TALK

Do NOT Put APs in Hallways

Keith Parsons · WLAN Pros channel · 2020-09-21

A short training video on why you should not put access points in hallways.

Short answer

Because hallway access points can cover the rooms, but it takes more of them. In this talk, Keith Parsons shows a hotel design in which access points in the hallways reached about 98 percent of the room area with 24 access points, while access points inside the rooms did better with 10. He explains that hallway walls often carry the building's weight and are made of denser material, so they block more signal than the lighter walls between rooms, which one access point inside a room can reach through. A hallway access point also throws long tails of coverage down the hall, so a device turning a corner can lose signal within a couple of meters and have to roam, switch to another access point, at once.

Key points

- Part of the Wireless LAN Design Rules series: why access points (APs) should not go in hallways.
- Uses a design tool to show one omnidirectional AP covering a whole football field in open space, then the same AP shaped by walls in a small medical clinic.
- In a hotel model, APs in the hallway covered the rooms with 24 APs; APs inside the rooms did better with 10.
- Hallway walls are often load-bearing and dense, so they block more signal than the lighter walls between rooms.
- Covers when breaking the rule makes sense, such as steel-walled cruise ship cabins, using a directional antenna aimed into the rooms.

Chapters

1. 00:27 Why people put APs in hallways
2. 01:24 One AP on a football field
3. 02:25 The same AP in a medical clinic
4. 06:32 A hotel with APs in the hallway
5. 08:14 APs in the rooms: 10 instead of 24
6. 10:32 When to break the rule

Watch on YouTube (https://www.youtube.com/watch?v=cYvP8Ck2zDY). More conference talks: wlan-talks.net (index by Victor Gatuna).

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