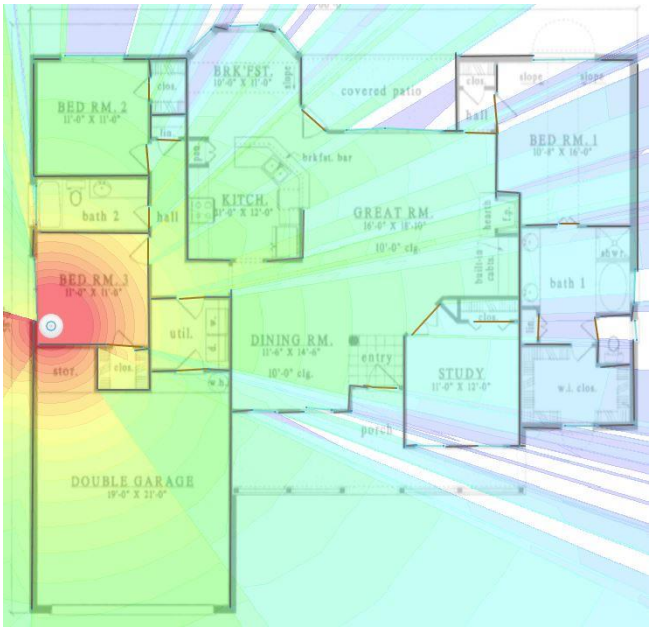
So, you Want Futiva Fiber?
Please give some thought about placement of a WiFi-6 router!!

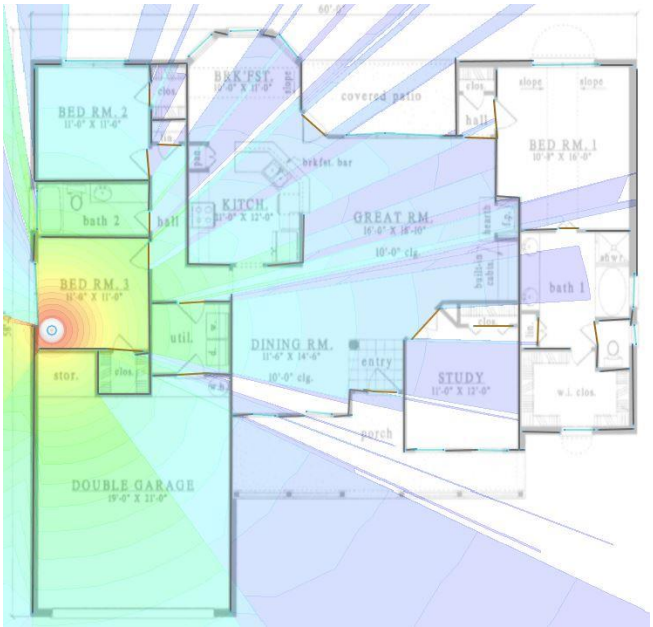
First off, I would like to say you have made a great decision on getting Futiva Fiber! We are the only locally owned fiber internet company in your area. We look forward to providing you the best Fiber experience, and service possible.

So, here are a few things we need to talk about before our engineers and technicians come out.

1. Location, location, location: I know this is cliché: but it's true.
2. Wi-Fi-6 - what is it?
3. Futiva's Managed Wi-Fi

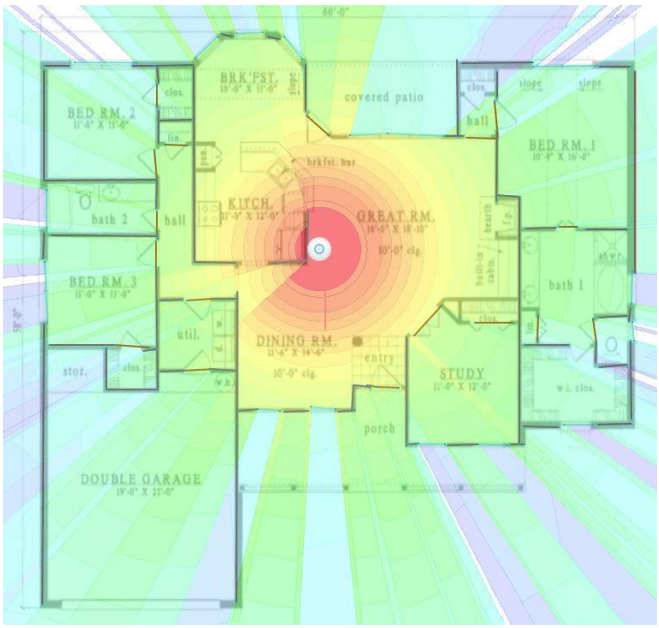
1: Location, Location, Location: Better Signal equals Greater Potential Throughput!
So, lets first think about all the devices you have in your home that uses the internet. Cell phones, tablets, printers, Ring Doorbells, laptops, desktops, Firesticks, Roku's, smartTV's, thermostats, smart-watches, game consoles, ebook readers, and the list goes on! Now let's think about where these devices are used? They are not all used in one section of your house, are they? Of course not!!
Let's look at the two images below, this is a 2,000 square foot home. When our engineers ask, "*Where would you like the fiber clam shell installed on the house?"* most often people say the garage. The next question is where would you like the router? Again, most often, it is usually in a room close to the garage, or in a cabinet by a TV, or in the basement. Routers work on two frequencies, 2.4 & 5Ghz. So, looking at the first image, this is a heatmap of what 2.4Ghz router would put out for approximate coverage and the second image is what 5Ghz would put out for approximate coverage. You can see that 2.4 can cover more then 5Ghz. But 5Ghz offers higher speeds to devices.

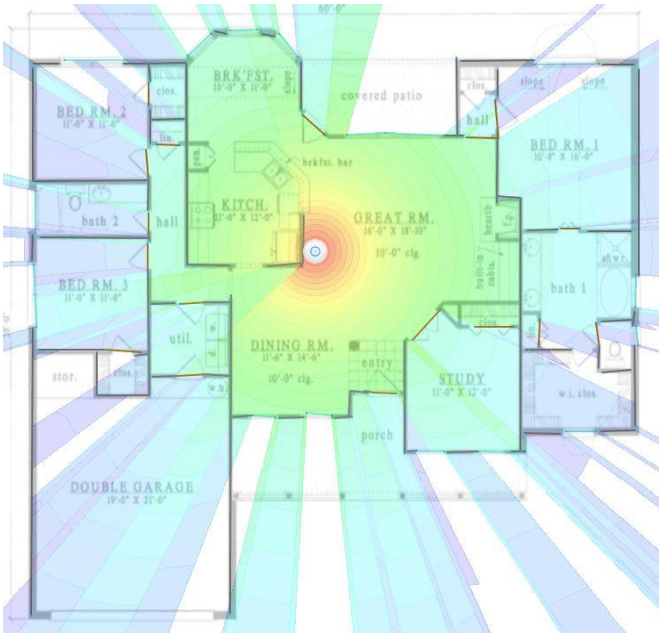




Looking at the images above, Devices in bedroom 2 & 3 would work, but moving to other areas of this house, your devices would then switch to using 2.4Ghz and get slower speeds.

Now let's look at the next images below, with the router more in the center of the house:





Now you see that 2.4 can cover the complete house and 5Ghz does a better job too. With the 5Ghz bedroom 1 has good coverage, but bedroom 2 & 3 on the 5Ghz still isn't as good. This is because of the number of walls the signals have to go through. The lower the frequency, the better the signal goes through walls. In this instance, we would suggest an extender or mesh unit to fill in that coverage.
I know, you might ask: why not leave the router in bedroom 3 and use an extender or mesh unit? Well extenders/mesh units do not have the same power output that the main router will have. Note: extender/mesh units need to connect back to the router, not to another extender/mesh unit.

1. **Centralize your Router:**
   Make sure you place the router/access point in the middle of all the devices that you are using. The signal strength from your router is somewhat based on the distance. The central position can allow even distribution to all of your devices.
2. **Router Placement High or Low:**
   Try to place the router as high as possible in the room, so the signal gets dispersed throughout your home. Wi-Fi routers emit radio waves, which spread out and down from their source. Mounting the router to a wall or setting it on a high shelf can give you a better signal coverage.

2: Wi-Fi-6 - what is it?
To start with, let's talk about the evolution of Wi-Fi:

- 1999: 802.11b the first wireless routers came out, 2.4Ghz only and only could see at best 7meg of throughput.
- 2003: 802.11a/g came out (a) side 5Ghz and could see about 45meg of throughput (g) side 2.4Ghz and could see about 28meg of throughput.
- 2009: 802.11n is the most widely used with many devices still being used today. Both 2.4Ghz and 5Ghz best case throughput on 2.4Ghz was about 50-100meg and up to 320meg throughput on the 5Ghz side.
- 2013: 802.11ac Both 2.4Ghz and 5Ghz. Best case throughput on 2.4Ghz was about 50-100meg and up to 500meg throughput on the 5Ghz side. On 802.11ac MIMO (Multi IN Multi Out)

Antennas were added to give greater coverage and support more devices. There are 2x2 antennas on the 2.4Ghz side and 4x4 antennas on the 5Ghz.

- 2019: 802.11ax (WiFi6) Both 2.4Ghz and 5Ghz best case throughput on 2.4Ghz was about 50-100meg and up to 500meg throughput on the 5Ghz side. On 802.11ax MIMO (Multi IN Multi Out) Antennas were doubled to give greater coverage and support even more devices. There are 4x4 antennas on the 2.4Ghz side and 8x8 antennas on the 5Ghz.

So, what is 802.11ax (Wi-Fi 6)? It is the latest Wi-Fi connectivity protocol released. The average number of connected devices per household for a family of four is now 10 devices. By 2022, that same family of four is estimated to reach 50 wirelessly connected devices.

Futiva's Managed Wi-Fi:

Managed Wi-Fi is an additional service we provide that ensures you experience the most your fiber internet service has to offer. This service provides a GigaSpire Blast router and 1 extender/mesh unit if needed, so you can now experience whole-home coverage in every corner of your home. Our trained technicians will optimize your Wi-Fi where you need to use it the most. There is no expensive equipment to buy or replace. We take care of everything. Give us a call to learn more about this great new service offering! 618-736-2901