

ECONOMUSE

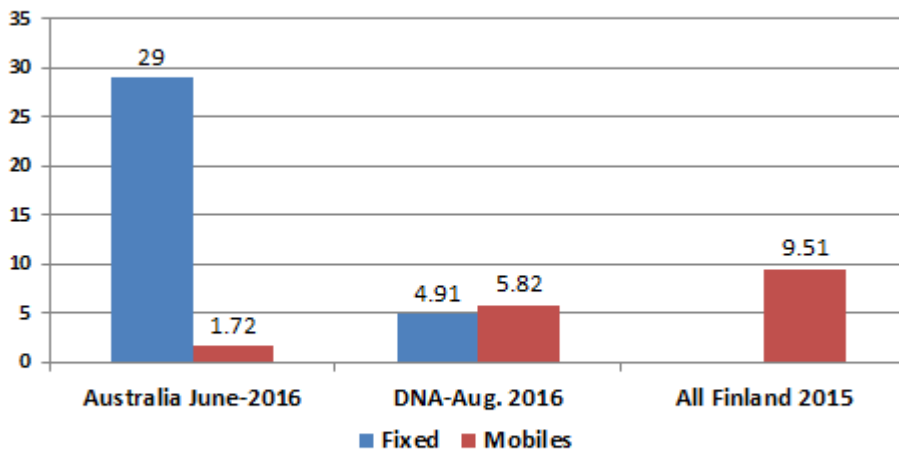
Who's afraid of mobile data?

Is it possible – or wise – to have unlimited data over wireless?

August 2016 saw a turning point for the communications industry when DNA, a [European operator](#), said the volume of data downloaded over its mobile network exceed that for its fixed network. Exceedingly (?) generous data allowances on mobiles help explain why.

DNA is the biggest TV operator and the third largest telco in Finland after Elisa and Telia Sonera. All have both fixed and mobile networks. About 94 per cent of all Finnish households had a broadband internet connection in 2016. Around 35% of households have mobile broadband only and 51% have both fixed and mobile broadband. Only 10% of households subscribe to fixed telephony service (it is much higher in Australia – for the moment).

Monthly download per capita



Sources: ABS and www.dfmonitor.eu

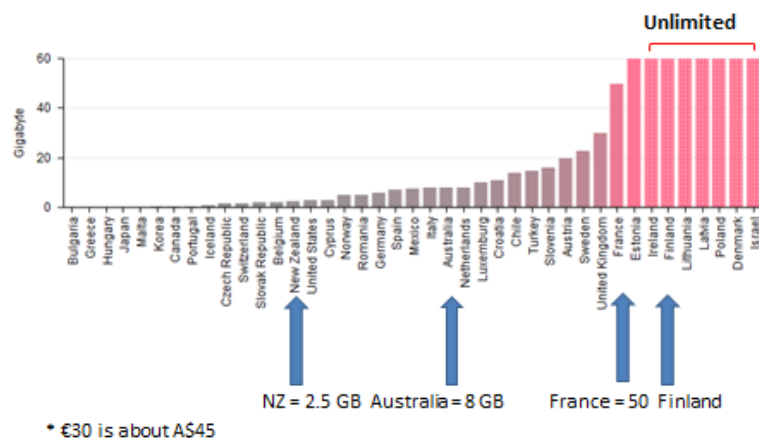
In this chart, the 29GB for Australia is lower than the 130GB you may have seen because it is per capita; not per user.

It is surprisingly high relative to Finland where DNA's fixed cable and copper networks are used mainly to carry high definition TV.

However, adding traffic across all mobile networks, the download per capita is 5x higher in Finland than here. Of course, price has a lot to do with this, as shown in the second chart.

Look at the number of countries with unlimited mobile data. In Australia, there are many unlimited call offers on mobiles but not unlimited data – yet.

How many 4G gigabytes will €30* buy?

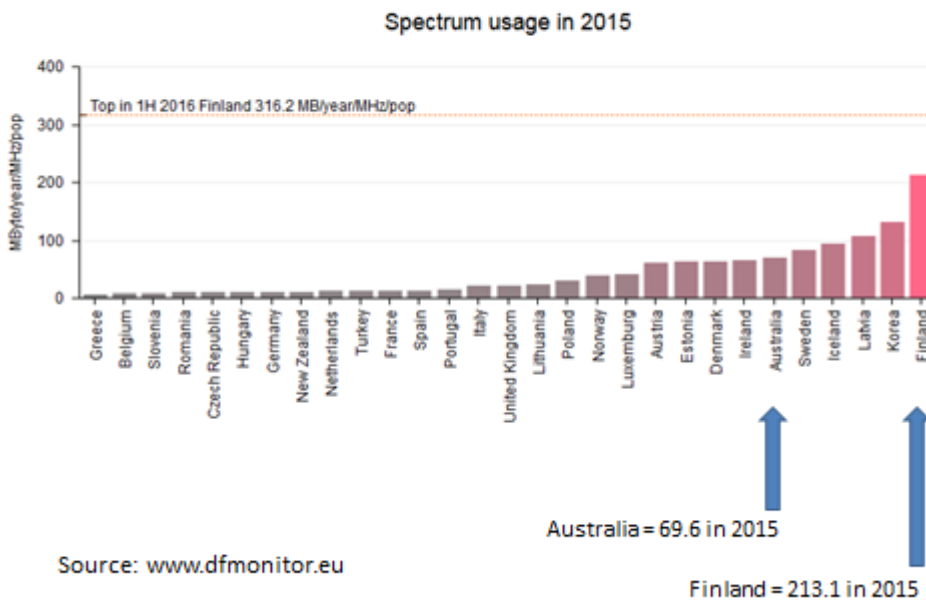


We are used to thinking about mobile spectrum as being scarce and you might think that precludes unlimited data. So, how is it that in September 2016 as many as 29 operators sold

unlimited 4G mobile data in 11 European Union and 3 non-EU OECD countries?

There are at least two partial explanations.

First, spectrum is limited but more can be [squeezed](#) out of it. The amount of data that can be transmitted given a specific bandwidth of radio spectrum doesn't have an upper bound (i.e. there is no such thing as 100% spectrum utilisation). The more cell sites (macro sites, sector densification, small cells) the operator deploys the more data transmission capacity it gains given a finite amount of spectrum.



The third chart here shows spectrum usage; defined as Byte/Year/MHz/Population

Again, Australia is not so bad and Finland is best. The chart shows Finland went from 213 in 2015 to 316 in the first half of this year. Australia was 76.4 in the June quarter this year.

Second, nobody ever uses their unlimited data. Telstra just reduced its fixed broadband prices and is now offering 1TB for \$99 pm. The mean fixed usage per user in Australia is around 130 GB pm but the median usage (same number of users either side) will be less than half that. Telstra is delivering bill certainty.

So how much is Telstra really charging for data usage? Using my [benchmarking method](#) for handling unlimited data, the implicit price of data at 130 GB is 13.5 cents/GB.

Have I got it wrong? For a long time, I have been [arguing](#) that if you have to be dumb, don't be stupid. That is, with growth in data over both fixed and mobile networks, the best way that network operators can make sure they get their fair share of revenue is to include a usage charge (but not with the awful CVC). Given the implicit price of data, I am right still.

The average mobile speed in Australia is now higher than that of fixed. If unlimited (or virtually unlimited) mobile data plans become common, the NBN needs to be afraid – very afraid.

John de Ridder