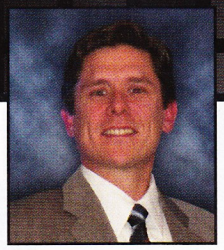

By Hunter Newby

# The Internet of Things (and Stuff)

The phrase Internet of Things is as popular as it is vague. Things is not a very descriptive word, and as if it was not vague enough, the phrase is commonly referred to as IoT.

Things as a word is a close cousin to the equally uninformative word stuff. Things & Stuff sounds like a chain of stores in malls across America that sell eclectic and mostly useless items that no one really needs to survive. On the contrary, the Internet has become something that almost everyone needs in our society today. So, what are these things, what do they mean to the Internet, and is any value derived from actually knowing?

Gartner Inc., the global research firm, defines things as consumer devices excluding PCs, tablets, and smartphones, and predicts that there will be 26 billion things by 2020. That's a whole lot of things, like toasters and stuff. Gartner also predicts the "component cost of IoT-enabling consumer devices will approach $1." That's a whole lot of cheap stuff. The lower the cost, the more devices the Internet will be imbedded into.

What do these things mean to the Internet? The IoT will create a sustained blizzard of mostly, if not exclusively, wireless communications sessions to end user devices with centralized and distributed data centers housing the servers that will collect data and ultimately control the devices. Every toaster, air conditioner, and other device will be equipped with Wi-Fi, will require an Internet connection, and probably will not work if it is not connected. In this dimension Gartner predicts that "'ghost devices with unused connectivity will be common."

This last bit is particularly interesting. Unused connectivity? There are two issues with this assumption. The first is that connectivity is not free, so this implies that someone is paying for something they are not using. That may be true since consumers currently pay a flat monthly rate for a certain amount of Internet access whether they use it or not, but how will consumers be able to afford that carrying cost? Also, imagine adding billions of devices to the equation and how much more connectivity that will require. That leads to the second issue. Where is all of that connectivity going to come from?

Everything wireless leads to a physical wire and, or ultimately a fiber connection at some point. Hopefully someone is thinking about all of the investment and actual work that will be required in building the fiber networks needed to support all of these IoT projections. Otherwise, it will be like adding billions of cars to the roads without adding any roads, or more lanes to the existing roads and Internet traffic jams abound.

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Gartner predicts that "the total economic value-add from IoT across industries will reach $1.9 trillion worldwide in 2020...." That is a fairly significant contribution to global gross domestic product considering that it is coming from just a sliver of what happens on the Internet, so there certainly is value in knowing the composition of the things. Knowing how the Internet and the things actually work together is another matter. Presumably that knowledge will bring even greater value to those that possess it.

As an overall assessment of IoT, the Internet itself is a fairly complex subject as to how it all works, so to add the word things behind it does not aid in solving any of the mystery to it. It seems that what is typically popular is also largely misunderstood, so maybe IoT is a concept like many others meant for the mainstream. Based on the current line of education about how it is all going to actually work for all, anyone knows IoT is just big and complicated, so don't ask and keep right on consuming. If you are looking for answers when your toaster oven will not make toast because it cannot connect to the Internet you might want to stop by Things & Stuff in the mall and pick up a Magic 8 Ball and ask it why. Then again, by that time the Magic 8 Ball will probably need an Internet connection too, so who knows if that will even work. IT

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