

Home Networking or How to Install Your Very Own Home-Based Wired or Internet Radio Network

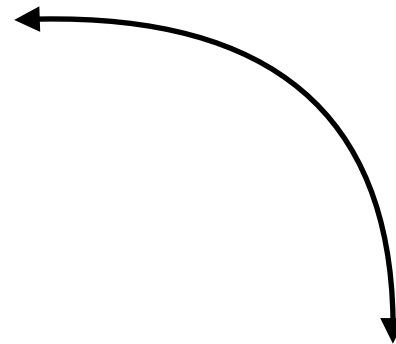


SAMUG Presentation
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What You Need



Access to the Internet



Modem - A modulator-demodulator. Converts between analog signals and digital signals.

Router - A device that directs data packets (traffic directing) around a network.

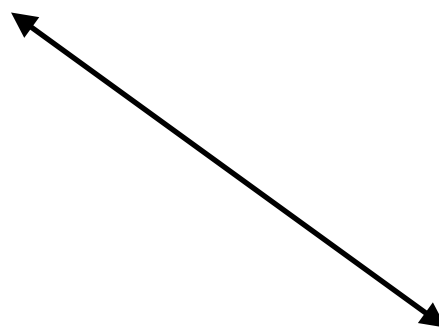


A Modem and a Router

The Simplest Solution



Access to the Internet is provided by an Internet Service Provider (ISP). For many of us, the phone company or our cable television provider also serves as our ISP.

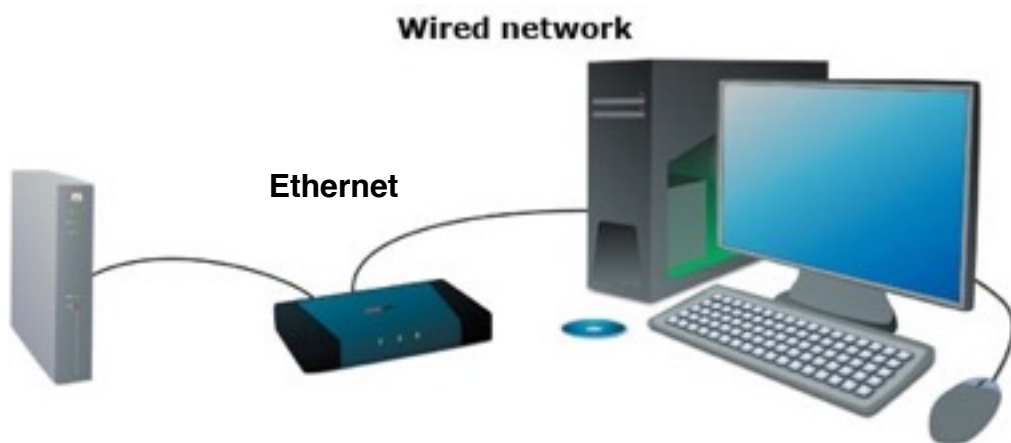


A Combined Modem/Router
(Cable modem or DSL modem)



Dual Wired/Wireless Router

Wired vs. Wireless

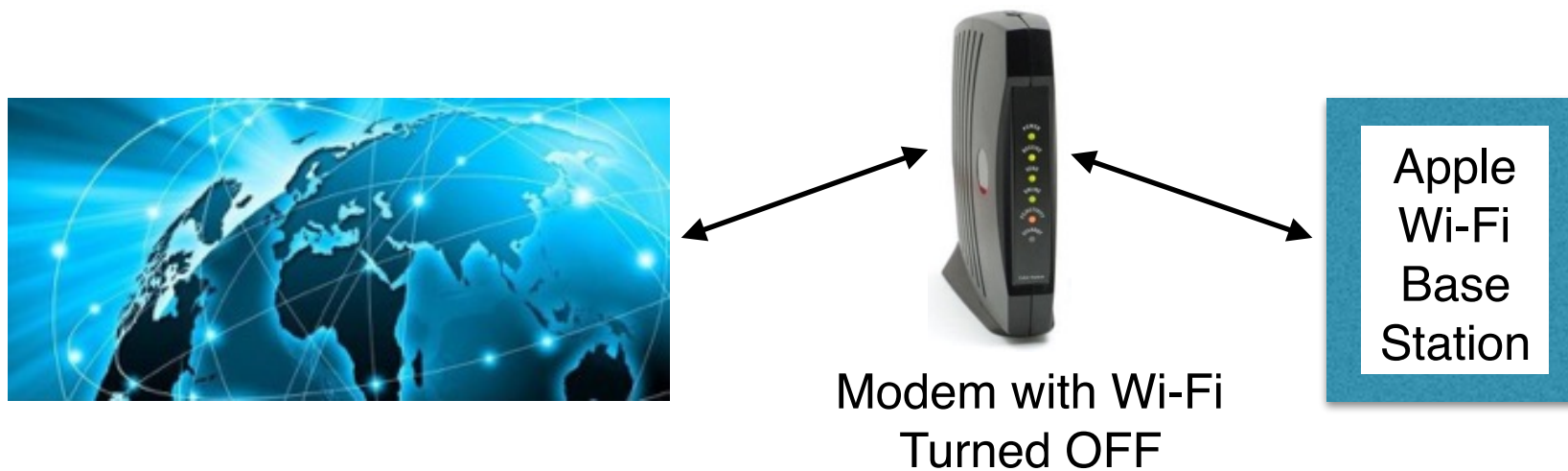


Most routers can function as both a wired and a wireless router in a mixed network.

Wired - Uses Ethernet protocol. Fast reliable, consistent speeds, secure. Generally faster than wireless.

Wireless - Uses Wi-fi protocol. Simple to set up. But, inconsistent performance, susceptible to environment, other wireless devices, walls, floors, microwaves, cordless phones, nearby routers, weather, black-spots w/ no signal, and is less secure.

The Apple Solution



The Apple Airport (Router) Family



AirPort Express
802.11n



AirPort Extreme
802.11ac

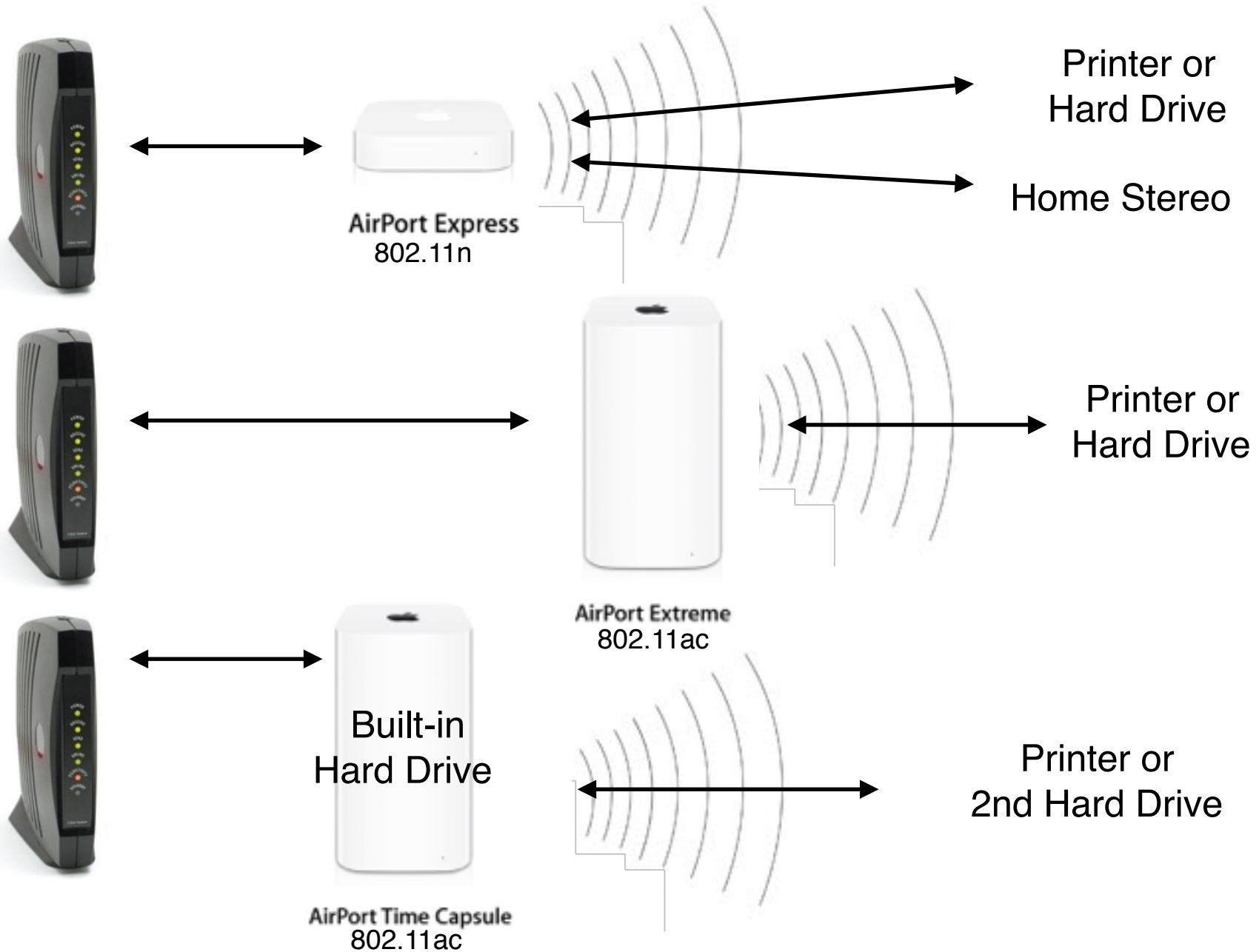


AirPort Time Capsule
802.11ac

- ### Apple Advantages
- Ease-of-use
 - Connectivity to other Apple devices
 - Reliability

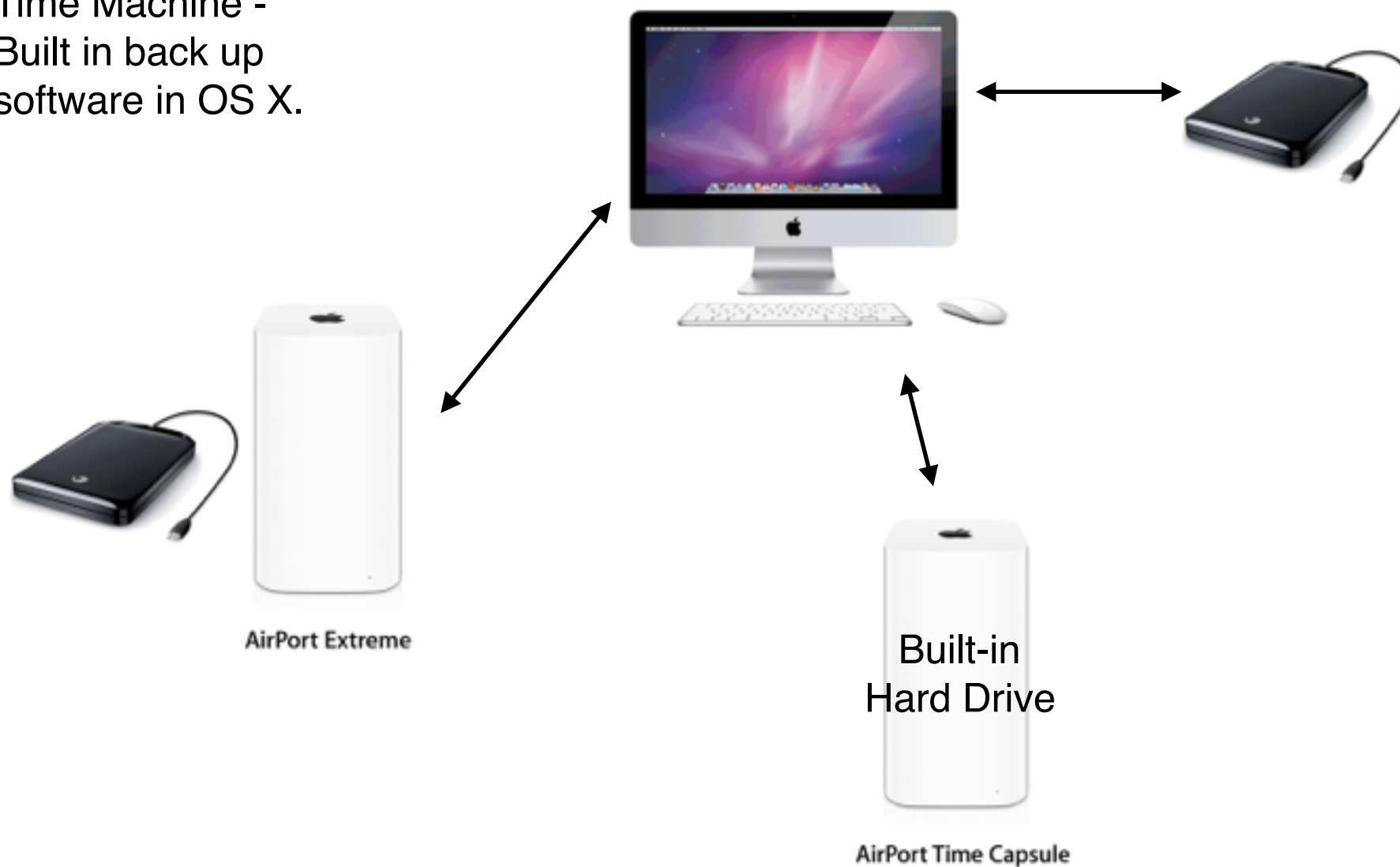
Disadvantage
- Cost

Apple Alternatives

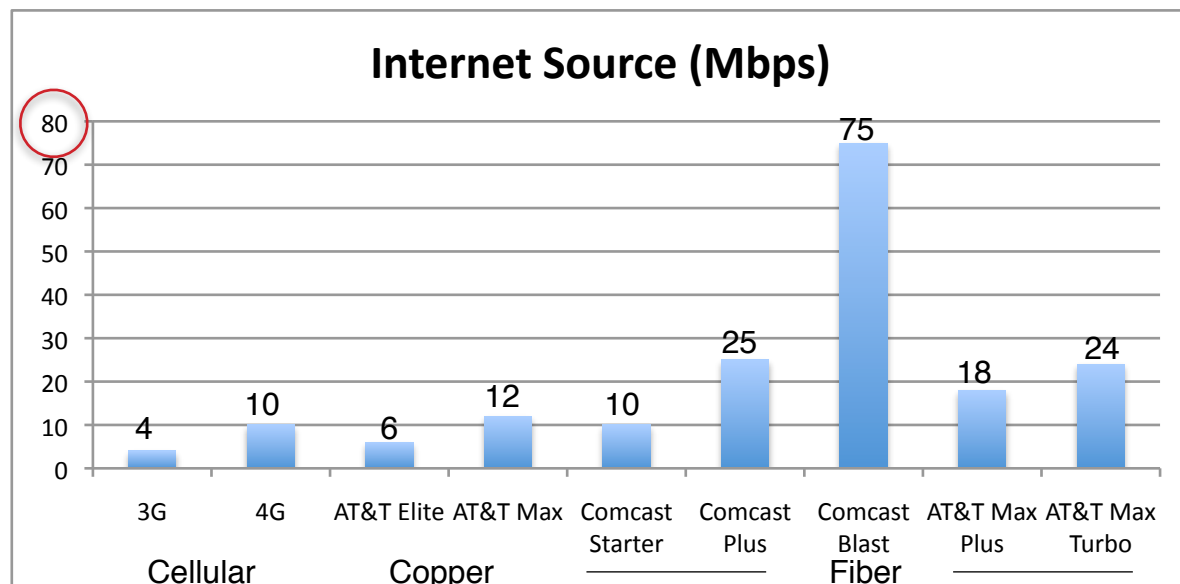


Backing Up with Time Machine

Time Machine -
Built in back up
software in OS X.



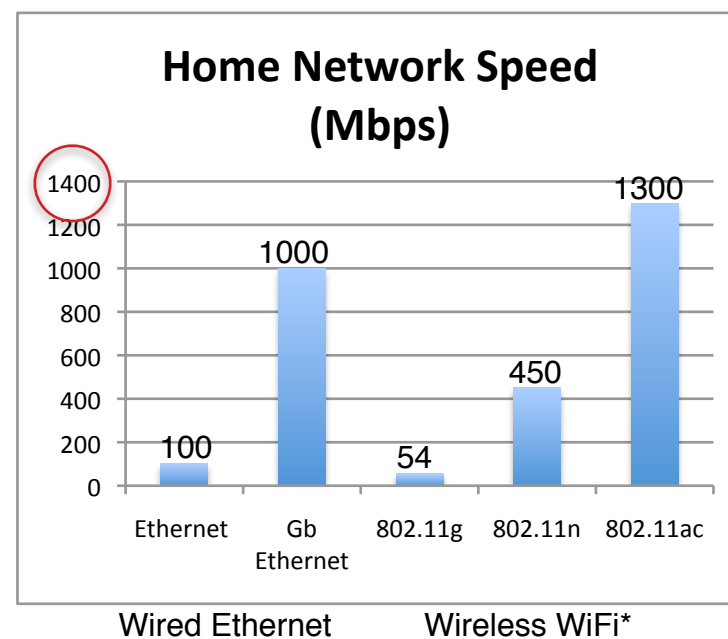
How Fast Is My Network



Mbps = 1 million bits per second.

Your Internet connection is the slowest part of your network.

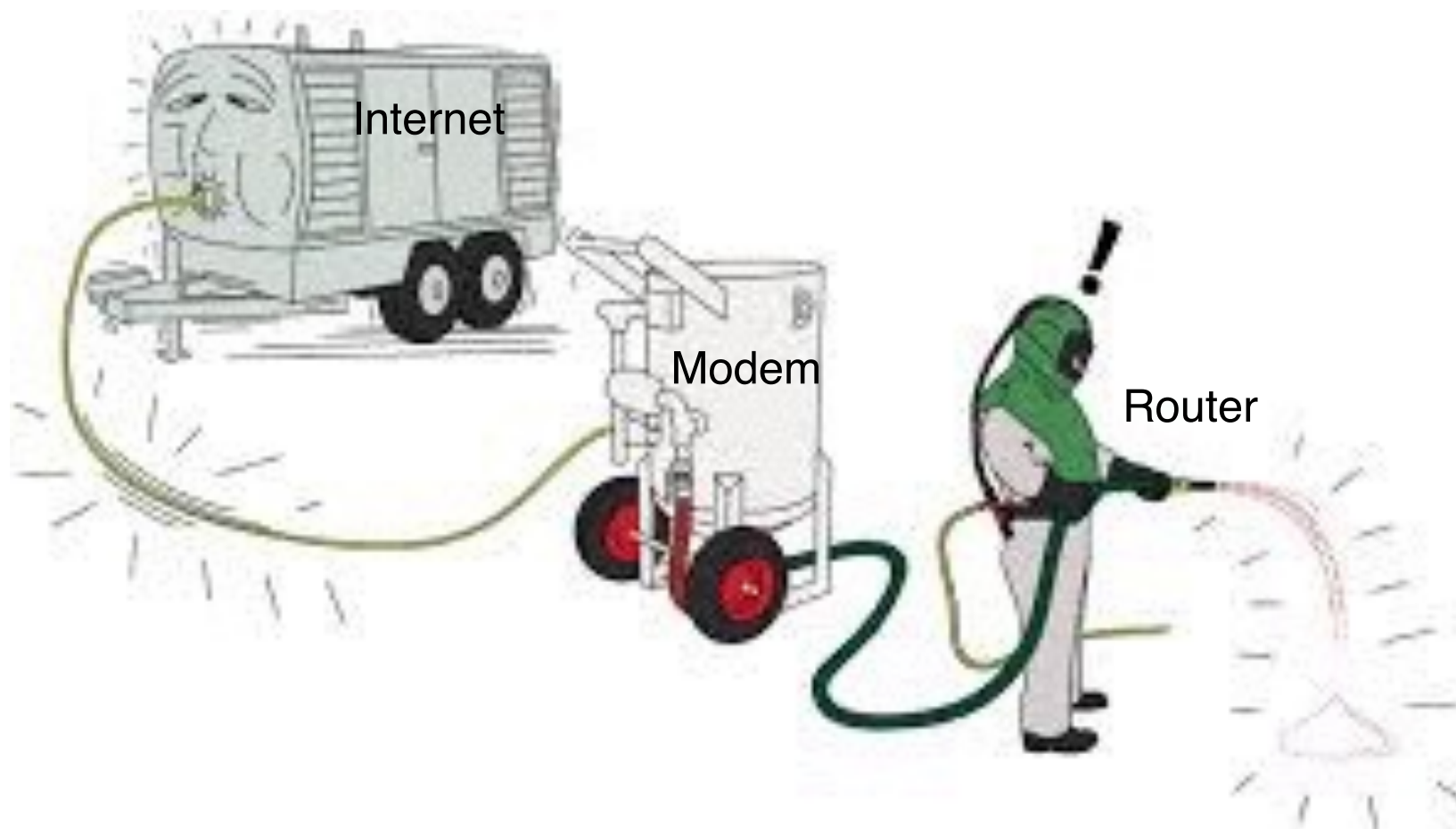
*Wi-fi speed is typically $\frac{1}{3}$ to $\frac{1}{2}$ slower than the published standard.



Wired Ethernet

Wireless WiFi*

Why Do I Download So Slowly



Even though you have a fast network, a small pipe feeding a large pipe can only supply the volume of the smaller pipe.