

IoT to dominate connected devices by 2018

Ericsson released its latest Mobility Report this month, June 2016, and predicts that the Internet of Things (IoT) will outstrip mobile phones as the "largest category of connected devices" by 2018.



Image by 123RF

The evolution of the 'Networked Society' is the latest focus of the [Ericsson Mobility Report](#) (June 2016), as is detailed in the report in the key highlights:

- The Internet of Things is expected to increase between 2015 and 2021 by a CAGR (compounded annual growth rate) of 23%. This will take the total forecast of connected devices from 16 billion to 28 billion by 2021.
- Smartphone subscriptions continue to increase, reports Ericsson, and are expected to exceed those for basic phones, worldwide, by the third quarter of this year. The numbers, when analysed, show there are about 5 billion subscribers, compared to 7.4 billion subscriptions. "The number of mobile subscriptions exceeds the population in many countries. This is largely due to inactive subscriptions; multiple device ownership; or optimisation of subscriptions for different types of calls. This means that the number of subscribers is lower than the number of subscriptions," the report reads.
- The Ericsson report also explores how teens are changing television and video viewing behaviour, which is moving from traditional TVs to streaming video on smartphones.
- The Middle East and Africa will see a "dramatic shift" from a 2G market to over 80% penetration of subscriptions for 3G/4G. In Western Europe, 90% of subscriptions will be for LTE/5G by 2021, and 95% for North America. The US, Japan, China and South Korea will be the first countries where 5G subscriptions will be available, surmises Ericsson. LTE-connected devices make up 5% of the market currently, but as costs and latency reduces and functionality evolves on LTE networks, including 5G capabilities, so too will the range of apps for critical IoT "deployments", increase.

Internet of Things

Ericsson expects there to be 1.5 billion IoT devices with cellular subscriptions by 2021. Current figures put IoT devices with cellular subscriptions at around 400 million at the end of 2015. The biggest growth for connected devices is expected to come from those connected to cellular, which will reach 1.5 billion connected devices by 2021.

Ericsson reports that the growth is due to increased industry focus and 3GPP standardisation of cellular IoT technologies.

There are two major market segments emerging in IoT, according to Ericsson:

- 1. Massive IoT:** Massive IoT covers smart buildings, transport logistics, fleet management, smart meters and agriculture – which need high connection volumes, low costs, low energy consumption and small data traffic volumes.
- 2. Critical IoT:** With critical IoT, requirements are ultra-reliability and availability, low latency. Examples include traffic safety, autonomous cars, industrial applications, remote manufacturing and healthcare, including remote surgery.

Africa patterns

Mobile subscriptions in Middle East and Africa and Asia Pacific are mainly GSM/EDGE-only, while in Western Europe and North America the majority are WCDMA/HSPA and LTE.

Middle East and Africa is a region experiencing economic growth and improved living standards in several countries. Combined with increasing availability of low cost smartphones and demand for mobile broadband services, there will be a shift from a voice centric GSM/EDGE-only majority of subscriptions in 2015 to a majority of WCDMA/HSPA and LTE-subscriptions by 2021. However, GSM/EDGE-only subscriptions will still have a significant share in the region by 2021. In sub-Saharan Africa, WCDMA/HSPA will become predominant towards 2021, due to the high number of lower income consumers using 3G-enabled handsets.

Teen influencers

Cellular data growth is increasingly driven by teens who are watching more video on their smartphones, resulting in wi-fi data growth “dramatically outpacing” cellular data usage on smartphones.

According to Ericsson, Japan and South Korea presented with an 80% growth in cellular data usage between July 2014 and October 2015 for smartphone video streaming apps – but corresponding wi-fi data growth is “more than double” that.

“Interestingly, although teens use more wi-fi, they are also more inclined to pay for connectivity. 63% of teenagers surveyed in the US, Japan and South Korea say they would like to pay for improved mobile data speed and coverage, which is higher than other age groups.

“Given the highly mobilised video viewing behaviour spread throughout the day among teens, it makes sense that this should also result in an increased demand for cellular data connectivity. Analysis of smartphone on-device data in the US, Japan and South Korea shows that this is now starting to happen.”

Teen video data consumption over cellular networks is growing rapidly and they are the influencers in this category, creating a marked generational change: “The higher reliance on smartphones for video viewing at any time of the day means that teen video data consumption over cellular networks is growing rapidly.

“Only 30–35 year olds have a higher growth rate than teens for cellular video streaming data usage. However, the overall mobile video data consumption (including both cellular and wi-fi) among this group is around 2.5 GB/month. That is only a fifth of the teens’ data consumption and the potential for further growth is limited due to the fact that 30–35 year olds are still rooted in traditional TV viewing behaviour,” Ericsson reports.

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