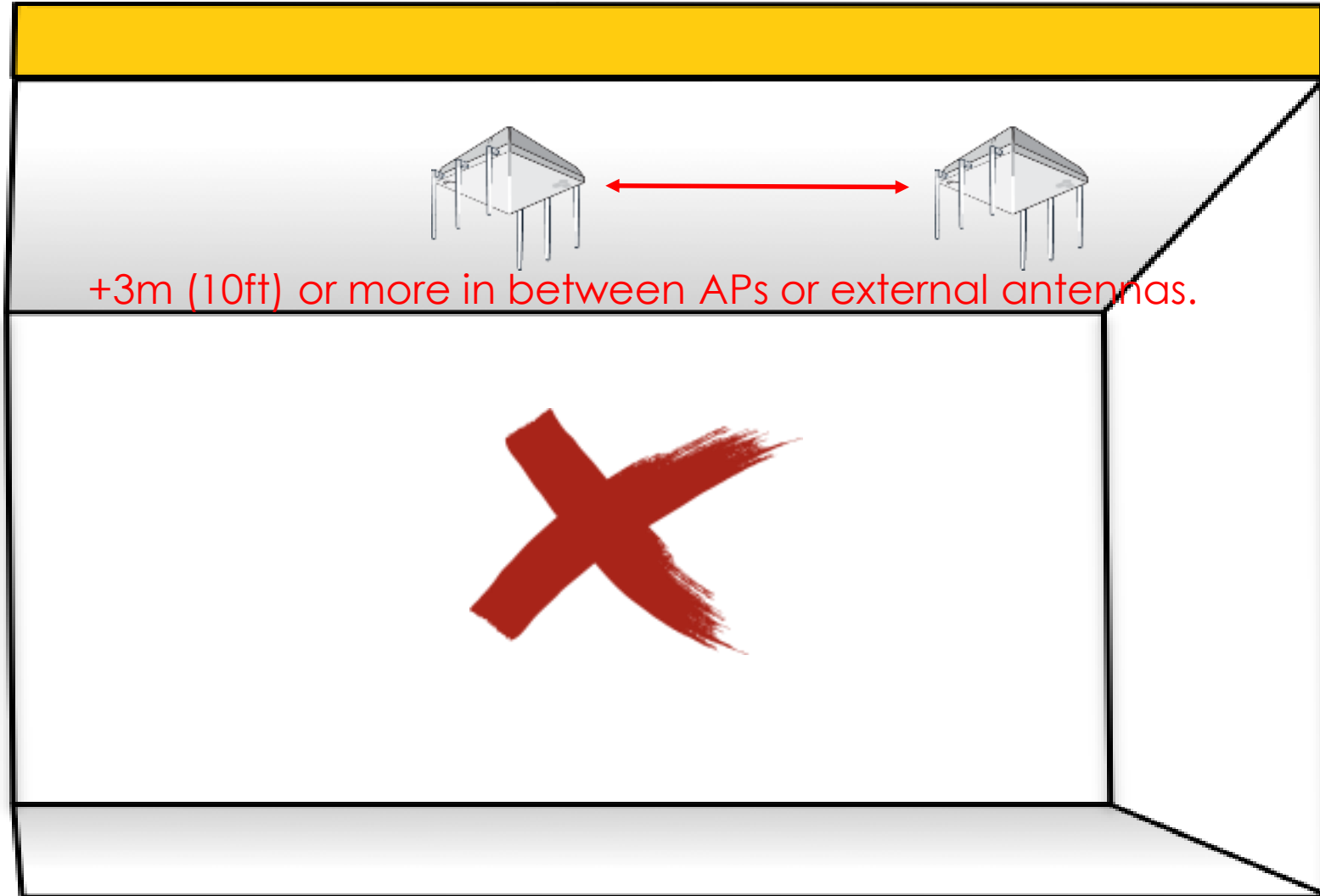
WiFi Don'ts



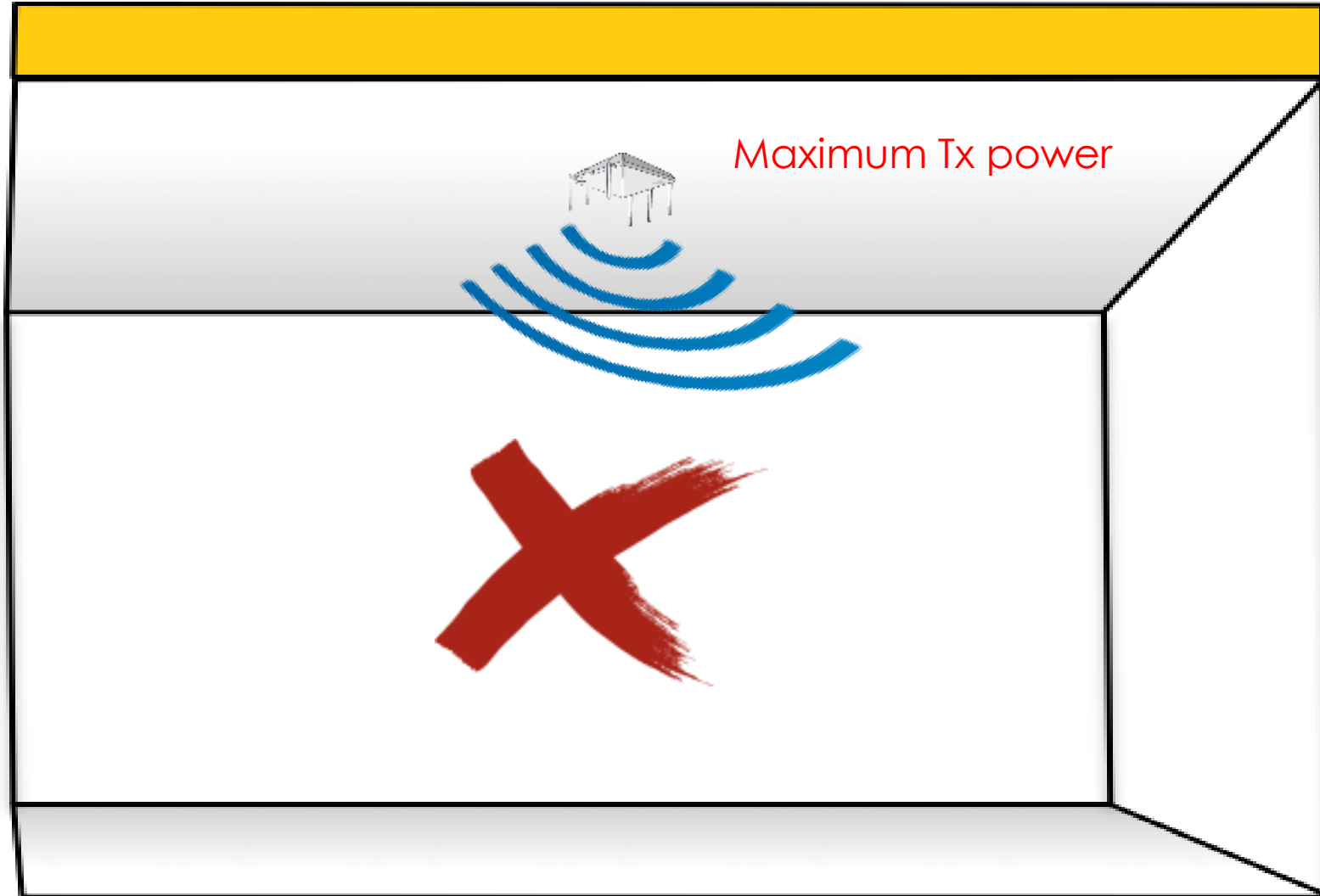
WiFi Don'ts



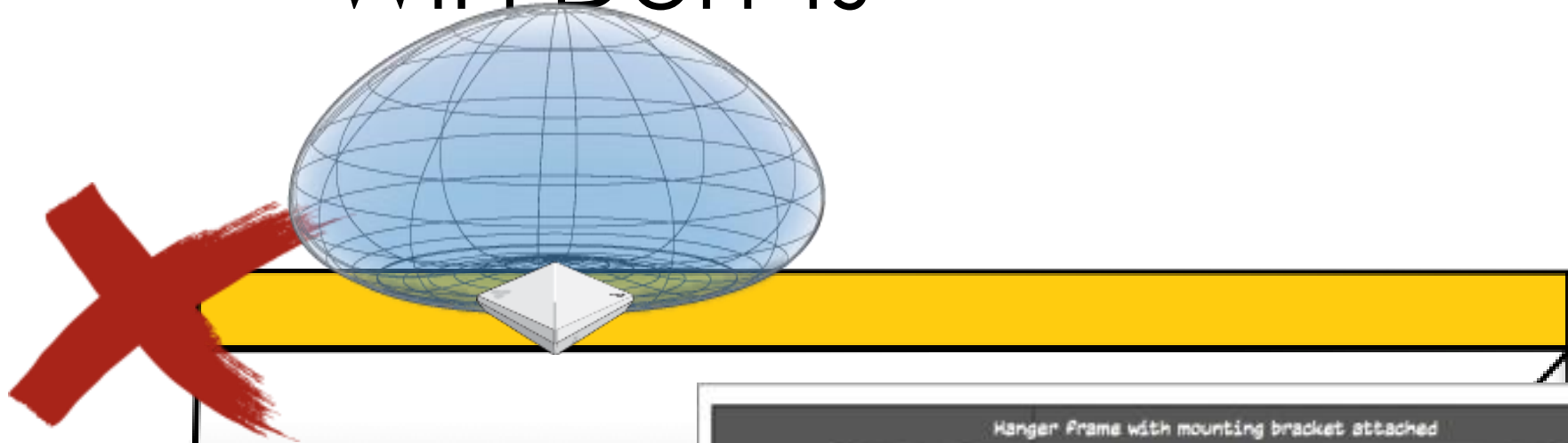
WiFi Don'ts



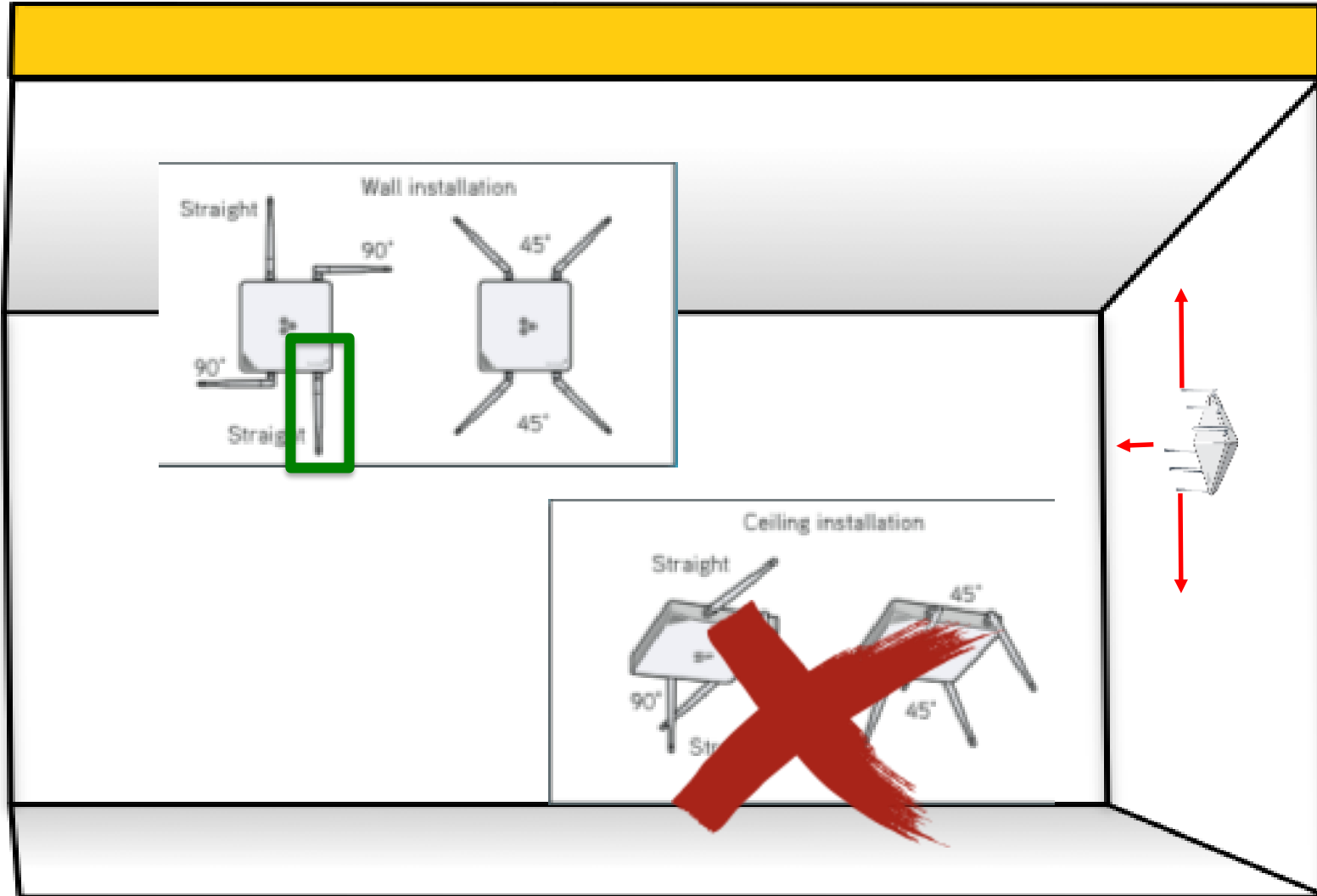
WiFi Don'ts



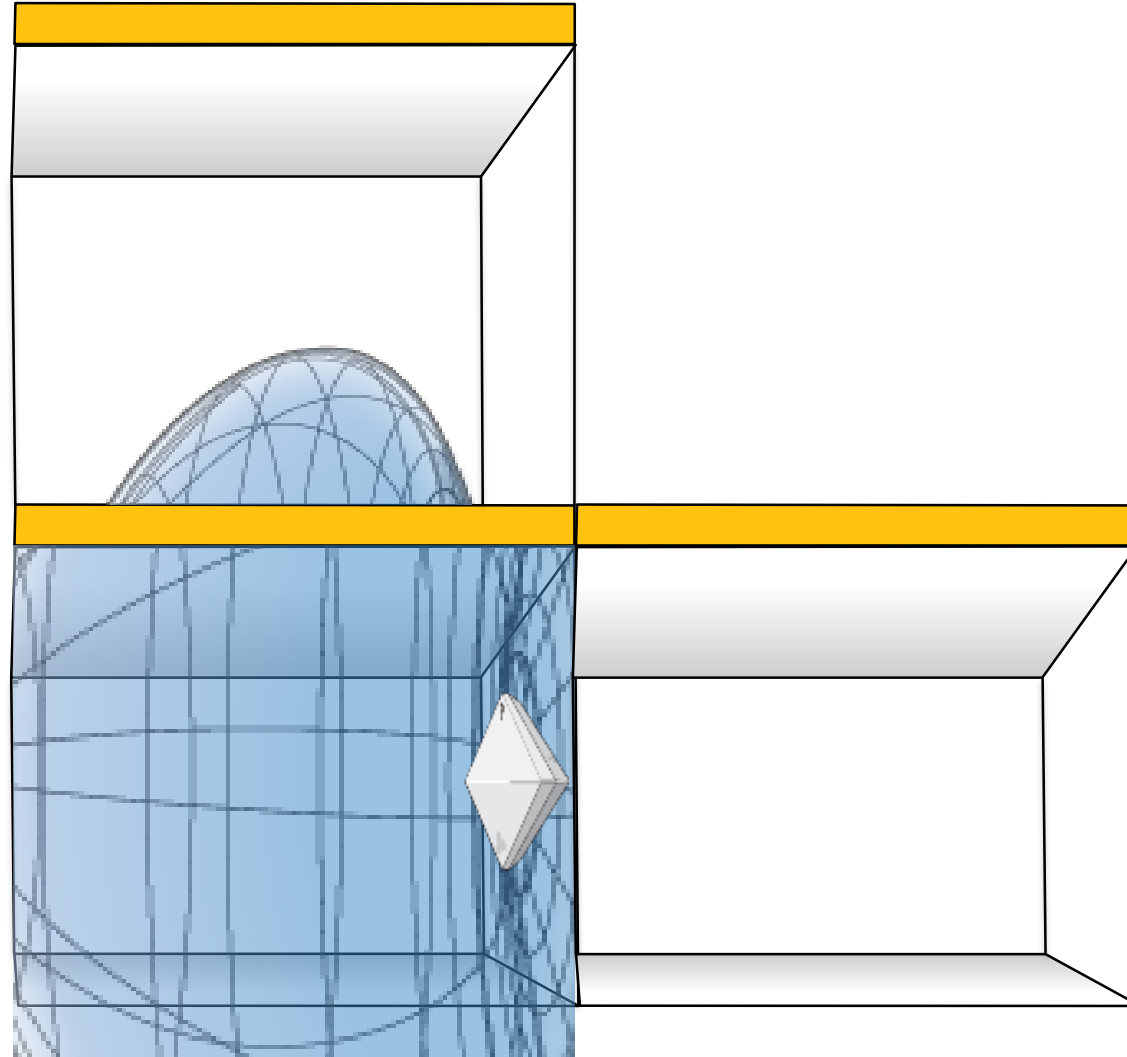
WiFi Don'ts



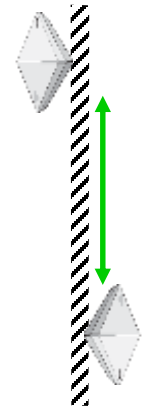
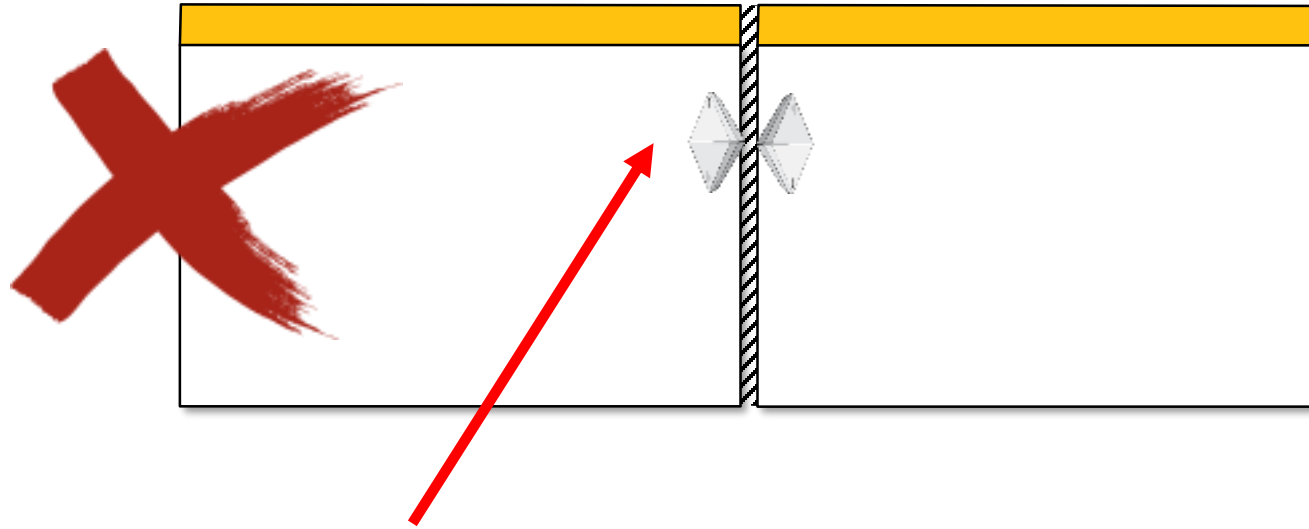
WiFi Don'ts



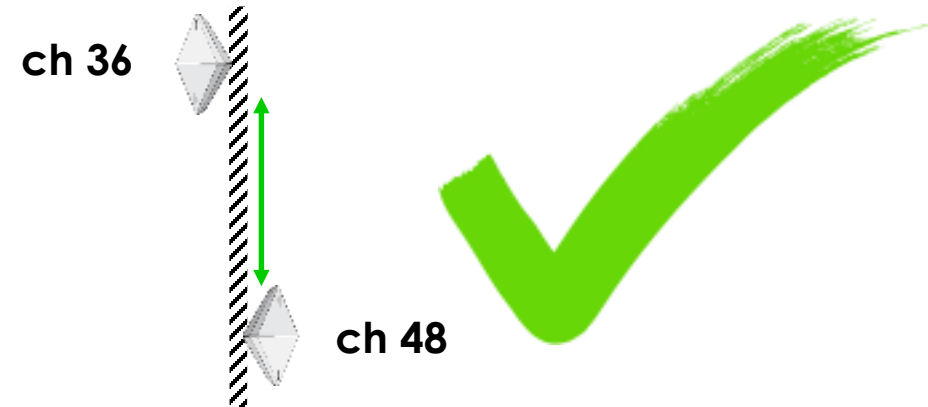
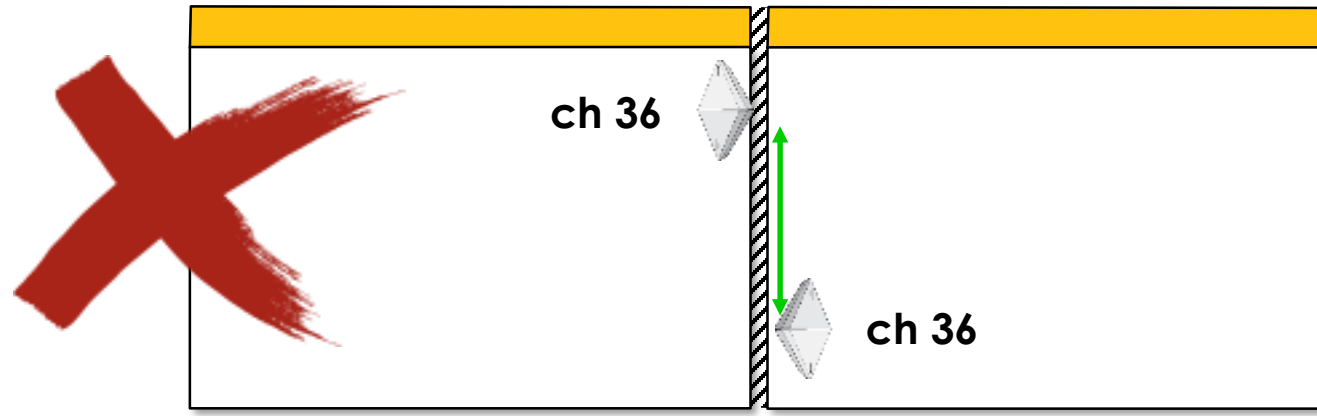
Basic AP placements: walls



Basic AP placements: walls

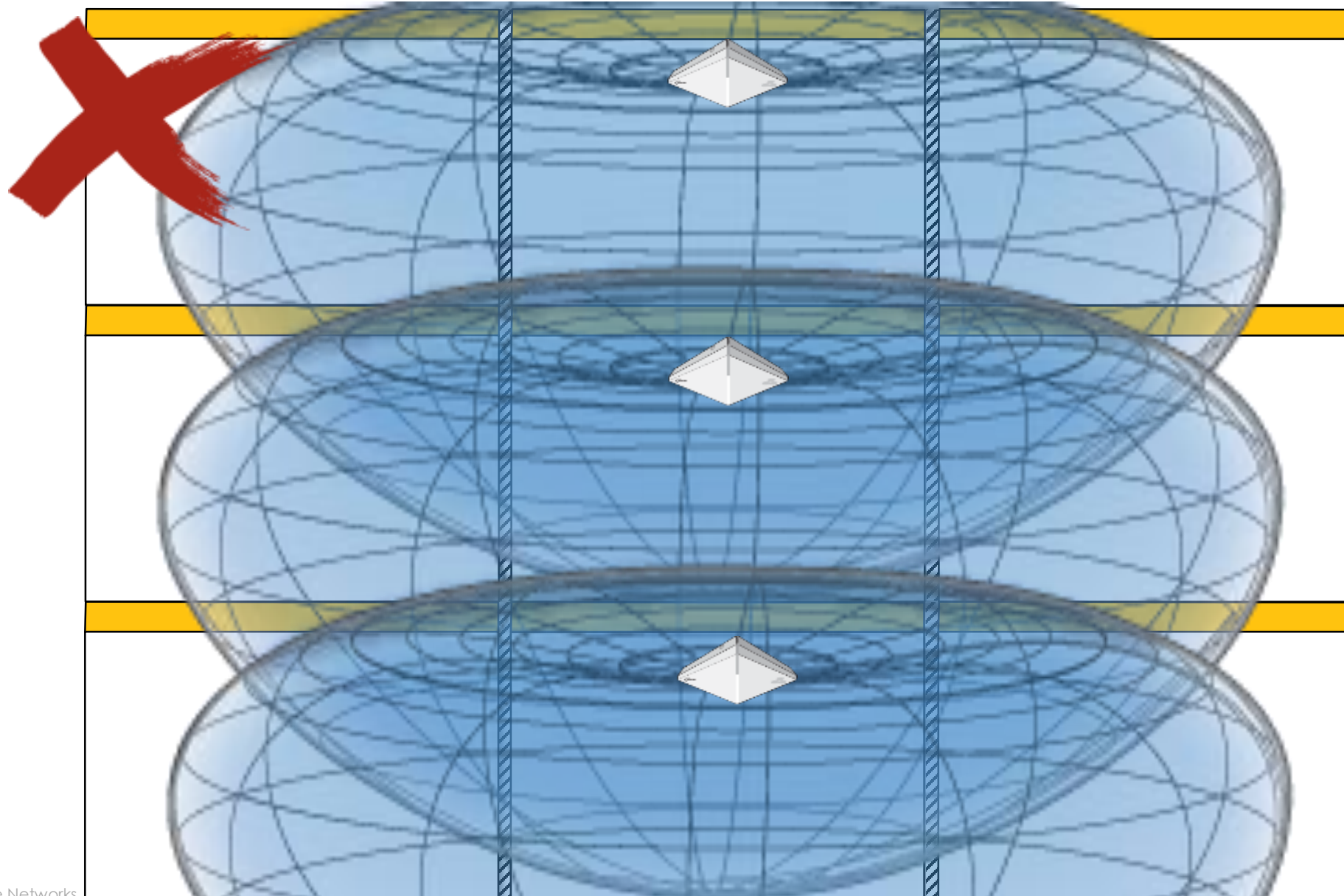


Basic AP placements: walls

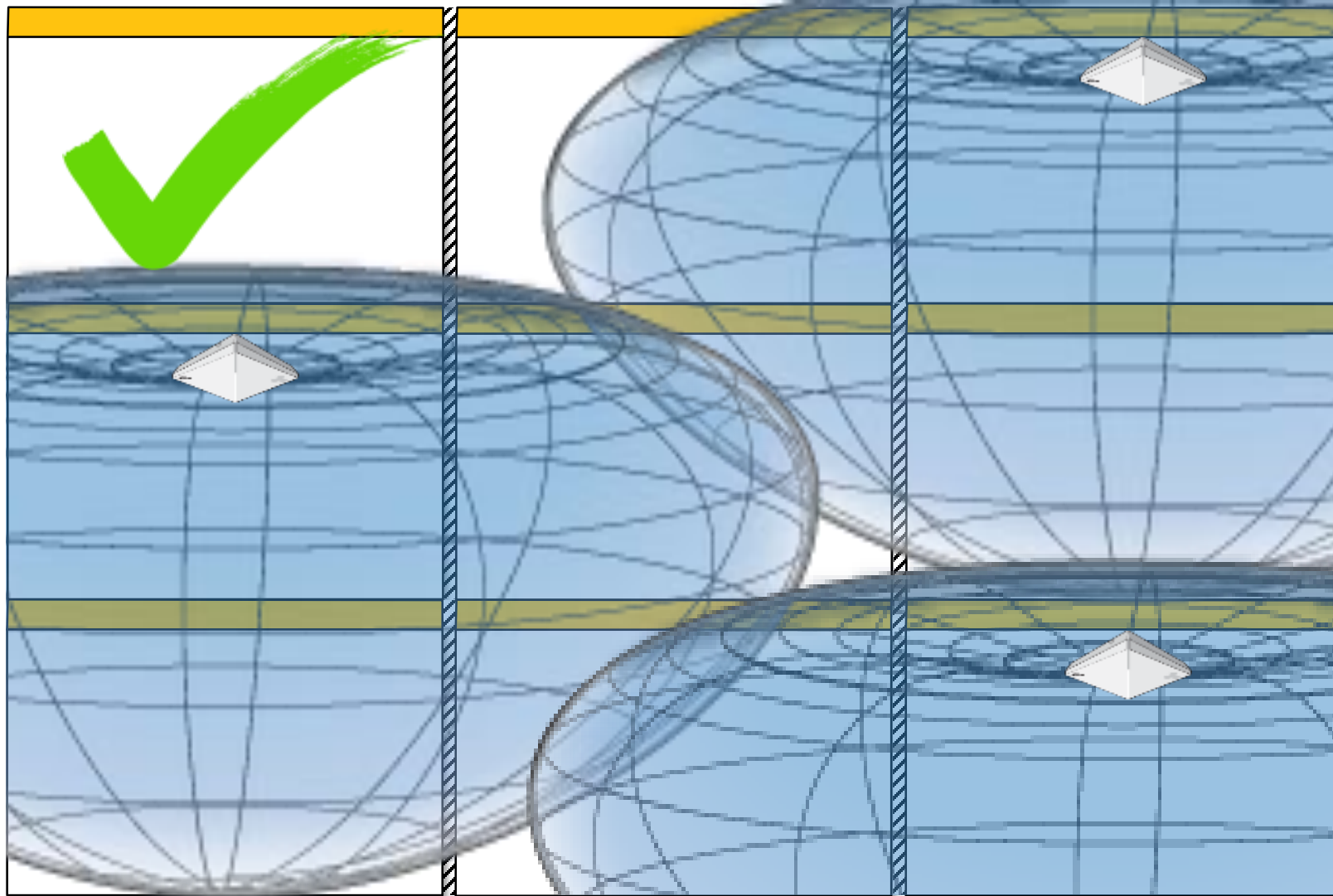


*adjust according to channel width.

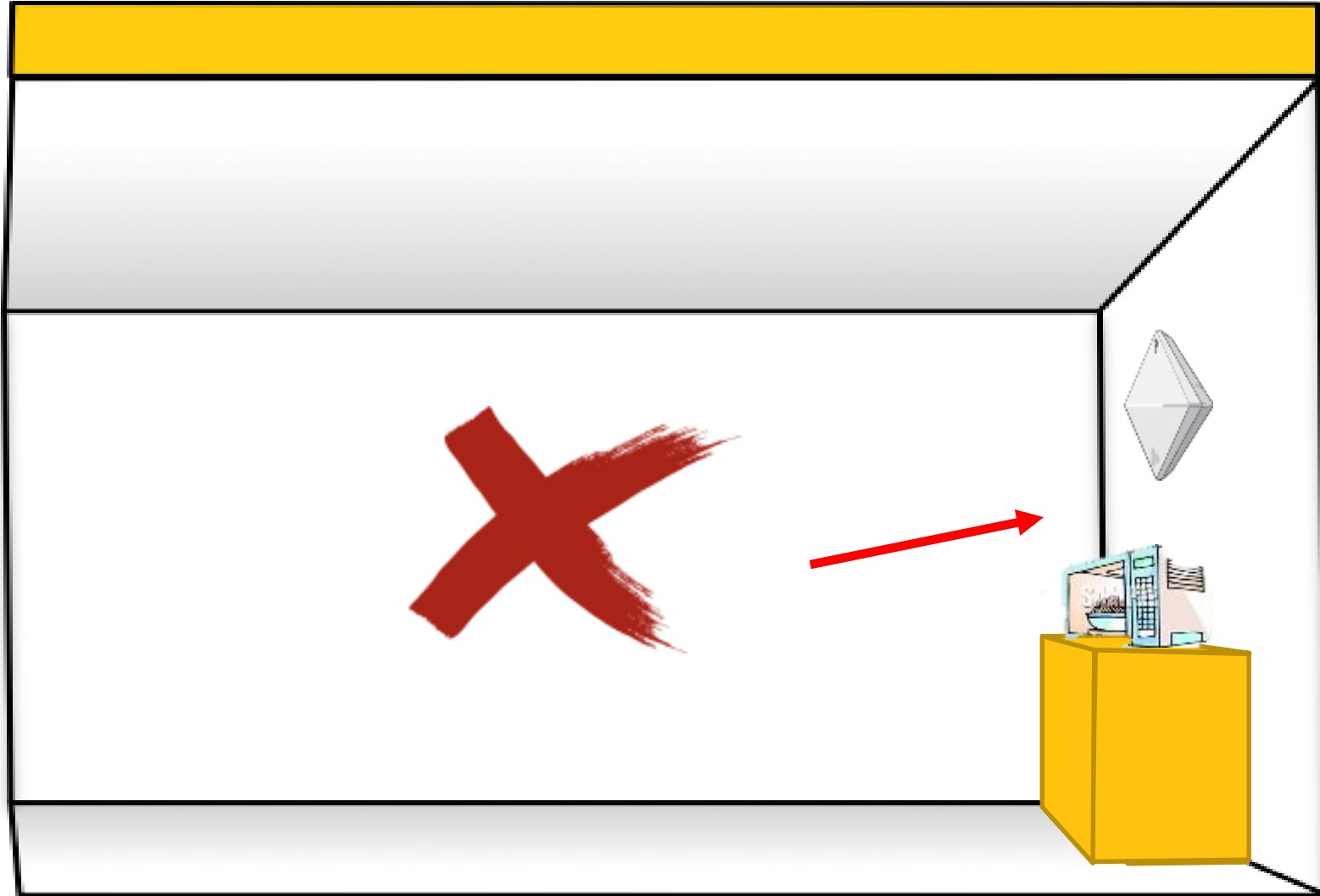
Basic AP placements



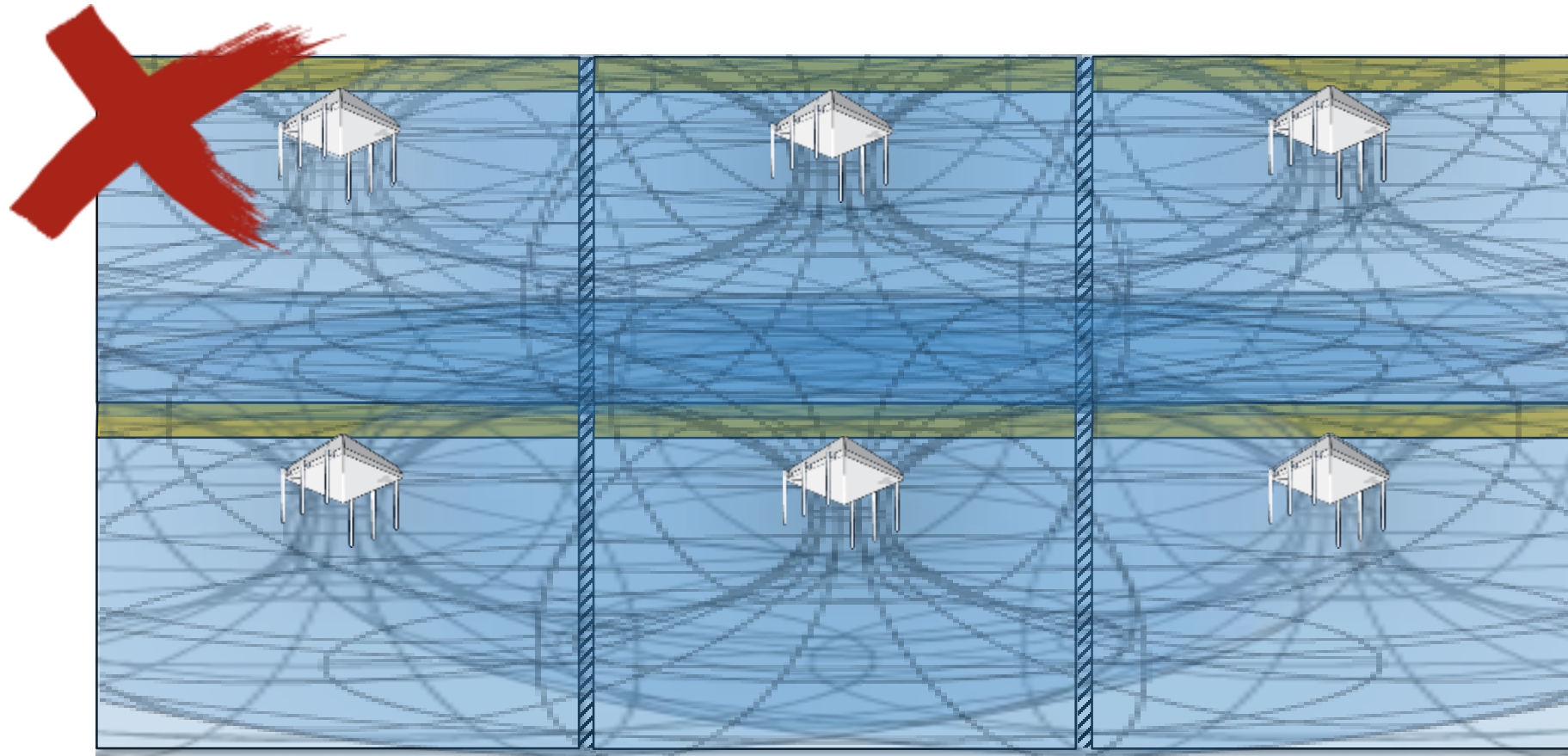
Multiple room design



WiFi Don'ts

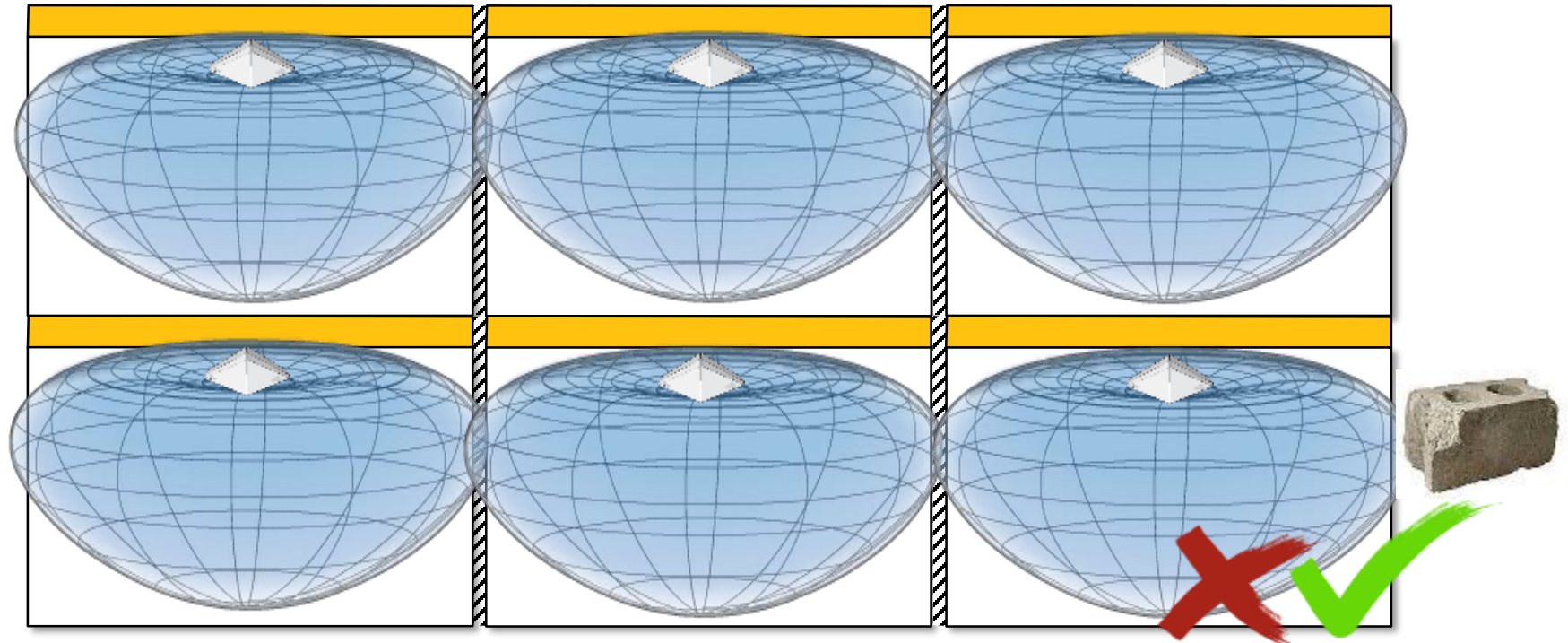


Multiple room coverage



The combination of Omni antennas and low wall attenuation is a sure way to trigger CCI.

High Density



AP in a room is tricky, **high risk/high reward** deployment. To make it work it is necessary to:

- Ensure the environment supports it (high attenuation walls).
- Limit the Tx power of the AP just enough to serve in-room clients.
- Use APs with integrated antennas or external directional antennas.
- Use 20 MHz channels and separate the neighboring channels as much as possible.
- Disable lower data rates

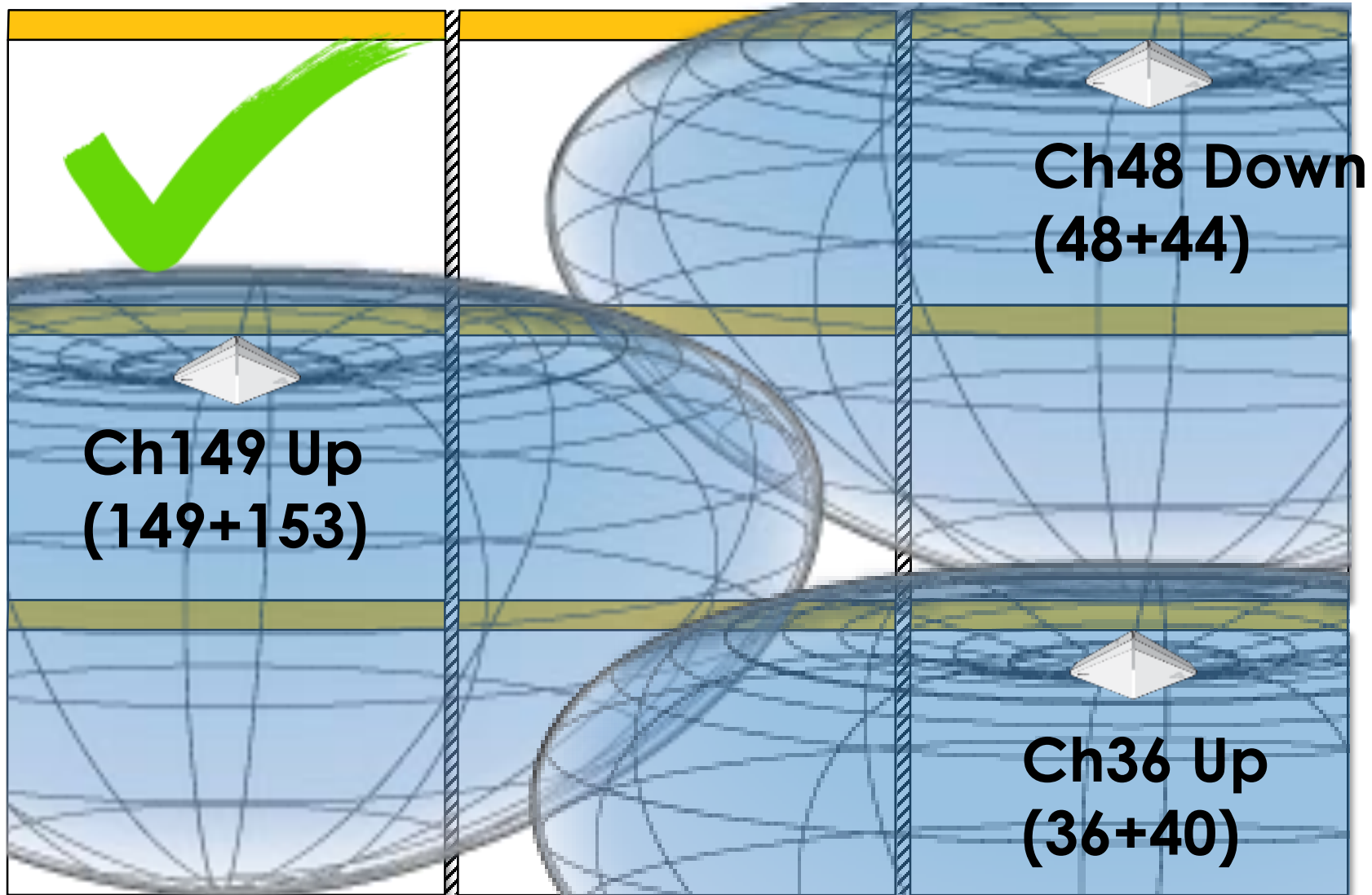
IMPORTANT!!!!



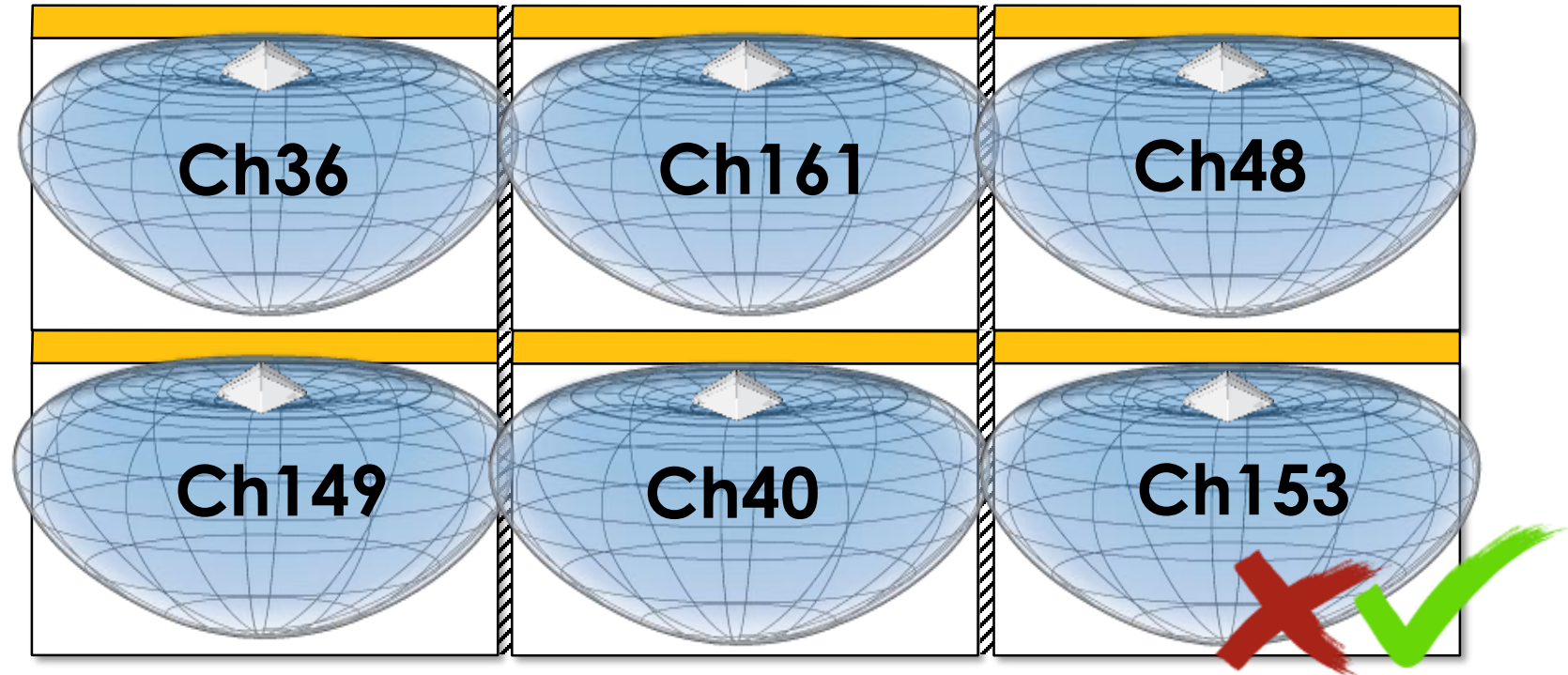
Use environment/material to your advantage



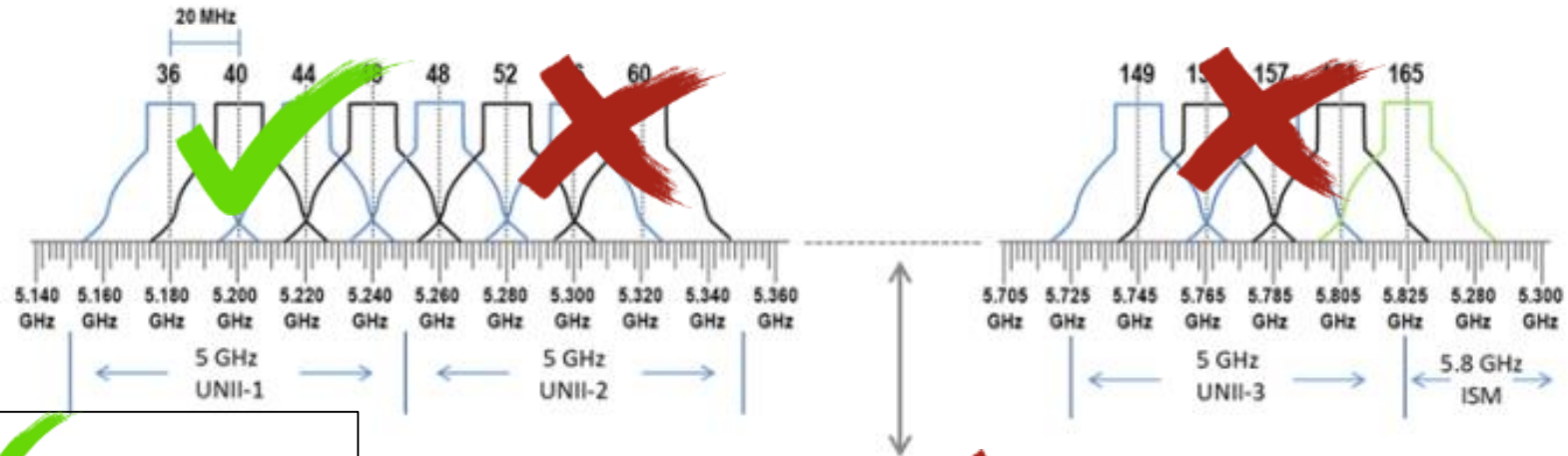
Channel width on 5GHz - 40MHz



Channel width on 5GHz - 20MHz



Using DFS channels

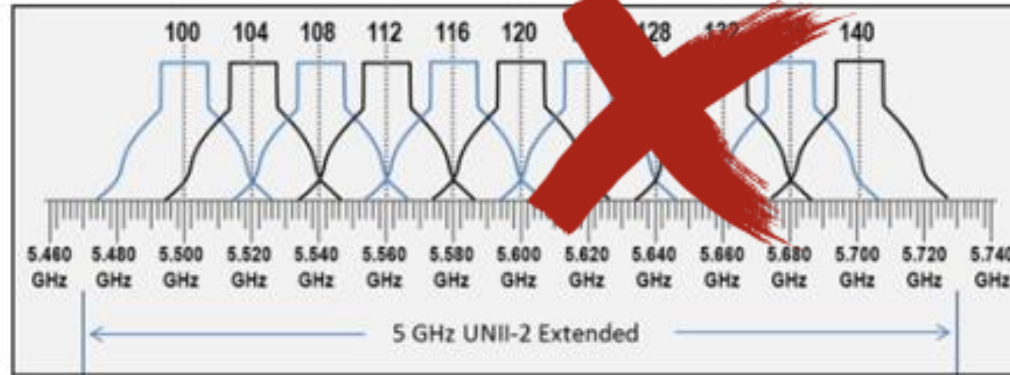


Do's

High density indoor environments like:

- Lecture halls
- Conference centers
- Schools
- Hotels

Primary use is DATA



Don'ts

Mission critical deployments with real time applications like Voice and Video in Hospitals, Logistics, Manufacturing, etc.

Always avoid it near the helipads, airports, marinas, etc., where there are weather radars present.



Thank You

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