# Wireless Fidelity

## Your Cheatin Heart

## What is a WiFi System - Router

*Router using Freq. between 2.4GHz - 5GHZ*

*Connects to the Internet via Modem from your Internet Provider*

*Signal range is up to 102 feet (varies due obstructions).*

*WiFi Routers can be changed to a Access Point for use on a Ethernet Loop*

*WiFi Nodes can be used to build a Mesh Network*

## WiFi Standards IEEE(Institute of Electrical and Electronics Engineers)

*The IEEE standard for WiFi is 802.11. The WiFi Alliance writes and promotes standards.* Poopy Heads

*Common Standards*

*802.11a - Business. Freq. 5GHz & 54Mbps*

*802.11b - Home use. Freq. 2.4GHz & 11Mbps*

*802.11g - Home use. Freq. 2.4GHz & 54Mbps*

*802.11n - Home use. Freq. 2.4 & 5GHz & 300Mbps*

*802.11ac- Business & Home. Freq. 2.4 & 5GHz & 1300 Mbps*

## You Unfaithful Cheating Router

*Routers are backwards compatible to older standards. If your Router is 802.11ac (1300 Mbps), but use a lesser standard devices like 802.11b (11Mbps), the system reverts to 802.11b. This means all other devices on the system revert to 802.11b no matter their 802.11 standard.*

*OMG - Can this be fixed ?*

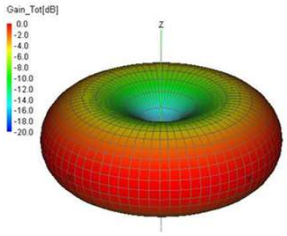
*"No way Jose"*

# WiFi Donut

***WiFi Signal if seen looks like a <u>fat thick donut</u>***

***A Single Router MIMO (Multiple Antennas) can intensify the density of the signal but not the range***

***Hey you can substitute a Bagel***

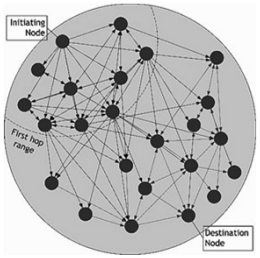



# WiFi Topology

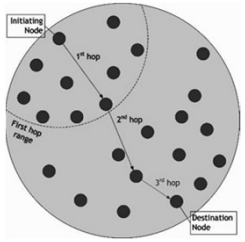
***Single Router***

# Mesh WiFi Topology *"I still hate you"*

***Flood***




***Route***




# Lets add another Router

***Determine each device's 802.11 standard including the Router***

***All new devices use 802.11ac. If you have a "ac" Router, buy a "N" router, add your 802.11 b,g,n devices to the new Router or vise : versa.***

***Example:***

***I use a Mesh System 5GHz for all of my "ac" devices and my old 2.4 GHz system for "N" devices and guests.***

***Still a lousy System - As some say "if it's not broken…… Most likely it is and you are paying too much for Internet $100 to $1000 a year***