

## *The Internet of Things (IOT) opportunity is incredibly diverse and still wide open*



Source: [www.techspot.com](http://www.techspot.com), June 26, 2015 at 10:30am.

Reporter: Shweta Bhatia.



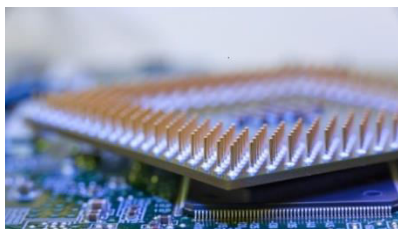
While there are never-ending debates about the potential size of the market opportunity for the Internet of Things (IOT), most everyone will agree that it's going to be a relatively large number, both in terms of units and revenues.

However, there's another aspect of the IOT market that isn't discussed as much, but in my mind, is equally as certain: at every level imaginable, the

IOT market is wide open. From semiconductor architectures to semiconductor makers, operating systems, sensor makers, device makers, application providers, data analysis tools, and on and on, there are few, if any, dominant players in IOT. Instead, there's opportunity for a lot of different companies—both large and small—to try and stake a claim in these new markets and to find traction in a variety of IOT sub-

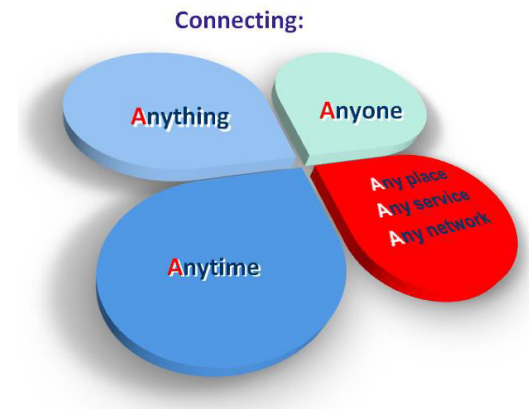
segments. In fact, this is one of the reasons so many companies are now talking about IOT—they clearly see that they have a chance to carve out some solid business for themselves.

In the case of CPUs, not only will we see big players like Intel continue to build on their strength in the embedded space, but several different ARM licensees, such as Broadcom, Marvell, STMicro and Atmel (among many others) will likely capture many types of design wins. At the same time, the IOT market is also very well-suited for MIPS architectures. With the infusion of money and support from parent company Imagination Technologies, MIPS licensees such as Freescale and NXP (both of whom also support ARM) are also likely to find success as well. At the end of the day, much of the success for CPU, modem and other semiconductor providers will be determined by the suite of tools they can offer (or partner with others to offer) in order to enable fast, efficient and, most importantly, secure IOT product development.



In the case of operating systems, Google's rumored version of Android for IOT (code-named Brillo) is likely

to have some impact, but so will Windows 10 given Microsoft has announced a version of their new OS specifically for IOT applications. At the same time, there will probably be even bigger numbers for basic real-time operating systems (RTOS) from companies like Blackberry as well as Intel's WindRiver division, and loads of other smaller companies that we've likely never heard of. Similar to the chipmakers, the most powerful tools won't necessarily win in IOT, because the computer and software requirements for IOT applications are generally very modest. Instead, success will be determined by the quality of tools that the platform makers can offer.



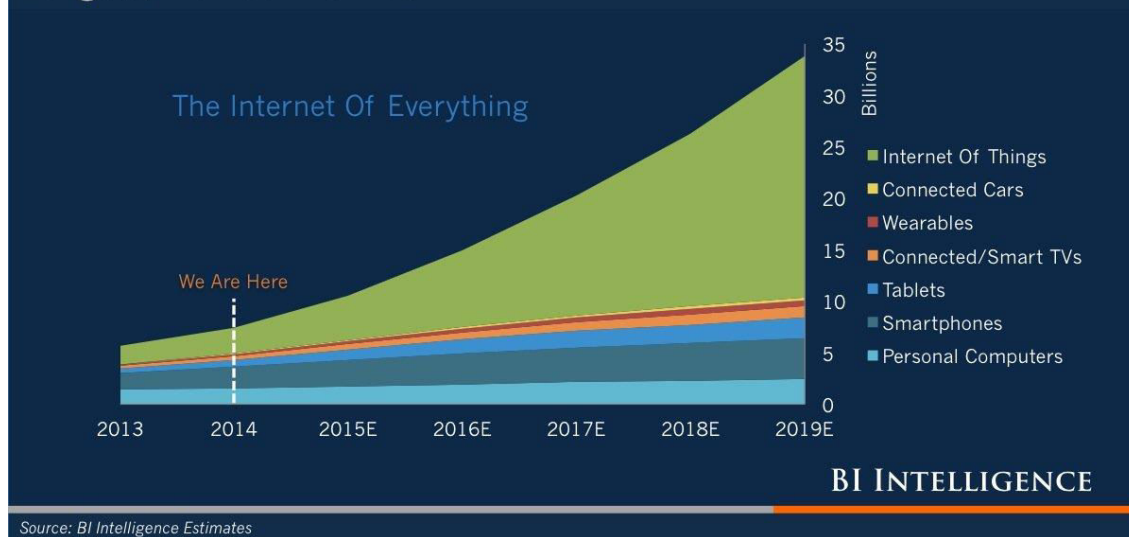
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Part of the reason for this wide open opportunity in IOT is because the market for it is still very young. As it begins to mature, we'll likely see a

few larger players start to take a bigger role. Another reason for this Wild West-type mentality is because the IOT opportunity is so diverse. As I've written previously, the IOT market is really a loose federation of different opportunities. From embedded industrial applications that

have existed for years to transportation and logistics businesses, to smart meters and utility applications, through farming, connected cars, smart home devices and, depending on your definition, even smart wearables, there's an enormous range of IOT segments.

## The 'Internet Of Things' Will Be By Far The World's Largest Device Market



This represents a very large pie for companies to battle over—at least in theory. The problem is that it's likely to end up being played out as hundreds of small skirmishes across an equally large number of different vertical applications, very few of which turn out to be particularly impressive from a revenue perspective. So, I think companies need to be realistic in setting their expectations about how much revenue they can generate from these IOT opportunities, particularly in the near term.

Over time, I believe the IOT market will prove to be extremely important, and given that we are in its early days, it certainly makes sense for a lot of companies to pursue it—especially in an effort to lay claim to their share of this clearly unclaimed territory. As we start to hear more vendors' grandiose claims about striking gold in these undiscovered new lands, however, it's best to take these potential prospects' claims with a grain of salt.

# ***New Smartphone Technology to help blind people 'see'***

Source: <http://timesofindia.indiatimes.com>; <http://www.health24.com>

Jun 27, 2015, 10.53 AM

Reporter: Priyanka Choudhari

Scientists are developing new adaptive mobile technology that could enable visually-impaired people to 'see' through their smartphone or tablet.



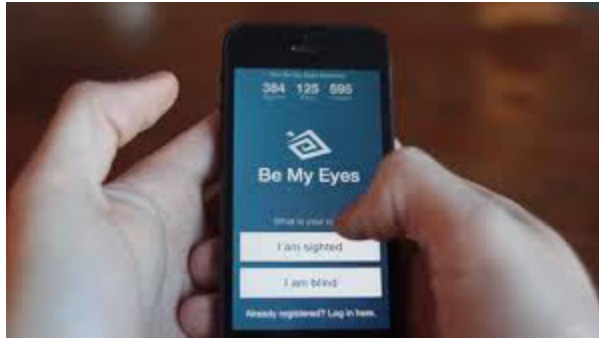
Specialists in computer vision and machine learning based at the University of Lincoln, UK funded by a Google Faculty Research Award, are aiming to embed a smart vision system in mobile devices to help people with sight problems navigate unfamiliar indoor environments.

Based on preliminary work on assistive technologies done by the

Lincoln Centre for Autonomous Systems, the team plans to use colour and depth sensor technology inside new smartphones and tablets to enable 3D mapping and localisation, navigation and object recognition.

The team will then develop the best interface to relay that to users - whether that is vibrations, sounds or the spoken word.

"This project will build on our previous research to create an interface that can be used to help people with visual impairments," said Project lead Dr Nicola Bellotto, an expert on machine perception and human-centred robotics from Lincoln's School of Computer Science.



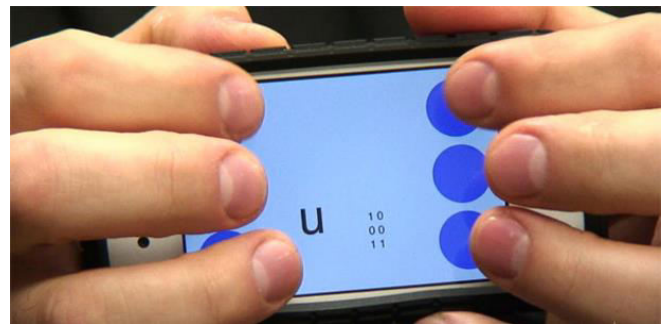
"There are many visual aids already available, from guide dogs to cameras and wearable sensors. Typical problems with the latter are usability and acceptability.

"If people were able to use technology embedded in devices such as smartphones, it would not require them to wear extra equipment which could make them feel self-conscious.

"There are also existing smartphone apps that are able to, for example, recognise an object or speak text to describe places. But the sensors embedded in the device are still not fully exploited.

"We aim to create a system with 'human-in-the-loop' that provides good localisation relevant to visually impaired users and, most importantly, that understands how people observe and recognise particular features of their environment," said Bellotto.

The research team, which includes Dr Oscar Martinez Mozos, a specialist in machine learning and quality of life technologies, and Dr Grzegorz Cielniak, who works in mobile robotics and machine perception, aim to develop a system that will recognise visual clues in the environment.



This data would be detected through the device camera and used to identify the type of room as the user moves around the space.

A key aspect of the system will be its capacity to adapt to individual users' experiences, modifying the guidance it provides as the machine 'learns' from its landscape and from the human interaction.

So, as the user becomes more accustomed to the technology, the quicker and easier it would be to identify the environment

A whole world of communication and access to information is at the fingertips of visually impaired and blind people, CEO of the Cape Town Society for the Blind (CTSB) Lizelle van Wyk told Health24.



### **Mobile independence**

On Monday Vodacom launched the opening of a smartphone kiosk at the office of the CTSB, which was founded in 1929 and is situated in Salt River in Cape Town.

The initiative is aimed at empowering disabled people to gain mobile independence and the seed of the idea was first planted years ago, said Van Wyk.

"We hope it means greater support and encouragement for those making the change to smartphones," she said.

At the kiosk, visually impaired people will be helped with switching on the accessibility settings in their phones and activating talk-back features such as Google Voice.

"Many times training on how to use touch screens is not available and we hope with this project to be able to offer advice and a space where blind and visually impaired people can share knowledge and encourage each other," van Wyk said.

She added that she was hopeful that this initiative will spark similar partnerships in order to promote the concept of universal accessibility for all people with disabilities.

Van Wyk said one of those things that sighted people have a hard time to understand is how blind and visually impaired people actually use a flat screen smartphone.



"A device with just a flat screen and one to maybe four physical buttons was the bane of many blind users, but now we will have the opportunity to teach them how things have changed," she told News24Live.

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