Wireless LAN Networks : Example of Planning Wireless LAN Deployment using Packet Tracer

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The second thing I would like to talk about in wireless is the AP location.

This is it also one of the example; the floor plan is showing that is a large location covered by your wireless network. In this case you need to have more than one Wireless Access Point to provide full coverage of this network of this location or this building.

I take this example, and I convert it to Packet Tracer. In this file I use the physical view of Packet Tracer. I have four devices: Wireless Access Points A, B, C and D. They are all Linksys (routers). I just want to make it simple, and we have one laptop here. This one laptop has a Linksys Wireless Client installed, and of course, make sure there is Wireless Network Interface Linksys Card (NIC).

And then I go to the physical view. So you see the same floor plan I show in my slide. The demo is basically to show you where should you put the AP to provide a better coverage for your wireless LAN. (You can utilise the physical view). Insert an image just like the previous demo, I insert a frequency channel, and this one I insert a floor plan, and I put four Wireless Access Points here. These four Wireless Access Points are covering different parts of the floor. With these four Access Points placement, you see that I can provide 100% coverage of the wireless network. What you can see and what you can show is that, you have one laptop here, and this laptop has a PC Wireless Client and you can do a ‘connect’ tab and do a refresh.

Right now, my laptop is outside of any wireless network signal coverage, so I cannot see any wireless network available. When the laptop is on this floor, and is at this location, this laptop should be able to see the Wireless Access Point B because it is in the Wireless Access Point B's signal coverage. But when you move this laptop to other locations, for example, this one (location) - This one has the signal coverage for both the Wireless Access Point B and C. So when you open your laptop, you can see this computer is now getting the wireless signal coverage for network B and C. And quite obviously, (for) the network B, the Wireless Access Point B has a better signal coverage.

If you move your laptop to the edge of one of the coverage right now, this laptop has a stronger signal coming from (Access Point) B, and weaker signal coming from (Access Point) C.
We can turn on our laptop. To connect and see, now B has stronger signal- 69%, and C only 9%.

Because of Wireless Access Point placement, there are no blind spots for your wireless networks, so anywhere on this floor, you can get a wireless signal coverage. The only difference is in some locations, you may get stronger signal from one AP, but weaker signal

from the other AP. For example, this area, (when) I turn on my laptop, I am getting the wireless signal from the AP A, B and C, and we see that this computer has wireless signals from A - 17%, A is the AP up there up there; and (from) B - 20%, B is here; and (from) C - 17%. That means that there will be no blind spots anywhere the user moves around this floor, (the user) will not be get disconnected. The laptop will associate to the stronger signal automatically.

If you want to make sure that the user get (from) anywhere, a minimum 50% of signal coverage, then you may need to put extra Access Points. For example, you may want to put one Access Point here to provide better signal coverage because, compare with other area, other locations, this area seems to have the weaker signal, because it's almost at the edge of these three Wireless Access Points.

This is what you can do with Packet Tracer to observe (that) when the wireless clients move around the wireless network coverage, (where is) the best place to put your Access Points.