

# 3G NETWORKS ARE SHUTTING DOWN: HOW THIS AFFECTS YOUR DEVICES

OLLI CLECAT  
21 MARCH 2022



+

•

○

# Today's Presentation

- **What is 3G**
- **When is the 3G Shutdown**
- **What is Affected by the Shutdown**
- **Why is 3G Being Shutdown**
- **What Can (Should) I Do**
- **What is 5G**
- **America's 5G Future**
- **Takeaway**
- **Human Biology Meets AI**

# What is 3G?

- **3G stands for “third generation”, as it is the third type of access technology that has been made widely commercially available for connecting cell phones**
- **The development of 3G services in the late 1990s to early 2000s was a major step forward both in terms of reliability and coverage for voice calls and text messaging, as well as providing far more rapid access to the internet due to its capability of carrying larger amounts of data (the average download speed was around 3Mbps) than 2G**



Pict folio/E+/Getty Images

# When is “3G Shutdown”?

- All the US 3G networks are scheduled to shut down in 2022
- Whether you're with AT&T, T-Mobile (Sprint), or Verizon, this will affect your phone, your home alarm system, or even your car
  - AT&T officially shut down its 3G network on February 22, 2022. However, there are reports it's still active in some parts of the country
  - T-Mobile's (Sprint) 3G network will shut down on March 31, 2022
  - T-Mobile's (Sprint) 4G LTE network will shut down on June 30, 2022
  - T-Mobile's 3G network will shut down on July 1, 2022
  - Verizon's 3G network will shut down by December 31, 2022
- Shutdown is to make way for 5G and the Internet of Things (IoT)



iStock/Getty Images Plus

**Many carriers, such as Cricket, Boost, Straight Talk, and several Lifeline mobile service providers, utilize AT&T's, Verizon's, and T-Mobile's networks**

# What is Affected by the Shutdown?

- According to the US wireless communication industry, about 9% of wireless connections remaining in the US are 2G or 3G
  - This includes phones, tablets, home alarm systems, medical alert devices, cars, and other machinery
- In general, smartphones that launched after 2014 and flip phones that launched after 2017 should continue to work (check if phone says "4G LTE" or "5G" in its status bar when Wi-Fi is off)
- The shutdown will impact people still using 3G Kindles, 3G flip phones, the iPhone 5 and older models, various Android phones and some wearable devices (devices that currently support Wi-Fi will continue to work as before)
- It will also affect home alarm systems and medical devices such as fall detectors
- Some in-car crash notification and roadside assistance systems like OnStar will also need to be updated or replaced



# Why is 3G Being Shutdown?

- **The 3G networks are very old**
  - **Sprint and Verizon 3G is an enhancement to 2G, so those networks are basically on 1995-1996 technology**
  - **AT&T and T-Mobile introduced 3G widely in 2006-2007**
- **3G technology is officially obsolete**
- **3G assumes much less computing power than what modern devices are capable of, making it much less efficient than 4G or 5G**
- **3G airwaves can only be used for 3G, and need to be repurposed to 4G and 5G, allowing for use by many more devices and higher transmission rates**
- **Simply put, cellular providers are preparing to shut off their 3G signals to make room for 5G**



Times of India

# What Can (Should) I Do?

- **If you have a 3G-only phone or device that's about to lose cellular connected functionality, the easiest way to avoid the issue is to upgrade to a newer device**
- **Contact your mobile provider or consult your provider's website for more information about their 3G retirement plan and whether your phone, or other connected device, may be affected**
  - **Most mobile providers will likely have incentive programs that cover some or all the costs to upgrade to a new device**
- **If you own a Home Security system, contact the manufacturer to see if you can upgrade to 4G or 5G connectivity (you may have to upgrade at your own expense)**
- **Many new cars made in the last decade, even some in the 2021 model year, were built with their connected services running on 3G**
  - **For some cars, this means an over-the-air-update or a hardware swap at a dealership (be prepared to pay). For others, it's the end of the road for connected services**



TheDrive.com

# What is 5G?

- **Cellular networks are getting an upgrade with the arrival of fifth generation ("5G") technology**
  - 5G will support a growing number of connected devices
  - Other potential applications include augmented reality, virtual reality and self-driving cars
- **5G technology promises faster data rates with lower latency (delays) in transmitting data**
- **5G also promises more capacity for a more efficient network**
- **5G technology can provide higher data speeds with less delay than 4G/4G LTE**
  - Some 5G services will provide coverage areas with data speeds up to 100 times faster and almost instantaneous response time
  - For example, it can take almost six minutes to download a feature-length movie with 4G. With 5G, the same movie can be downloaded in as little as 15 seconds

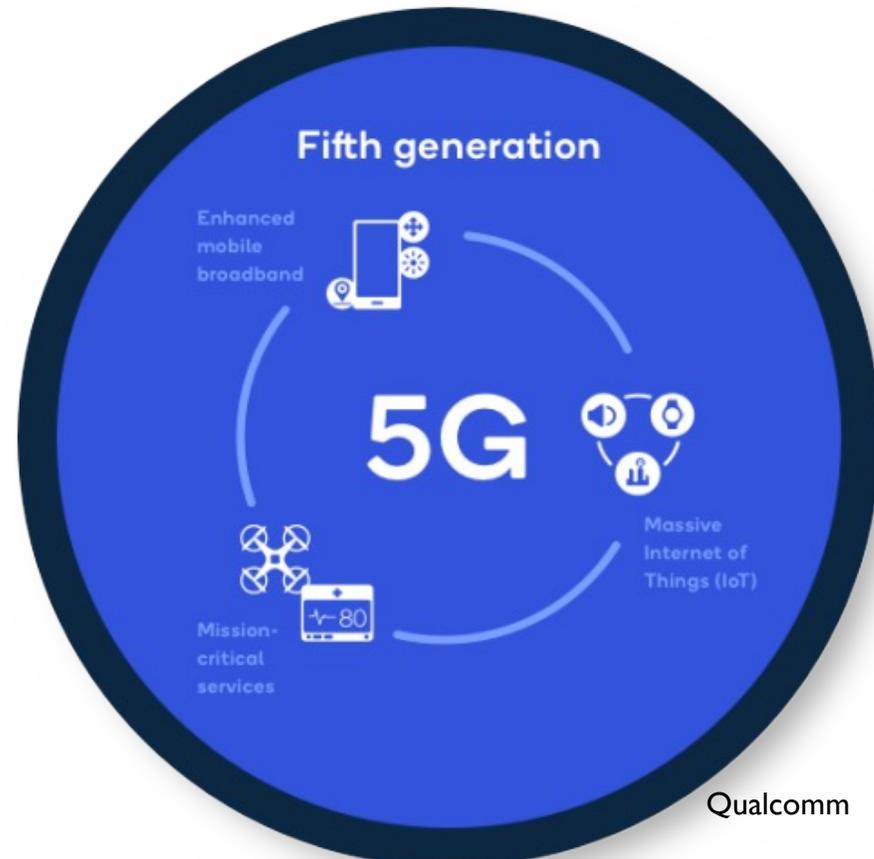


Forbes

**FYI: The 5G label on a home Wi-Fi router indicates that it operates in the 5GHz (gigahertz) spectrum band. 5GHz Wi-Fi is based on a different technology than 5G cellular**

# America's 5G Future\*

## 5G Explained In 7 Minutes



**\* For more on 5G, click here for Qualcomm white paper “Everything you need to know about 5G”**

### The Five G's – A Chronology



#### 5G – Rolling Out Now

Promises faster data rates and energy savings. Enhances existing networks and ushers in new uses like telemedicine and virtual reality.

#### 4G – Streaming Video

Faster data downloads and uploads, support for data-intensive applications, gaming services, mobile TV, video conferencing, and other high-speed features.

#### 3G – Internet and Video

Enabled full-feature mobile internet access and video calling, with faster data transmission speeds.

#### 2G – Messaging

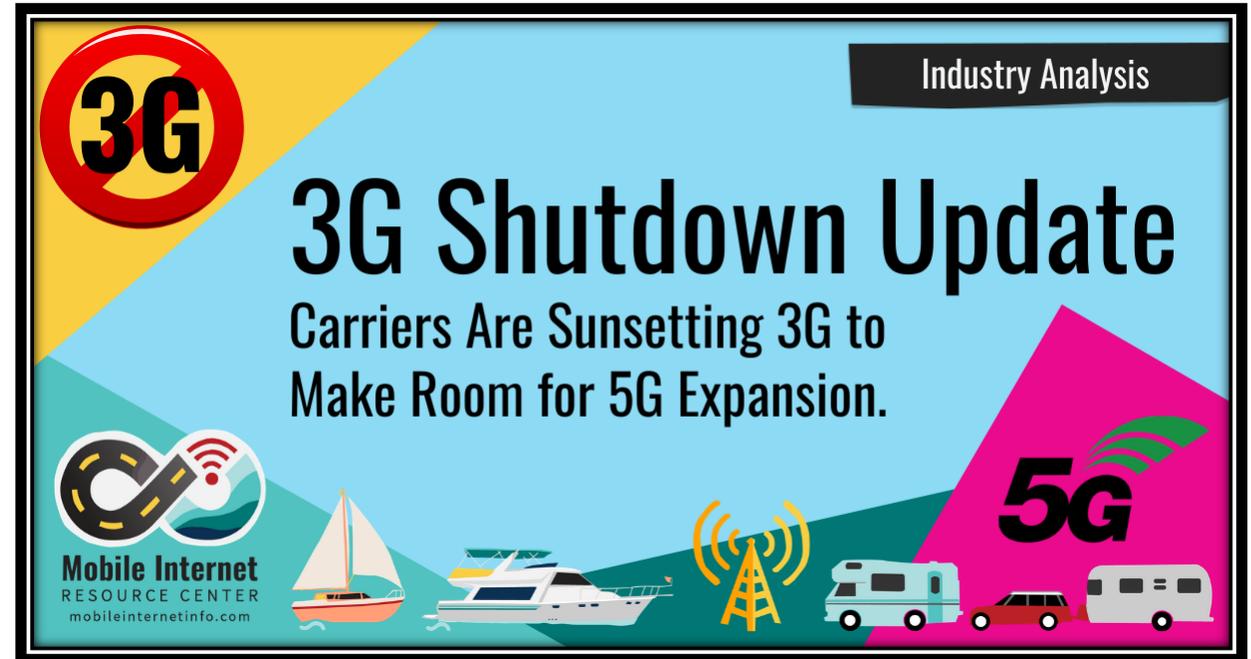
Replaced analog with a digital network. Enabled call and text encryption, text, and multimedia messaging.

#### 1G – Wireless Calling

Eliminated the need for phone cords and copper wiring, enabling network calls on the go. Voice only. Poor battery life and voice quality.

# Takeaway

- **Mobile carriers are shutting down their 3G networks, which rely on older technology, to make room for more advanced network services, including 5G**
- **You may need to upgrade your device before your provider shuts down its 3G network to avoid losing service**
  - **Older cell phones will be unable to make or receive calls and texts, including calls to 911, or use data services**
- **Other devices, such as certain medical devices, tablets, smart watches, vehicle SOS services, home security systems, and other connected products may be using 3G network services**
- **Plan for Phase Out of 3G Cellular Networks and Service – [Link to FCC](#)**



Mobile Internet Resource Center

# Technology Pushes Forward (Human Biology Meets AI)



Shutterstock.com

- **6G networks are expected to be even more diverse and support applications beyond current mobile use scenarios, such as**
  - **Virtual and augmented reality (VR/AR)...teleportation**
  - **Ever-present instant communications**
  - **Pervasive intelligence and the Internet of Things (IoT)**
- **6G will be 100 times faster than 5G, have enhanced reliability, and far wider networking coverage**
- **6G networks expected to roll out sometime around 2030...expect delays**

# Questions

