

## A Pocket Guide To

# 5G HYPE

**5G, or “fifth generation” wireless, is a set of new standards and technological improvements that will enable faster wireless connectivity once implemented.**

Compared to current 4G LTE networks, in which users connect to towers thousands of feet away, typical 5G networks require much more densely deployed infrastructure, with small cell base stations less than 1,000 feet from devices. The cell sites will be connected to each other and the broader Internet by fiber optic cables. 5G networks are being marketed both for mobile (e.g., cell phones) and fixed (e.g., home Internet access) uses and as smart city infrastructure.

## We Still Need Wires

Though 5G will offer high-speed wireless connections to end devices, fiber optic lines still have far greater capacity and reliability, and they’re the only technology that can deliver sufficient bandwidth to each 5G cell site.



## 5G Won't Fix the Broadband Market

Competition is limited by economic considerations, not technology. 5G providers are unlikely to rival cable directly because big companies prefer to divide markets rather than engage in robust competition. 5G development won't open the market to new competition because only the biggest telephone companies, like AT&T and Verizon, have access to the volume of spectrum needed.



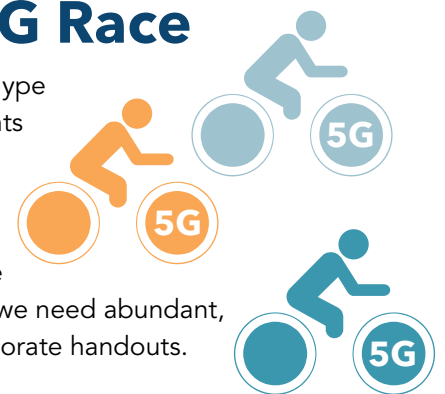
## 5G Won't Solve the Digital Divide

Since 5G connectivity relies on fiber optics that aren't available in many rural areas, these communities won't receive 5G access anytime soon. The same market reality discouraging investment in rural broadband will also discourage 5G investment. Even in urban areas, companies like AT&T and Verizon are unlikely to start investing in the low-income neighborhoods they have neglected for years.



## There's No 5G Race

The “5G Race” is marketing hype designed to scare governments into giving companies large subsidies and consumers into paying a premium for prototype devices. To achieve widespread 5G deployment, we need abundant, open fiber networks, not corporate handouts.



# 5G and Fiber-to-the-Home (FTTH) are complementary technologies that are each best suited to different applications.



## RELIABILITY



## SPEED



## AFFORDABILITY



## BEST USES

### 5G

Requires line-of-sight. Trees, buildings, and sometimes weather can impact reliability.

Eventually more than 1 gigabit to devices in ideal conditions, but often slower based on environmental factors and congestion.

Mobile plans often have restrictive data caps with overage fees and throttling.

Well suited for mobile uses, like cell phones and smart transportation, in densely populated areas.

### FTTH

Very reliable connectivity not impacted by environmental conditions.

No known limits on speed with providers commonly offering 1 gigabit or even 10 gigabits.

Varies by the provider with locally-based networks offering the best prices.

Ideal option for fixed Internet access at a home or business in both urban and rural areas, using Wi-Fi to connect most devices.

## FCC Small Cell Order Hurts Local Control



In late 2018, the Federal Communications Commission (FCC) adopted an Order that limits how municipalities and local governments can negotiate with carriers over 5G small cell deployments. By preempting local authority, the FCC has undermined the ability of communities to promote digital equity, to the benefit of national telecom companies.

## Don't Fall for Big Telecom's 5G Hype



Wireless technologies like 5G are complementary to robust, wired networks. On their own, 5G networks will not achieve key goals, such as connecting rural America and closing the digital divide.

## Additional Resources



[The Wireless Industry's 5G Hype is Funny and Overblown](#) from New America



[FCC Stomps on Local Control in Latest Small Cell Order](#) from the Institute for Local Self-Reliance



[Moving Toward 5G: What Cities Need to Know](#) from Next Century Cities



[Will 5G end up leaving some people behind?](#) from NBC News



[Guide to FCC Small Cell Order](#) from Next Century Cities



[Straight Talk About 5G](#) from Community Broadband Bits Podcast

