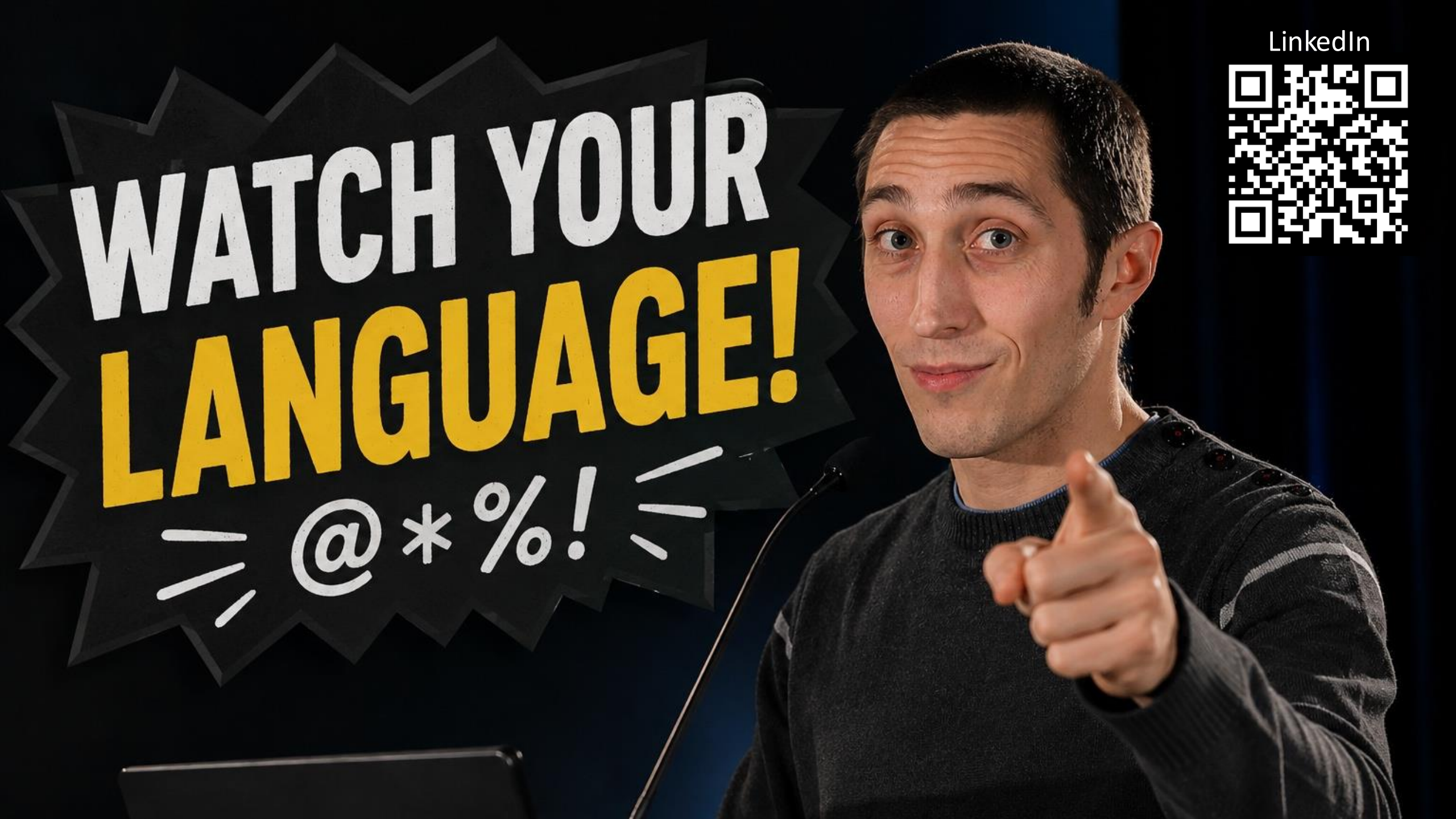

WATCH YOUR
LANGUAGE!
@*%!
LinkedIn



What is CCI?

What is CCI?

Co-channel interference occurs when 2 or more AP's are using the same channel

Occurs when two or more wireless devices, transmitters, or access points operate on the exact same frequency channel within overlapping coverage areas

Crosstalk from two different radio transmitters using the same channel.

What is CCI?

An AP or client operating on the same channel as another access point, where both devices can successfully decode each other's transmissions.

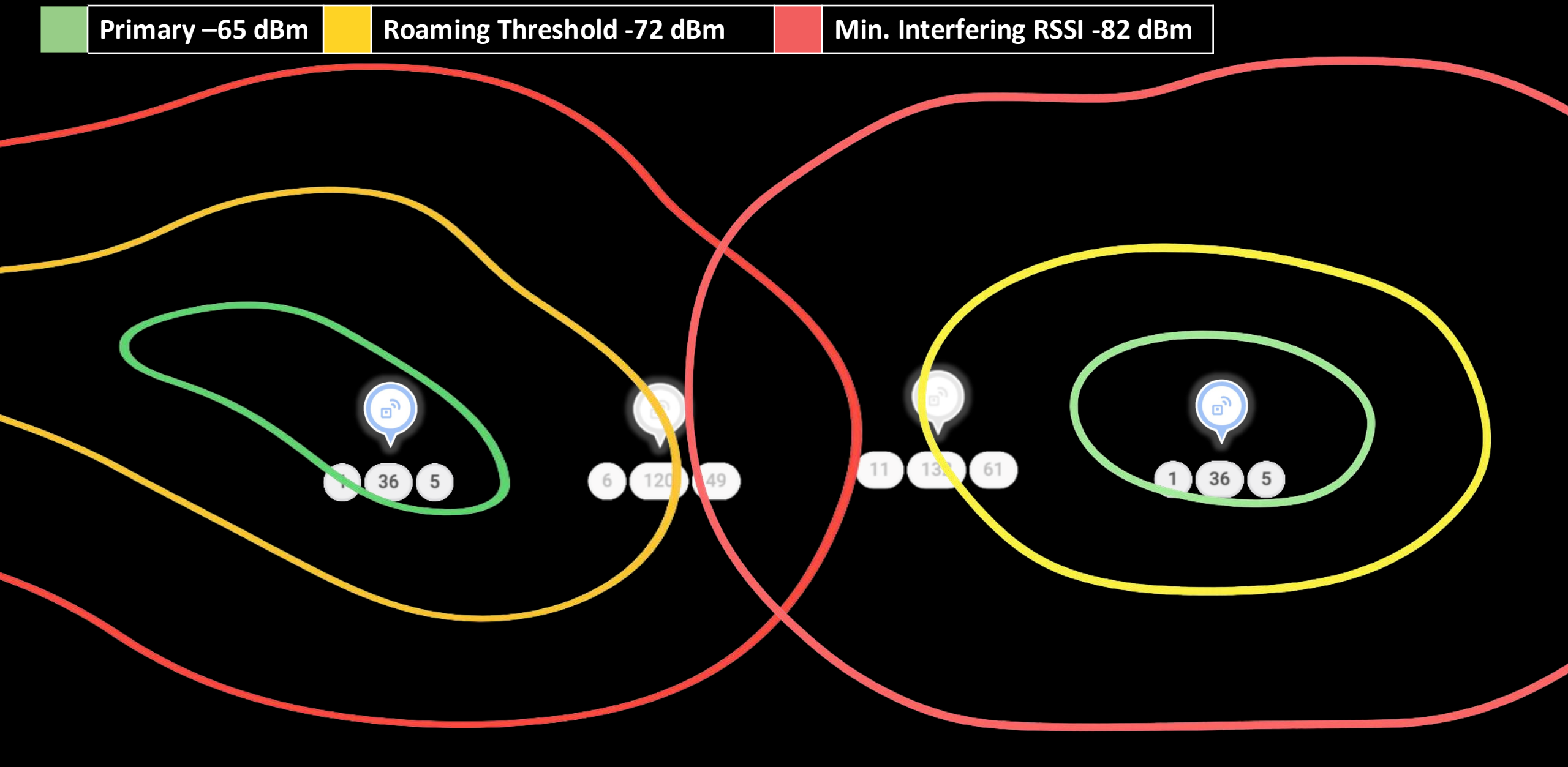
Interference



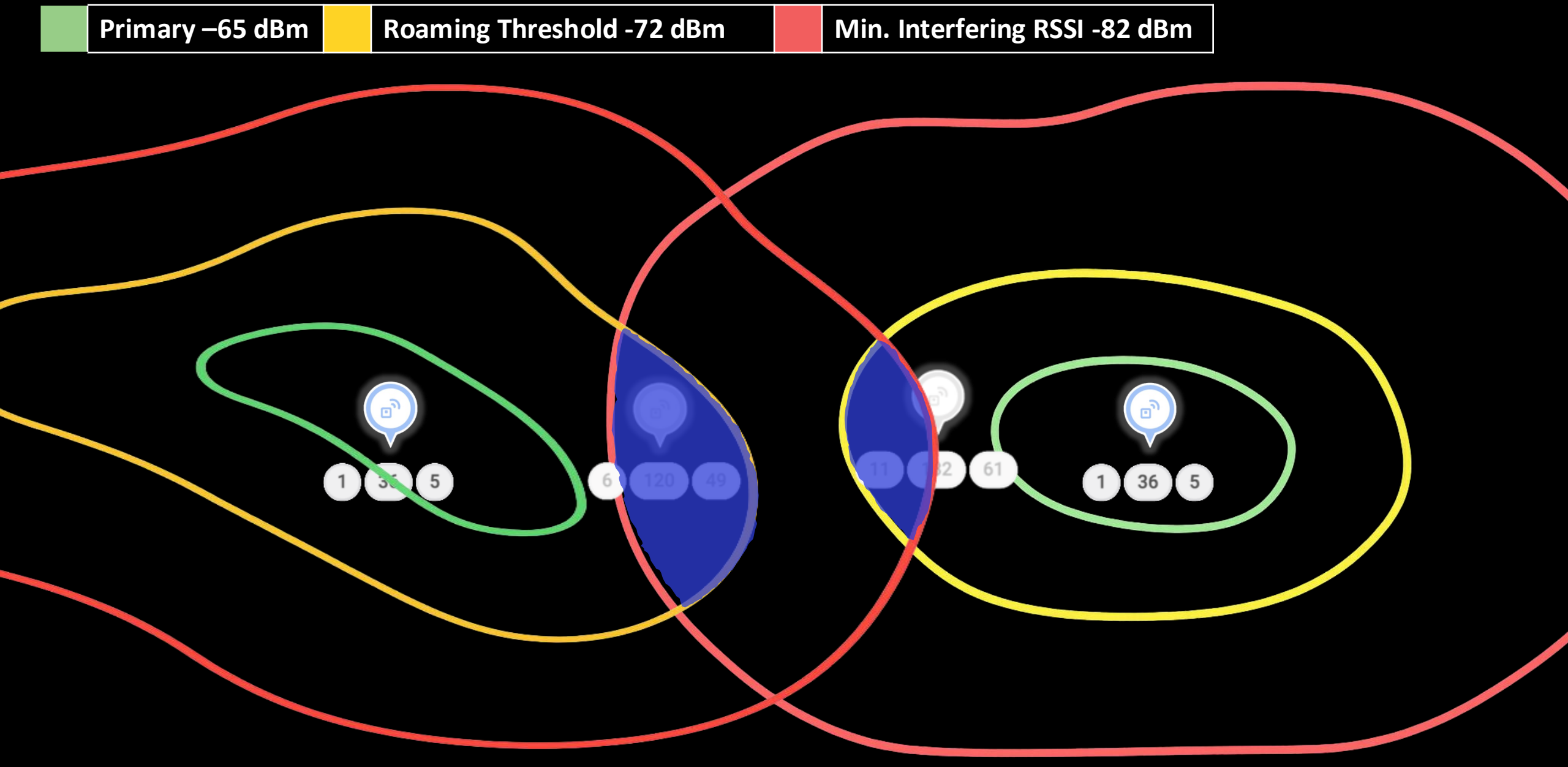
Interference



Interference



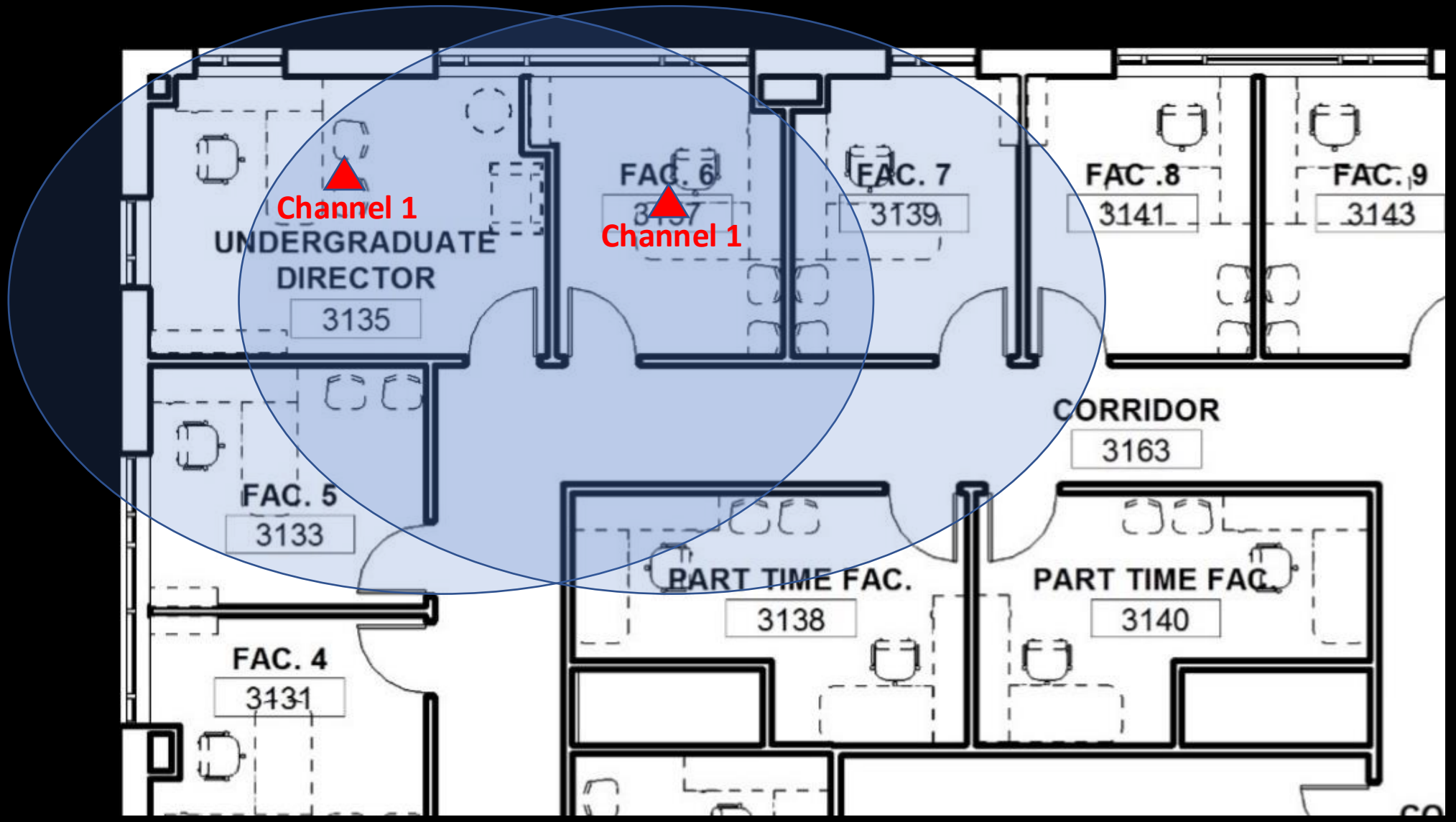
Interference



What is CCI?

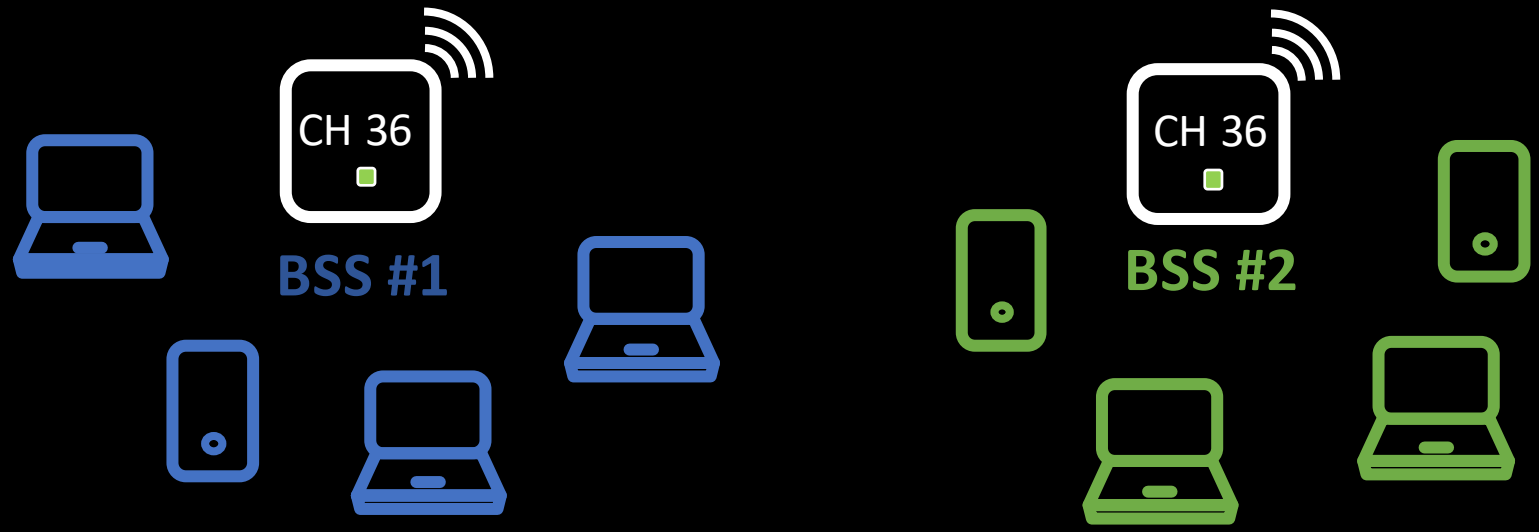
An AP or client operating on the same channel as another access point, where both devices can successfully decode each other's transmissions.

Co-Channel Interference



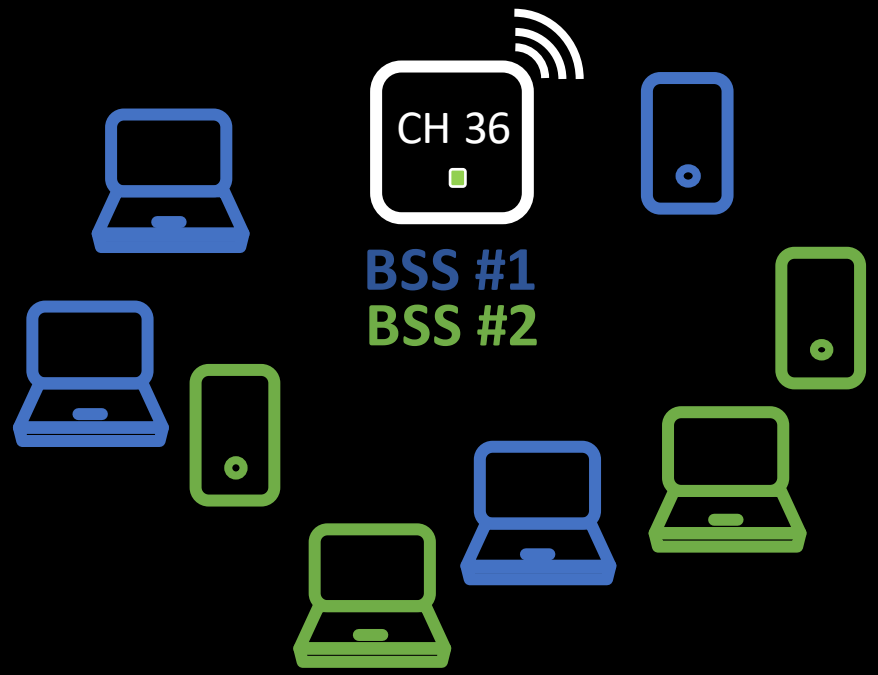
This is Bad?

WARRNING CCI!

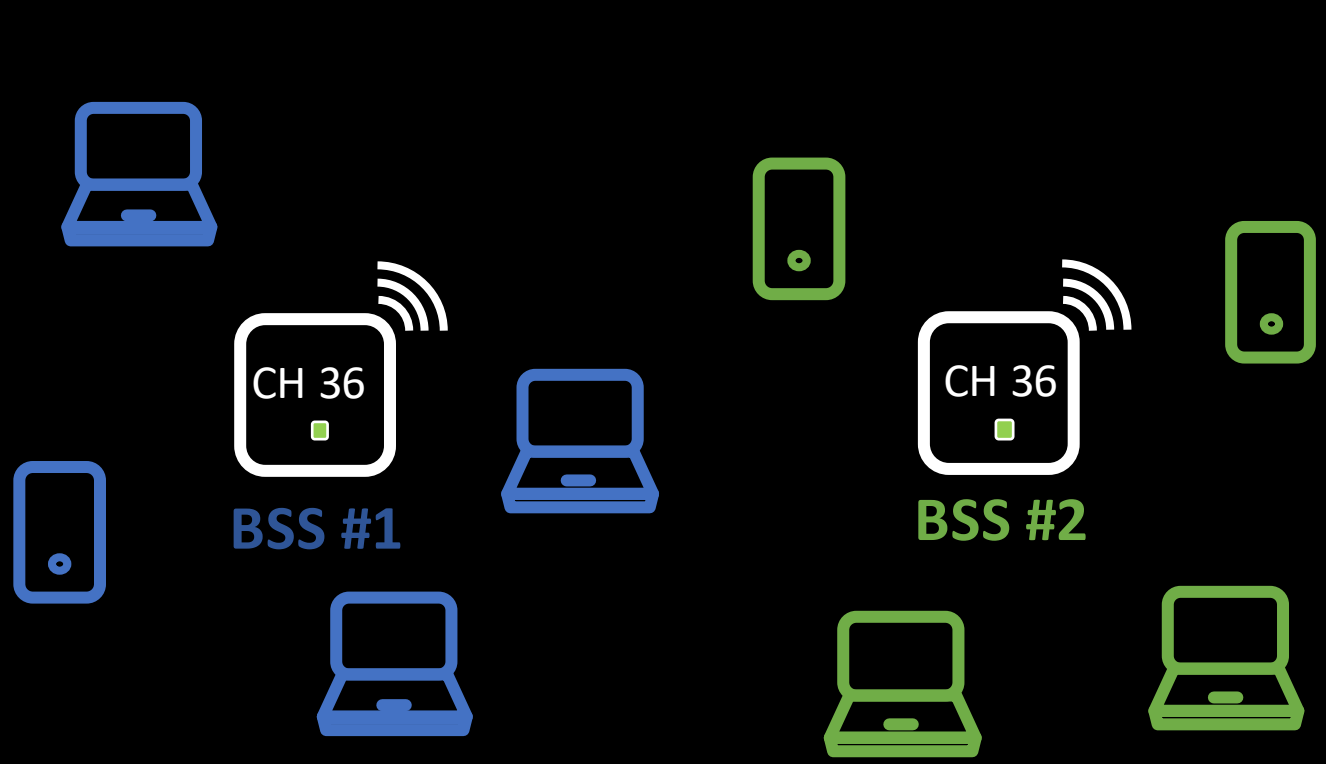


But this is OK?

Do we have CCI here?



Are these equal?



8 STAs contending for access to CH 36



8 STAs contending for access to CH 36

Which is worst?



4 STAs contending for access to CH 36



8 STAs contending for access to CH 36

The most import static?

How many devices are contenting for the access to the same channel?

Co-Channel ~~Interference~~

Contention

OR

DCF (Distributed Coordination Function)

DCF (Distributed Coordination Function)

1

Listen before you talk

802.11 Stations can only transmit when the RF medium is free.

Before transmitting, station will listen to see if the medium is free.

If a station can hear another 802.11 transmission on the channel, they will defer their transmission

2

Be quiet for a while

Between every frame transmitting on the RF medium there must a minimum period of quiet called an Interframe Space.

3

Avoid collisions

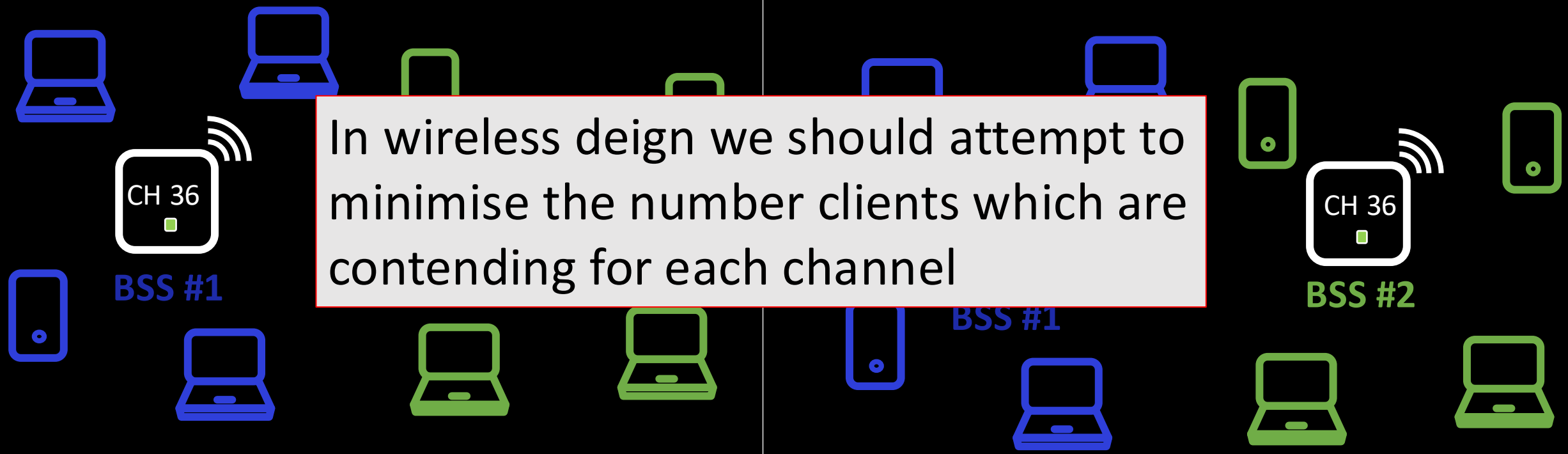
(Be quiet for a while longer)

To avoid collisions, following the interframe space, a station will wait for an additional amount of time.

The amount of time is randomly selected between a contention window's min and max value.

Don’t get me wrong

This is better them this …..

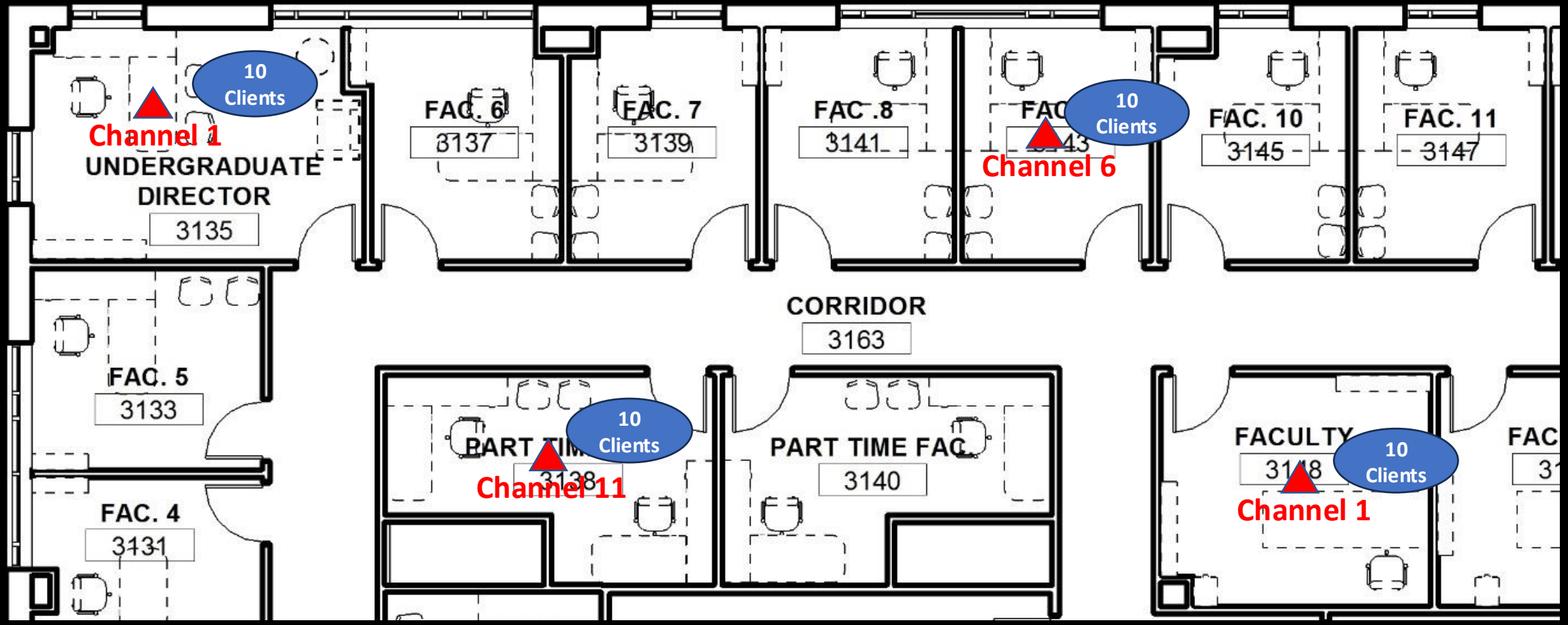


In wireless deign we should attempt to minimise the number clients which are contending for each channel

Disabling 2.4GHz Radios

10 users assorted to each AP each AP

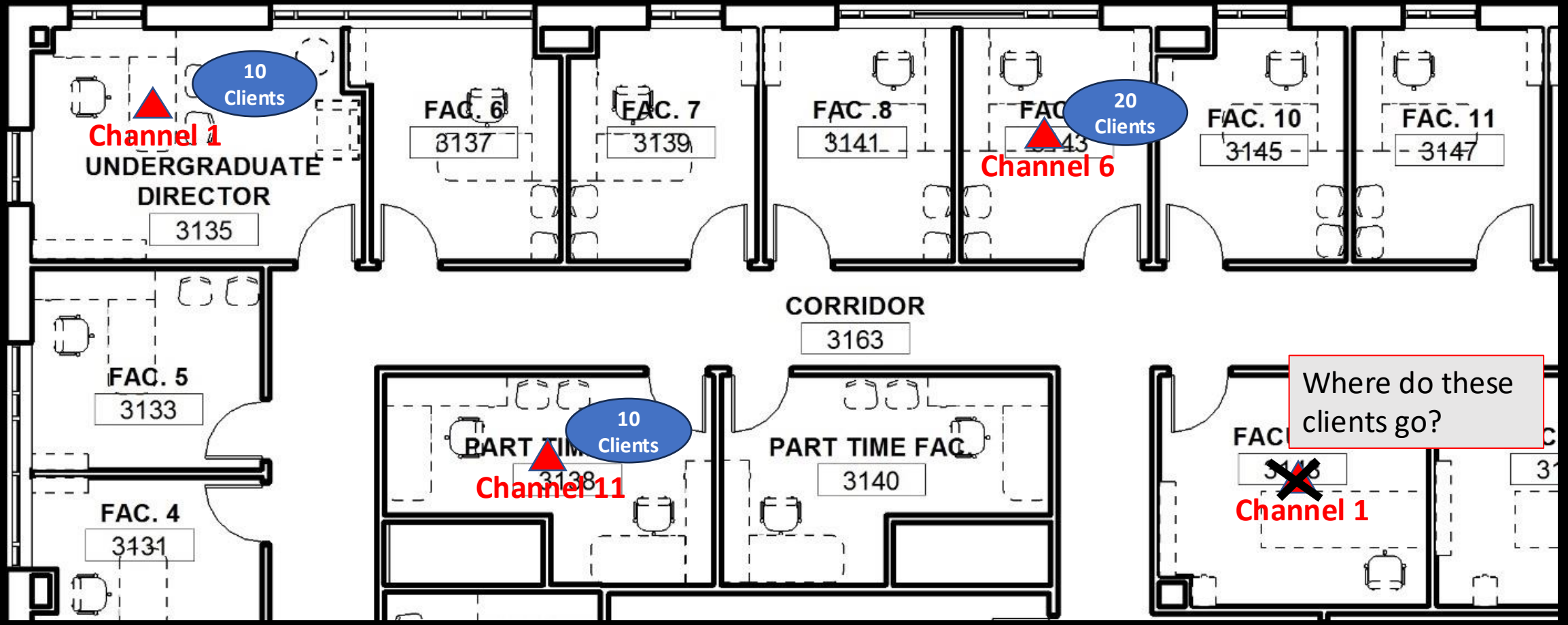
20 users contenting for Channel 1



Disabling 2.4GHz Radios

20 users assorted to each AP each AP

20 users contenting for Channel 6





Raise you right and say after me:

I solemnly swear that from this day forward, the term Co-Channel Interference (CCI) is officially banned from my vocabulary.”