

5G Technology

Charles Storrow, Leonine Public Affairs on behalf of AT&T

- 5G (5th Generation) is the latest generation of cellular mobile communications. It succeeds the 4G LTE, 3G and 2G (GSM) systems.
- 5G will deliver enhanced mobile broadband capabilities that are up to 100 times faster than speeds today with immediate responsiveness (latency).
 - Megabit = 1 million bits
 - Gigabit = 1 billion bits
- 5G will provide speeds potentially as fast as 20 gigabits per second (gbps).
- 5G will facilitate developments in, among other things:
 - Autonomous vehicles
 - Telehealth and robotic surgery
 - “Smart farming”
 - “Connected Homes” (smart appliances, security systems)
- 5G will be deployed via “small cell” sites.
- Radio Frequency (RF) energy is regulated by the FCC.
 - FCC limits are conservative—50-fold safety factor.
 - Small cell sites generate RF energy that is hundreds of times lower than FCC standards.
- Under the Federal Telecommunications Act states and localities are preempted from imposing requirements that prohibit or have the effect of prohibiting the deployment of wireless telecom infrastructure.¹

¹ 47 U.S.C. §§ 253(a), 332(c)(7)(B)(i)(II). See also FCC Declaratory Ruling and Third Report and Order, *In the Matter of Accelerating Wireless Broadband Deployment by Removing Barriers to Infrastructure Deployment*, WT Docket Nos. 17-79 and 17-84 (September 26, 2018).