3: Wi-Fi BACKHAUL

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TuCSon COMPUTER SOCIETY

apcug

An International
Association of Technology
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Web location for this presentation:

http://aztcs.apcug.org

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SUMMARY

There are three ways for you to connect Wi-Fi extender and mesh devices to expand the coverage of a wireless Wi-Fi network, without having to resort to wireless Wi-Fi backhaul connection.

TOPICS

- Wired and Wired Equivalent Methods
- Speed Comparison of the three Technologies

OPTIONS FOR THE BACKHAUL CONNECTION

- Option 1:
  a CAT 6 cable or a CAT 7 cable or a CAT 8 cable
- Option 2:
  a "Powerline Networking" kit
- Option 3:
  a "Multimedia over Coax Alliance" (MoCA) kit

INTERNET PROVIDER'S GATEWAY BOX

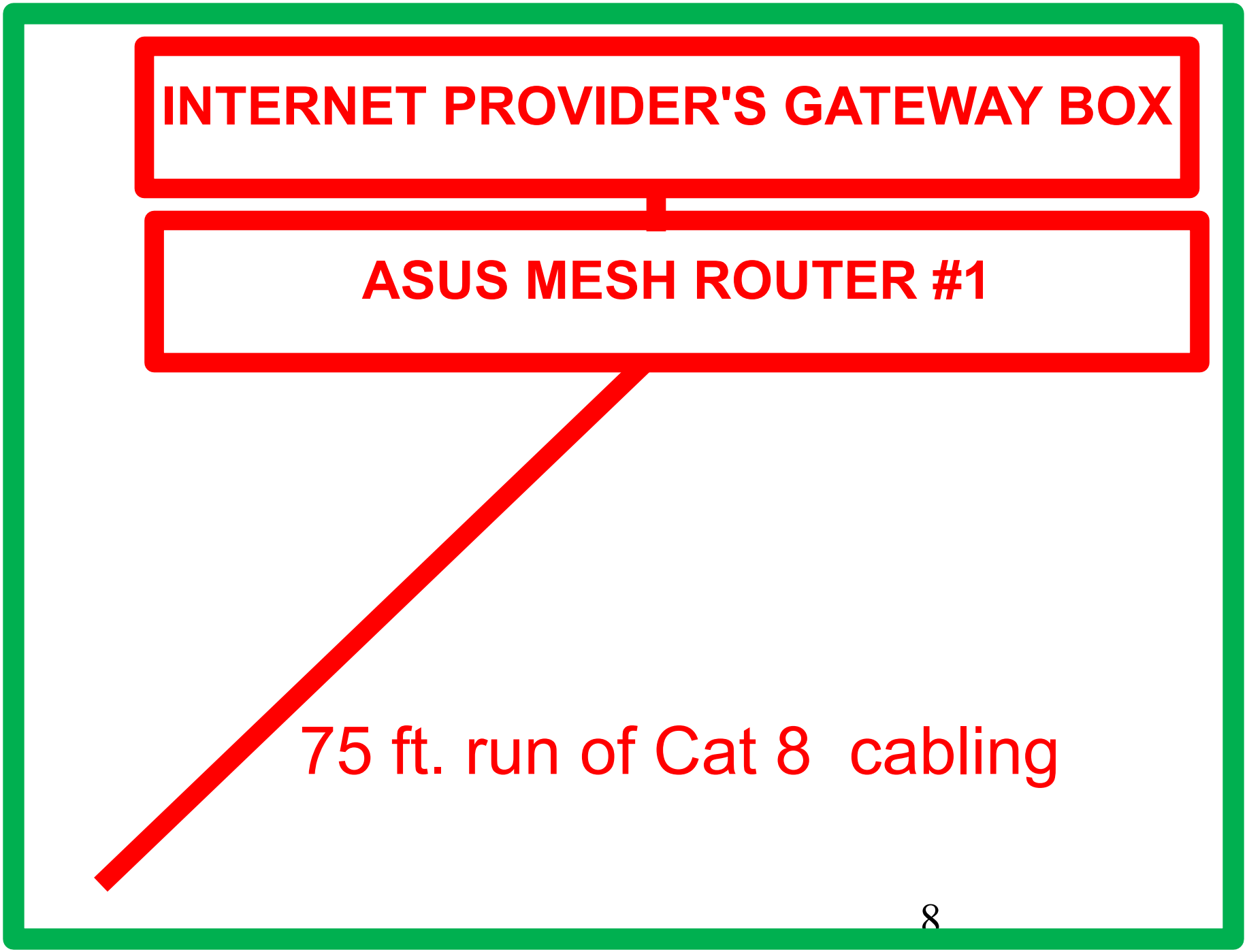
ASUS MESH ROUTER #1

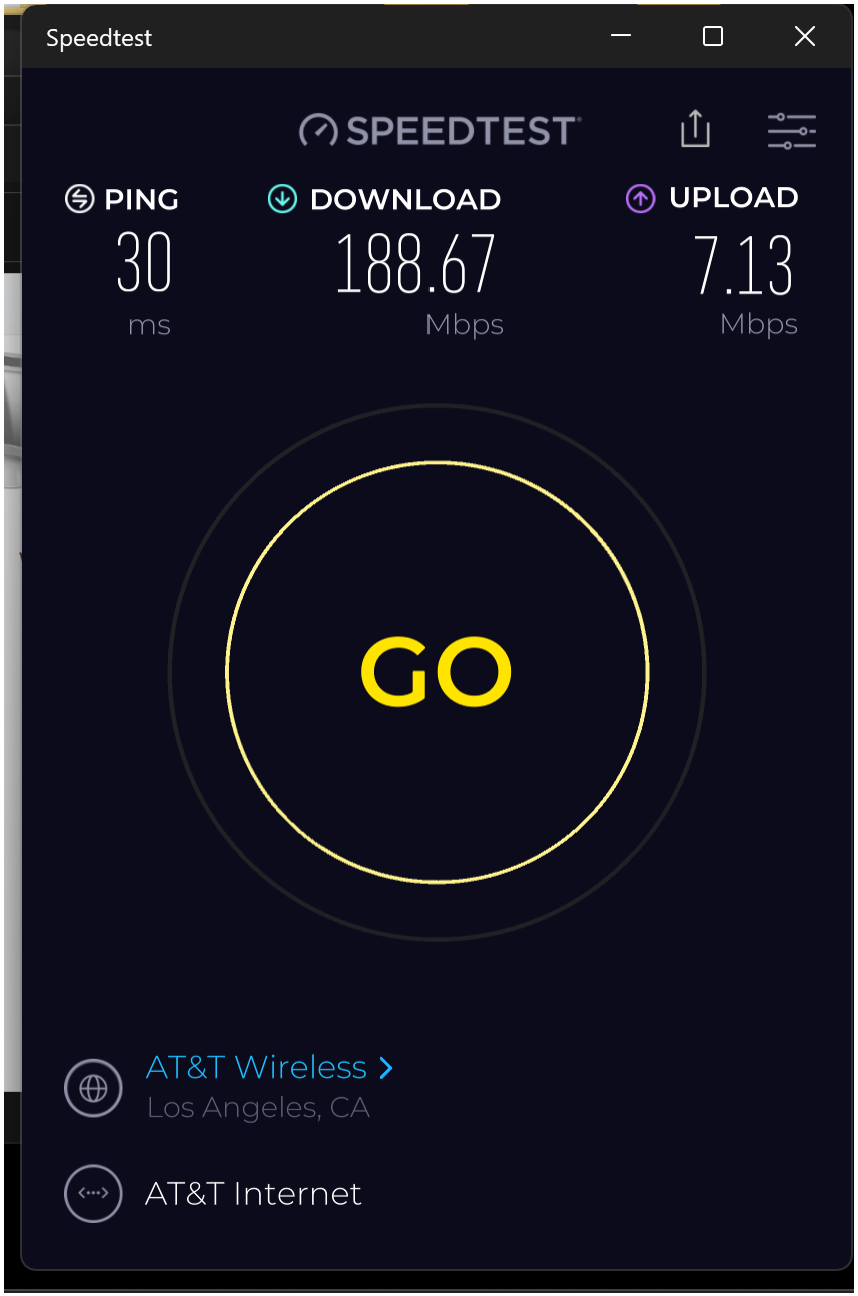
CAT 6/7/8 CABLING, OR
"POWERLINE NETWORKING" KITS, OR
"MULTIMEDIA over COAX ALLIANCE" KITS

USE "SPEEDTEST" TO MEASURE THE INTERNET SPEEDS

CAT 8 ETHERNET CABLING

- CAT 8 Ethernet cabling is the baseline that we will use to compare the two wired-equivalent technologies:


INTERNET PROVIDER'S GATEWAY BOX
ASUS MESH ROUTER #1
75 ft. run of Cat 8 cabling


Speedtest
SPEEDTEST
PING
30
ms
DOWNLOAD
188.67
Mbps
UPLOAD
7.13
Mbps
GO
AT&T Wireless
Los Angeles, CA
AT&T Internet

"POWERLINE NETWORKING" KIT

- For most of us, a powerline networking kit is much easier and cheaper to install relative to a CAT 6 cable or a CAT 7 cable or a CAT 8 cable or an RG6 coax cable:

"POWERLINE NETWORKING" KIT (continued)

- This Powerline Networking kit is faster and less expensive than any other that we have ever tested: https://www.amazon.com/dp/B07TBJML4R

POWERLINE NETWORKING KIT (continued)

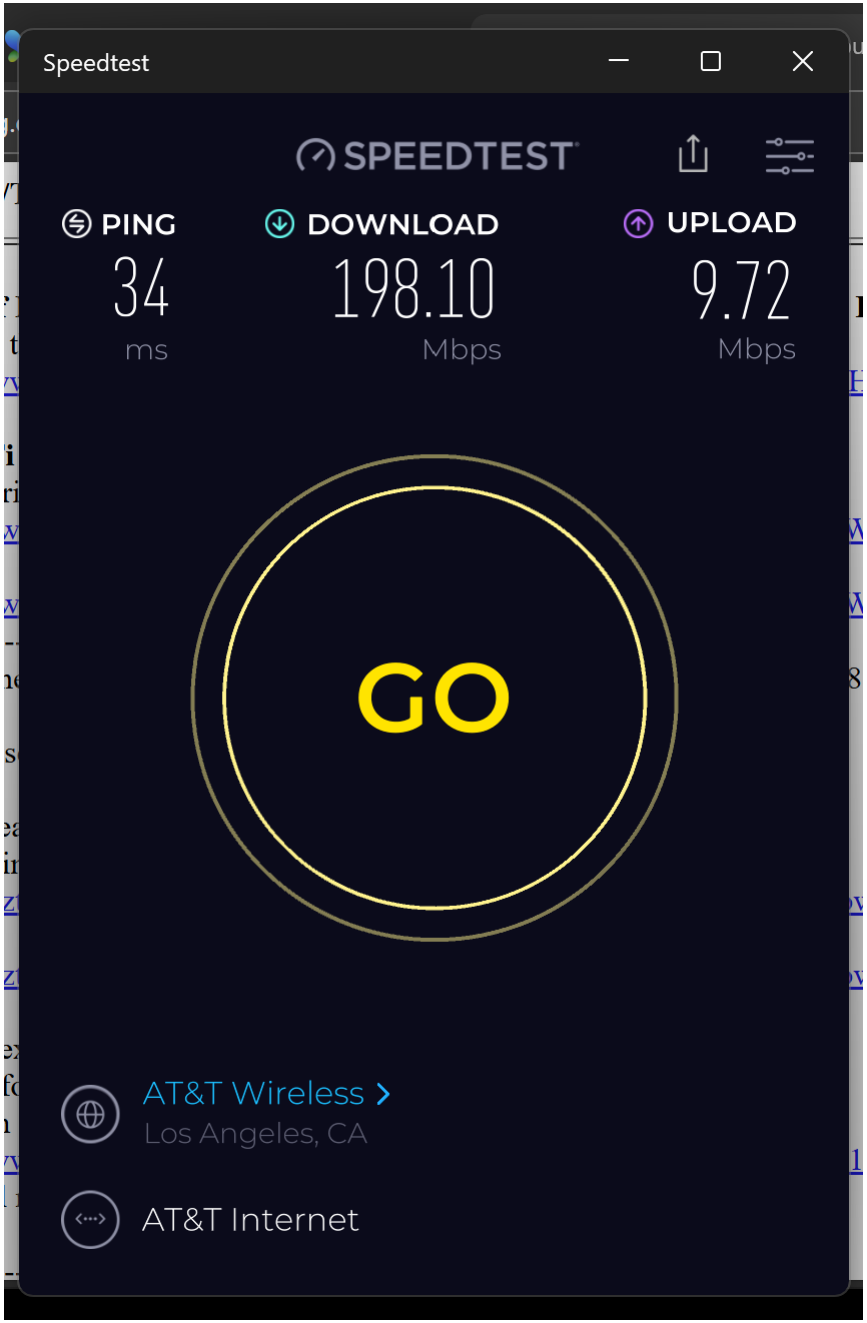
- ..from North wall to Southeast corner:

POWERLINE NETWORKING KIT (continued)

- ..from North wall to the Southeast corner, the Powerline Networking kit was as fast as Cat 8 cabling so you usually can find a combination of electrical outlets that can allow a Powerline Networking kit to operate as fast as Cat 8 cabling!!

INTERNET PROVIDER'S GATEWAY BOX

ASUS MESH ROUTER #1

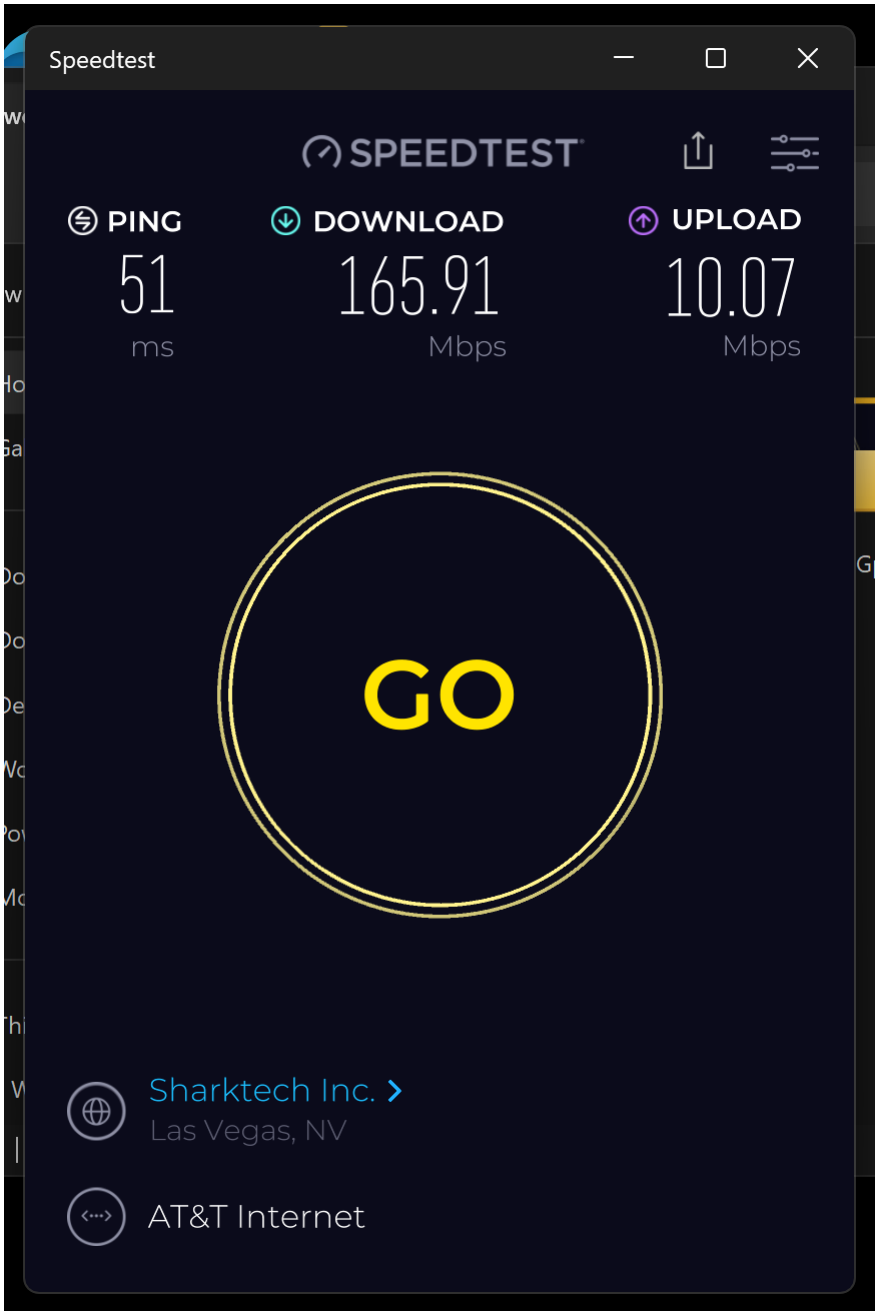

Speedtest
SPEEDTEST
PING
34
ms
DOWNLOAD
198.10
Mbps
UPLOAD
9.72
Mbps
GO
AT&T Wireless
Los Angeles, CA
AT&T Internet

POWERLINE NETWORKING KIT (continued)

- ..from North wall to center of the South wall:

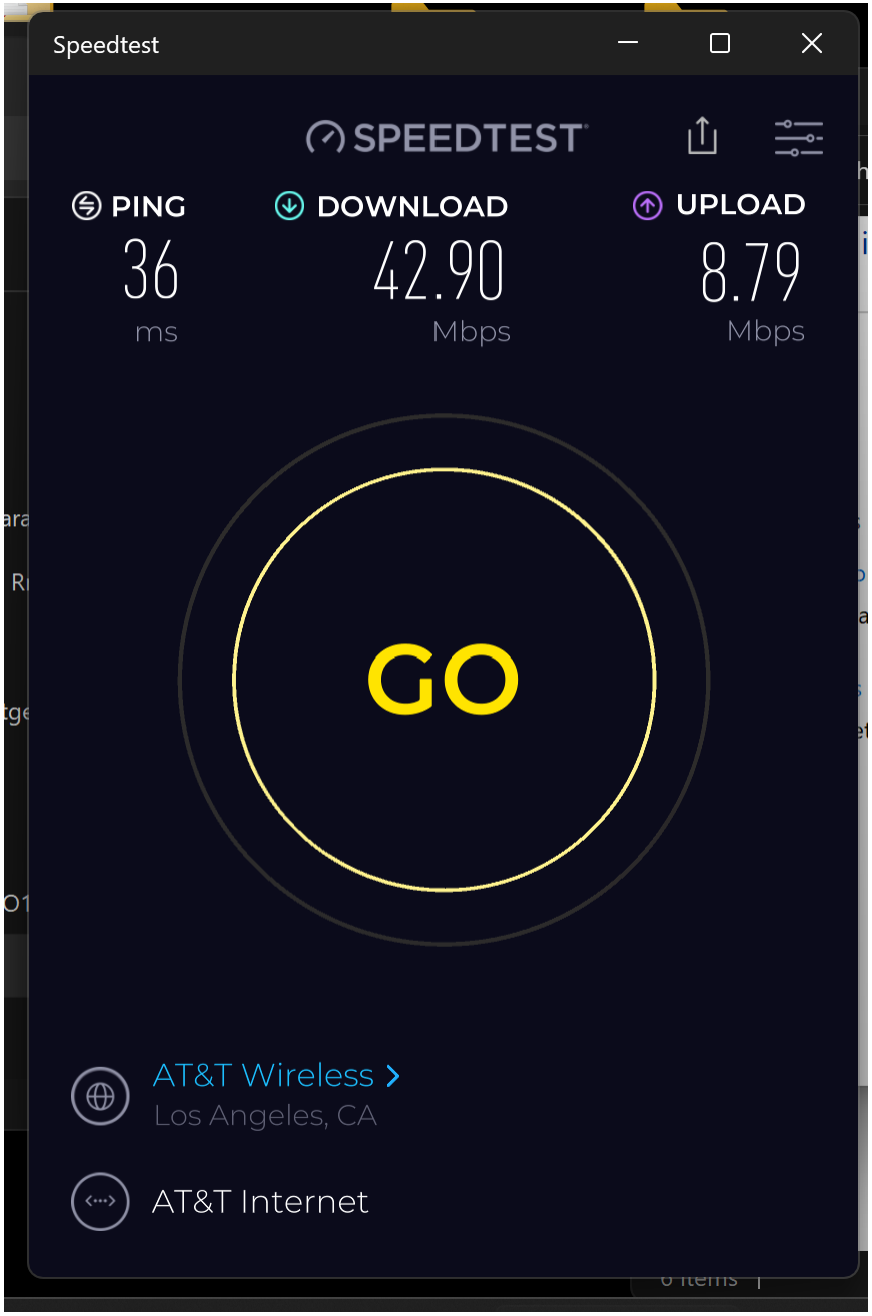
INTERNET PROVIDER'S GATEWAY BOX

ASUS MESH ROUTER #1


Speedtest
SPEEDTEST
PING
51
ms
DOWNLOAD
165.91
Mbps
UPLOAD
10.07
Mbps
GO
Sharktech Inc.
Las Vegas, NV
AT&T Internet

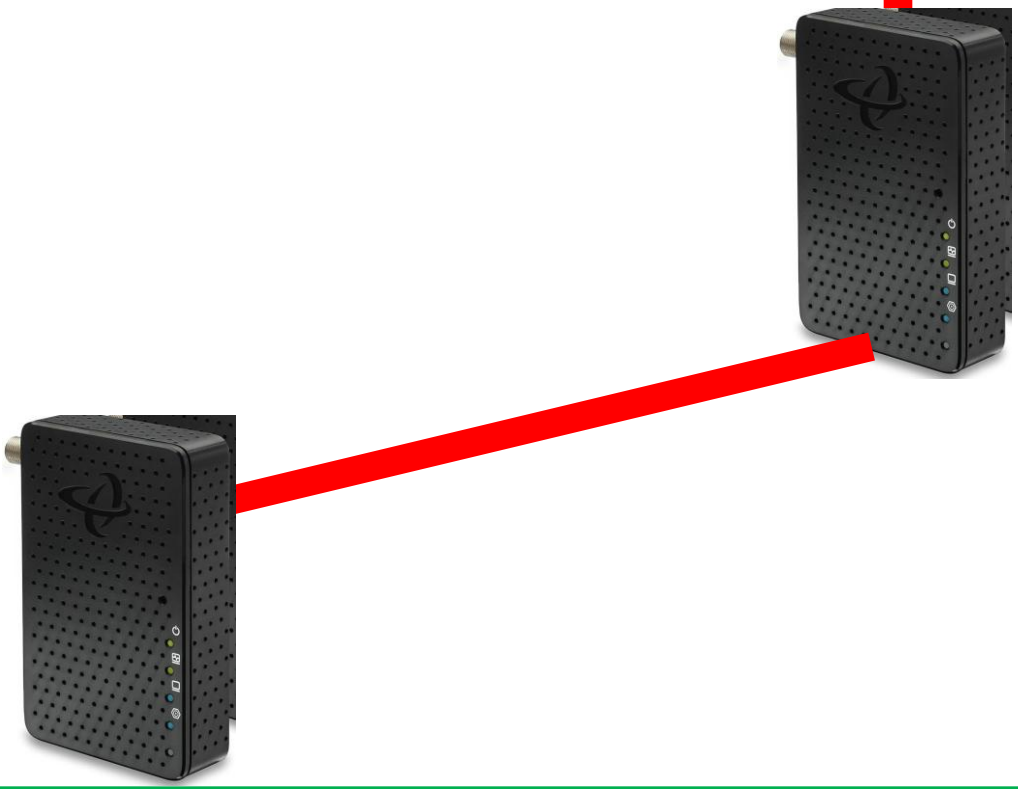
INTERNET PROVIDER'S GATEWAY BOX

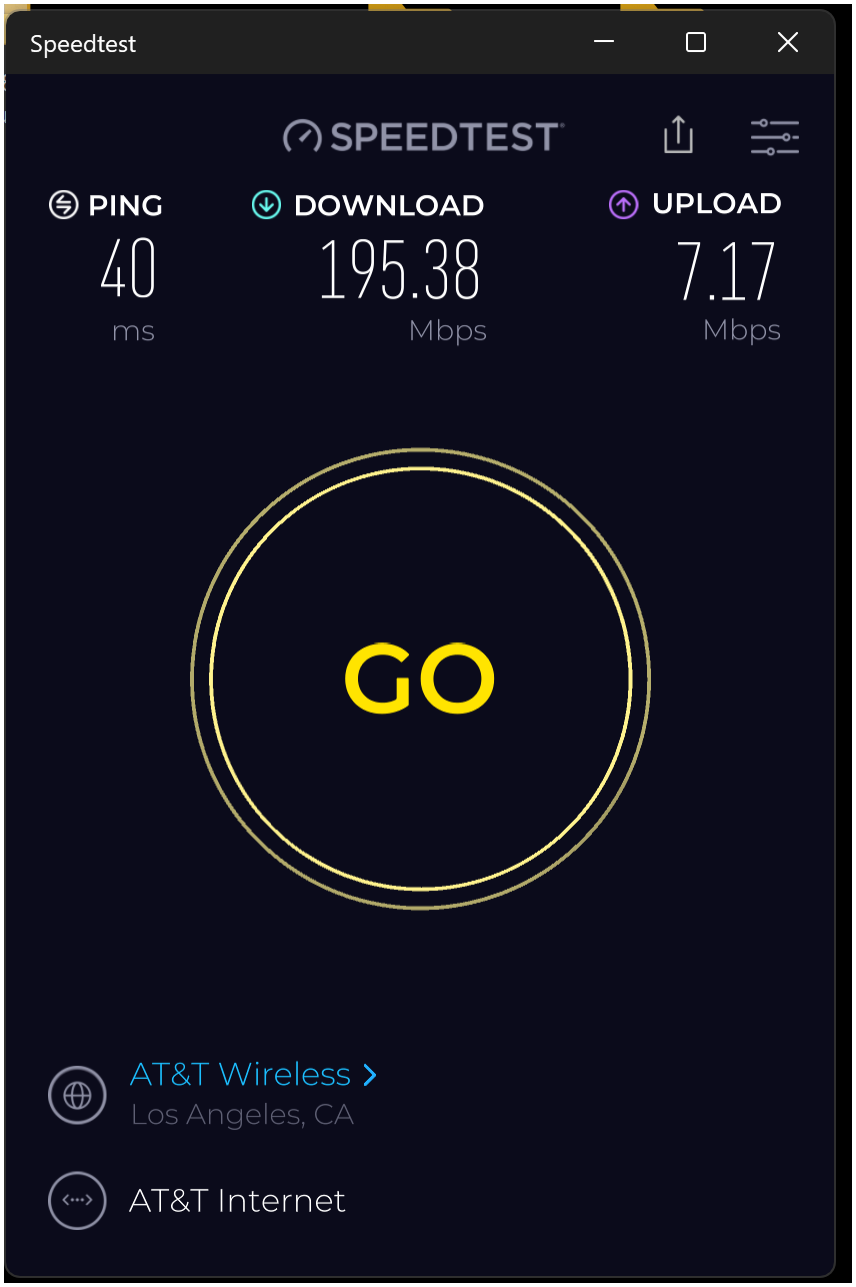
ASUS MESH ROUTER #1


Speedtest
SPEEDTEST
PING
36
ms
DOWNLOAD
42.90
Mbps
UPLOAD
8.79
Mbps
GO
AT&T Wireless
Los Angeles, CA
AT&T Internet

INTERNET PROVIDER'S GATEWAY BOX

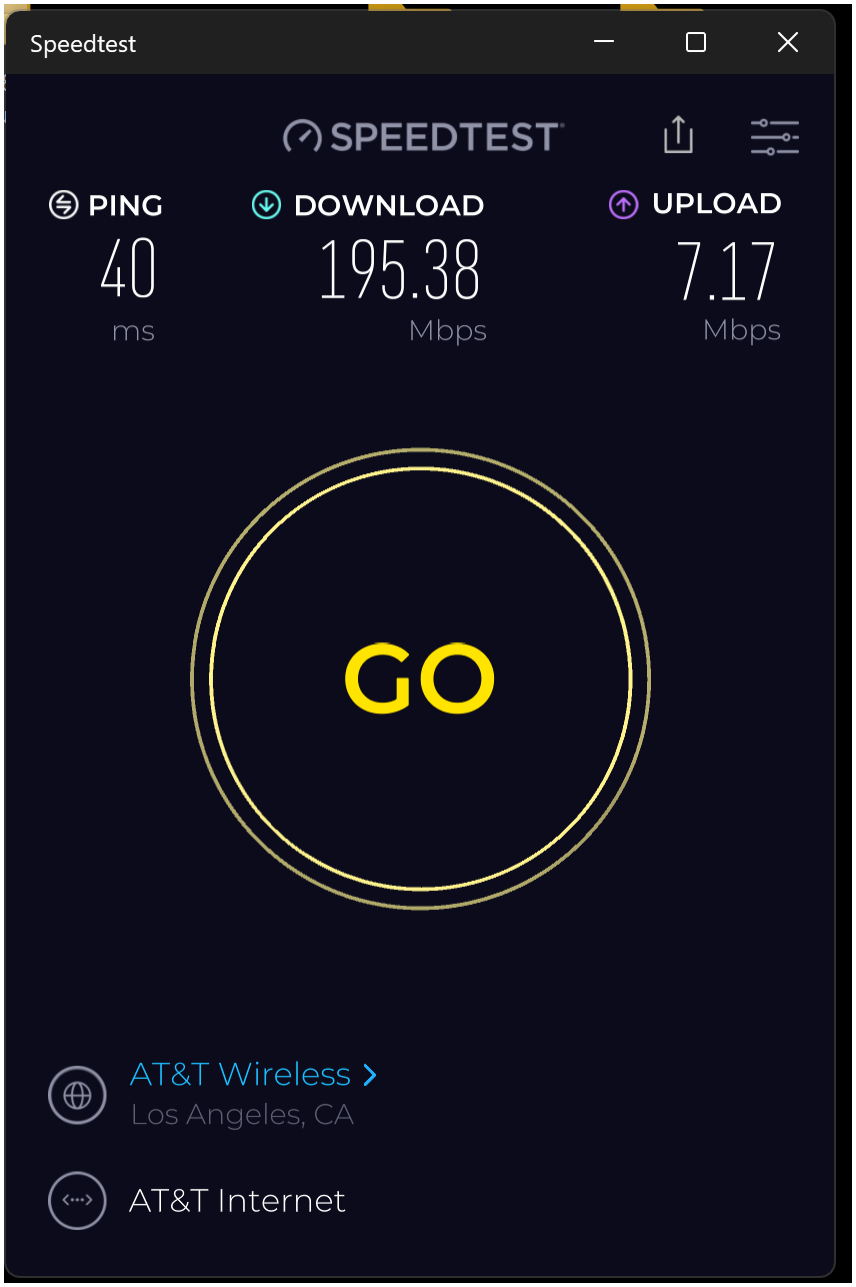
ASUS MESH ROUTER #1




Speedtest
SPEEDTEST
PING
40
ms
DOWNLOAD
195.38
Mbps
UPLOAD
7.17
Mbps
GO
AT&T Wireless
Los Angeles, CA
AT&T Internet

MULTIMEDIA over COAX ALLIANCE (MoCA) KIT

- This "G.hn Wave 2" MoCA kit is the fastest one that we have ever tested.
  It has a nominal local area network speed of 2.5 Gigabits per second in both directions:


Speedtest
SPEEDTEST
PING
40
ms
DOWNLOAD
195.38
Mbps
UPLOAD
7.17
Mbps
GO
AT&T Wireless
Los Angeles, CA
AT&T Internet

MULTIMEDIA over COAX ALLIANCE ("MoCA") KIT (continued)

- https://www.amazon.com/dp/B0C47MJT83
- Unfortunately, I had to run 75-ohm RG6 coaxial coast from the South side of the house to the North side

INSTALL CAT 6 OR 7 CABLING FOR THE LOWEST COST OF ETHERNET CABLING (continued)

- https://aztcs.apcug.org/meeting_notes/winhardsig/networks/Ethernet/Cat7-6-5-installation.pdf
  and
- https://aztcs.apcug.org/meeting_notes/winhardsig/networks/Ethernet/Cat7-6-5-installation.pptx

INSTALL CAT 8 CABLING FOR THE FASTEST POSSIBLE ETHERNET CONNECTION

- as explained at
  is explained at
  https://aztcs.apcug.org/meeting_notes/winhardsig/networks/Ethernet/Cat8-installation.pdf
  and
  https://aztcs.apcug.org/meeting_notes/winhardsig/networks/Ethernet/Cat8-installation.pptx