

“2016 Outlook: Mobile and Wireless”*

Wireless becomes almost pervasive. Apps migrate from silos to integrated services. Wearables and internet of things (IoT) take off. Cars become semi-automatous through Super Cruise Control.

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I believe that 2016 will be a banner year in mobile and wireless. Part of the reason, of course, is because the economy is finally coming back to pre-recession levels. However, another major reason 2016 is going to be a big year in mobile and wireless is that while the mobile industry is already big, it is still growing at a good clip. At the same time, the mobile market is still ripe for a number of innovations that will affect both consumers and enterprise for years to come. Finally, most of us have and use a smartphone and/or tablet so we participate in the mobile market. Thus, it's a great time to be in mobile and wireless!

Here are the areas in which I believe that we'll see major advances in mobile and wireless during this year:

Achieving Pervasive Wireless: Multi-Network Access

We live in an 'almost pervasive' wireless world, especially in metropolitan areas. Large cell towers provide wireless broadband, and Wi-Fi supplements cellular's wide area coverage with local, high speed networks primarily indoors and in a number of high density outdoor areas such as sports stadiums and arenas.

But, as we all know, cellular coverage is not 100% available at all locations. Sometimes, we are in a blind spot. And, Wi-Fi isn't always available in public places or is very expensive for use during a short time.

There are a number of efforts underway that will enable our smartphones and tablets to stay connected more of the time so that it becomes one smooth, pervasive experience no matter where we go. First, there is an initiative called LTE-U that takes a Wi-Fi zone and converts much of the bandwidth to LTE protocol that is used in outdoor cellular. Thus, your cell phone would show standard LTE coverage while indoors.

Another initiative led by Google's Fi program recognizes that there are, typically, four wireless operators with signals available in most metropolitan areas. The idea is to let the smartphone use the LTE data signals that are the strongest and most available much hopping on to Interstate highway that has the least traffic. You might have to pay for the privilege of accessing multiple networks, although if it were only used at peak times, the incremental cost might be minimal.

From Silos to Cross App

Another big area for innovation is in the area of mobile apps. There are now literally millions of apps that have been developed. However, useful information may be in one app while some other useful information may be in a different app. An example would be when watching a sporting event on ESPN and having the local weather pulled from the weather app or watching the same sports video but having stock alerts posted on top of the video. There is work going on to look at services which retrieve information either in the Cloud or from the individual apps to provide a better value than the single app alone.

Autonomous Driving

There's a lot of press coverage of the coming autonomous, driverless cars. You'll just input the address and the car would take you there. Or, think of Uber providing a service of cars without any drivers. While that seems like science fiction and likely may be just that for the near term, we'll certainly have the ability this to have our new car drive itself on Interstate highways. While not totally autonomous, these cars will be able to go for an hour or two while you read or talk to the other passengers (but not go to sleep!). This semi-autonomous capability is called "Super Cruise Control." A number of manufacturers will offer it this year. I personally can't wait to try it out. I suspect that this advanced cruise control will drive better than me!

Watches will become Pervasive

The smartwatch market is still quite small with only a few million units sold. People who have them like the Apple Watch tell me that they love its ability to look up people to call via Siri and get messages as long as their phone is nearby. I believe that almost everyone (meaning around 75-80%) will be wearing a smartwatch within a few years. Eventually, the smartwatch will gain full client status and have GPS, Wi-Fi and cellular. When that happens, then wearing the watch while out and about will be a full cellular experience. It's not there yet, but it likely will be before too long.

I expect that the Apple Watch and other competitors will get thinner in each new generation (have you ever seen Apple announce a product was getting thicker?). To me, the Apple Watch is about 50% too thick to be comfortable, but when it does get thinner (as well as more powerful), the number of user will go up by a hundredfold.

Streaming vs. Owning Content

I mentioned in last week's Mobile Letter that we're seeing a clear trend toward steaming of music vs. owning it. Yes, people like me still buy music on iTunes but over time, the Cloud will have virtually all the music, movies and TV shows ever recorded so streaming will become the norm. The challenge with streaming so much content is discovery of interesting content (finding out what you might be interested in) vs. searching for things you already know about.

Cameras in Phones are getting a Lot Better

Cameras in smartphones are getting better in each iteration of design. You can now take almost as good a photo with an iPhone as you can with a more expensive DSLR camera with interchangeable lenses. I believe you'll soon see more digital lens capture points on the back of a smartphone camera to allow the image that is captured to be change the focus point to be anywhere in the photo. You'll take a photo and notice that it should have focused on someone in the background. You'll simply slide the focus point from up front to the back and choose the focus point you prefer or, perhaps, change it so all points are in focus.

Voice Search and Voice Command & Control

We've all likely either used or witnessed a friend who has used voice input to search for something, e.g. "Find the best seafood restaurants in Palm Beach" (Charlie's Crab is the best). Voice is also used to give command and control of already known information such as "Play 'Hello' by Adele." We are getting to the point that the basic requests for voice input are getting quite reliable, but there is still a wide range of voice requests and ambiguous meaning that can give the wrong results. There is a lot of work being done by Apple (Siri), Microsoft (Cortana) and Google (Now) to get voice to work better. I point out, however, when I write or talk about voice systems is to remember that voice input is not appropriate in many social situations such as in a restaurant, "Call my husband at work" or in noisy places such as on an airplane. Voice input to a smartphone is important, but it's a narrow, focused situation and environment. Use it with care.

Messaging Grows to Become a Platform for Apps

Have you noticed that you can do more with your text messaging app than just a year or two ago? It starts off innocently with the ability to add a photo or video. Everyone can do that. But, then a company announces that you can send money to someone in the messaging app. Others follow, but you're going to find that your messaging app is going to provide more services over time so that it ends up being a platform in which many different services are added. Facebook believes that is a high priority for Facebook Messenger.

Social Goes Private

Most of what social networking is all about is very public. What you post is public, and it is automatically shown to your friends. But, recently, a number of apps like Carii and Jive offer social networking services geared to the enterprise. Posting is kept internal to the company but the platform enables users to feel like it is a social networking experience. Carii goes further and offers a way to automatically share with other communities.

Internet of Things (IoT) Creeps into Every Corner of our Lives

IoT has come out of nowhere to become one of our culture's new acronyms. It started with any machine (vs. person) communicating with another machine (M2M) but has morphed into a more generic IoT to include people to/from machines as well as machines to/from machines.

A good example of IoT is the development of wireless meter reading. This is a good M2M service in which small, inexpensive wireless modules are added to a home's water meter. These small wireless modules enable water meters to read the consumption of water flowing into a house and forward that information to the water department's offices which analyze the data for anomalies ("water leak detected") and automatically generate the customer's bill.

Probably the biggest innovative area in IoT is Wearables in which users "wear" a device that either provides information to you or senses information that can help the person wearing the device to achieve some benefit (e.g. warning of a medical issue). The Apple Watch has become the poster child of wearables this past year. But, literally hundreds of thousands of devices are going to be connected that will yield hundreds of terabytes of information. We'll know more and be able to do more but we'll also create larger security concerns as a result of it.

As you can see, mobile and wireless are going to yield many new advances this year. All of us are affecting this large dynamic market either as a user or as someone making new products and services.

I hope you all have a wonderful 2016.

P.S. Please note that both Carii is a client of Mobilocity.

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