

## Five Thoughts on 5G

The race to launch 5G is on. In the early days of cellular, having a mobile phone was initially a novelty. Eventually adoption increased for voice and then text, but with the advent of 3G and 4G LTE, voice usage on mobile phones took a back seat to mobile applications and data usage. 5G promises to accelerate this trend towards data and apps even more, bringing eye-popping changes not only to mobile phones but more importantly all of society in general.

### 1. 5G Will be a Game Changer for High Speed Bandwidth

So, why all the hype? Speed and capacity. 5G will deliver wireless speeds at rates of wired high-speed gigabit ethernet. Imagine a ten-gigabyte wireless connection to your home or office that is not throttled or shared by all your neighbors. Ultra-high-end video, voice and other data applications will not need a hard wire connection. The current talk of a fiber optic wired connection to your home or business will go by the wayside as “old” technology. The internet of Things or IOT, where all kinds of ordinary devices are connected to the web, will become mainstream. Consider driverless vehicles, the closest view they currently have is roughly three meters, with 5G, that view drops down to three millimeters – a better view or awareness than the human driver. Driverless vehicles will become safer and more convenient than owning and driving your own vehicles.

### 2. Precise Standards for 5G Remain in Flux

As much as the anticipation is building, the wait is also on for 5G. Formal standards for 5G have not been ratified but companies like Verizon are jumping on the hype with their own form of 5G. From a standards perspective, if you compare 5G to WIFI, WIFI has ratified standards that have moved from 802.11 A to A/B, G, N, and now M. These standards create a common protocol for all devices to work across 802.11 WIFI and are backwards compatible meaning what you bought a few years ago still works on the latest standards. Standards provide the roadmap for manufacturers of hardware to develop compatible devices. For example, the current generation of iPhones do not have 5G compatible radios which essentially render them useless for any 5G service.

Although some portions of 5G have been agreed upon, critical technical issues remain unresolved and unratified. The forecast for full standards-based 5G is sometime in the year 2020 – just around the corner. But despite a lack of defined standards, many of the wireless carriers are plowing ahead.

### 3. Radical Changes on the Way for your Carriers

“Last Mile” is a common phrase in technology and refers to the actual lines that come from a service provider into your office or home. Think of it as the line from the telephone pole that comes either over the air or underground to your facility. You may have a cable company that provides your TV, internet, and voice services or may have someone like AT&T, Verizon, Frontier, Windstream, TDS who provide bundled services to you via some type of hardwired connection.

In each case, these companies have spent billions of dollars to run their cables to connect your home or office to their network and in each case, carry a tremendous amount of debt on their books.

AT&T and Verizon have made radical changes over the last couple of years by acquiring content providers like CNN, Time Warner, Yahoo, AOL, HBO, Direct TV and a host of other similar companies that really don't look like traditional telecommunications operations. They are beginning to look more and more like media companies. As you look over the horizon with what 5G will bring to the market, along with a more affordable reach to the end users, it becomes clear to see that these companies are positioning themselves for a future that doesn't depend on them running wired facilities for the last mile to homes and offices.

#### **4. 5G Over the Horizon**

From a business standpoint, imagine having a 10g wireless connection coming into your office for a fraction of the price of your current wired connection - all while keeping your business with ultra-high availability connectivity to the outside world. Once standards are ratified, that 5G connection will then be able to connect directly to your internal data routers or your internal data center.

Gone are the needs of having the cable company or telco delivering wired connections that could have your service interrupted from a variety of issues. No more waiting for the company to build that fiber connection to your office. In an instant, 5G could be provisioned and turned on directly connecting your office with ultra-high bandwidth connectivity.

What happens to the likes of Windstream, Frontier, TDS, CenturyLink, and other local last mile providers who don't and won't have 5G networks? You won't need them any longer and if you don't need their services, where does their revenue and ability to pay down their debt come from? 5G will bring tremendous upheaval to many of these companies and some of these companies may not be around in the next few years.

5G technology will soon become the standard for last mile connectivity but clearly there is plenty of work to do. 5G uses different types of radio antennas, different protocols, and has distance limitations. The companies building these networks will be the winners in the world of information delivery.

#### **5. Losers and Winners**

Plainly, any local service provider which is running the cables to your home or office to deliver services or content over wired connections face extinction. That may seem extreme, however, if you are waiting for a company to build out a high capacity line to your facility or currently have high capacity wired connections coming into your facility, those providers will become the dinosaurs.



Clearly both businesses and consumers will enjoy a completely new generation of technology with many pundits making the rollout of 5G equivalent to the initial rollout of the internet. Gone will be the days of businesses facing network outages, delays waiting on the carrier to construct a fiber route to your office or the cable company “lighting” a building with fiber connectivity. Gone are the days of throttled or limited connection speeds. Gone are the days consumers are faced to pay for thousands of channels of TV that you don’t watch, and interesting new ways for better human interaction with traffic as an example. Driverless vehicles, lower auto insurance rates, the ability to speak with and see your doctor in real time without leaving your home or office, and thousands of new era business models will be completely enabled by 5G.

## **About SETEL UC**

At SETEL, we been through these types of changes since our inception in 1974, from the transition from analog to digital to IP, the launch of the internet, launch of cellular services, and more recently the advent of Cloud or network-based solutions, we’ve been there to help and guide you through these changes. 5G is no different, our engineers are ready to discuss the technology in depth and help guide your decisions as we’ve done for the last 40+ years.

For more than forty years, SETEL has provided the latest communications solutions to companies of all shapes and sizes who are looking for secure, reliable technologies to help employees and customers stay connected more easily. Whether for basic phone systems, comprehensive unified communications, or contact center, business executives trust SETEL to deliver the latest features and functionality together with best in class service and support. Simplify your business communications today. [www.seteluc.com](http://www.seteluc.com) or call toll free 800.743.1340.