Internet of Things

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Abstract: -- The "Internet of things" (IoT) a concept that not only has the potential to impact how we live but also how we work. But what exactly is the "Internet of things" and what impact is it going to have on you, if any? There are a lot of complexities around the "Internet of things" but we want to stick to the basics. Broadband Internet is become more widely available, the cost of connecting is decreasing, more devices are being created with Wi-Fi capabilities and sensors built into them, technology costs are going down, and smart phone penetration is sky-rocketing. All of these things are creating a "perfect storm" for the IoT.

I.   INTRODUCTION

What is Internet of Things?

Simply put, this is the concept of basically connecting any device with an on and off switch to the Internet (and/or to each other). This includes everything from cellphones, coffee makers, washing machines, headphones, lamps, wearable devices and almost anything else you can think of. This also applies to components of machines, for example a jet engine of an airplane or the drill of an oil rig. The analyst firm Gartner says that by 2020 there will be over 26 billion connected devices… That's a lot of connections The IoT is a giant network of connected "things" (which also includes people). The relationship will be between people-people, people-things, and things-things.

Concerns about IOT

Security is a big issue that is oftentimes brought up. With billions of devices being connected together, what can people do to make sure that their information stays secure? Will someone be able to hack into your toaster and thereby get access to your entire network? The IoT also opens up companies all over the world to more security threats. Then we have the issue of privacy and data sharing. One can only imagine how the conversation and concerns will escalate when we are talking about many billions of devices being connected. Another issue that many companies specifically are going to be faced with is around the massive amounts of data that all of these devices are going to produce. Companies need to figure out a way to store, track, analyze and make sense of the vast amounts of data that will be generated.

Applications of IOT

There are many examples for what this might look like or what the potential value might be. Say for example you are on your way to a meeting; your car could have access to your calendar and already know the best route to take. What if your alarm clock wakes up you at 6 a.m. and then notifies your coffee maker to start brewing coffee for you? What if the wearable device you used in the workplace could tell you when and where you were most active and productive and shared that information with other devices that you used while working?

On a broader scale, the IoT can be applied to things like transportation networks: "smart cities" which can help us reduce waste and improve efficiency for things such as energy use; this helping us understand and improve how we work and live.

CONCLUSION

We are trying to understand what many opportunities and challenges are going to be as more and more devices start to join the IoT. For now the best thing that we can do is enlighten ourselves about what the IoT is and the potential impacts that can be seen on how we work and live.