

Mobile Data Strains Cellular Networks



With the launch of the iPad last week it is clear what was the number one news item in the gadget industry...

Cellular networks are already buckling under the strain of mobile data.

While some of this comes from email, or from Smartphones in general, it is astonishing just how much comes from one particular device - the iPhone. As the iPad is basically an iPhone with a bigger screen and better multimedia, it seems likely that the it will consume even more network capacity.

Cisco point out that wireless traffic grew from 33PB per month (PetaBytes so 33,000,000 GB) in 2008 to a forecast of 2184PB per month in three years time.

That is a growth rate of 137% a year, each year -- and anyone familiar with exponentials or compound interest will know that this is a problem.

But can the networks cope?

Unwired Insight predict that while traffic will grow 20X over next few years, the capacity per subscriber will actually slightly decrease, as more people use smartphones and spread the available capacity over more users.

The problem is that we have a finite amount of spectrum. While some new bands are becoming available (TV re-farming, digital dividend, 2.1GHz in Europe, "white space" and the like") this is only an incremental addition, and won't satisfy the explosive growth. It is Malthus - arithmetic increase can't feed a geometrically growing need.

We need to find ways to use the spectrum more efficiently. Technology can help,

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Published on Electronic Component News (<http://www.ecnmag.com>)

but we probably need to look at economics too.

<http://www.unwiredinsight.com/PDF/Unwired%20Insight%20white%20paper.pdf> [1]

http://www.cisco.com/en/US/solutions/collateral/ns341/ns525/ns537/ns705/ns827/white_paper_c11-481360_ns827_Networking_Solutions_White_Paper.html [2]

Source URL (retrieved on *08/01/2014 - 9:56pm*):

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