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# Will the iPad result in network problems?

With the tablet computer's growing popularity, network operators are preparing for a deluge of data downloads



**Big hit:** Apple claims that consumers downloaded more than 12 million apps and over 1.5 million e-books from the new iBookstore in its first month of launch

By DAVID SHARPLEY

CUPERTINO-BASED behemoth Apple announced recently that it sold over one million iPads in the first month of sales in the US alone. So popular has the device been that the rate of take-up is twice as fast as the iPhone, which it launched over three years ago.

It is not just the device that has taken the market by storm. Apple also claims that consumers downloaded more than 12 million apps from the App Store and over 1.5 million e-books from the new iBookstore in its first month of launch.

But what additional network congestion problems will the device cause for carriers offering a data plan? The evidence suggests they could be significant.

Apple launched a Wi-Fi version of the device on April 3, with the 3G version now available through US operator AT&T. The Singapore launch of the Apple iPad is slated for July, with operators here expected to offer data plans for users of the device.

The iPhone effect had a stark impact on operators' networks. According to estimates by analyst Chetan Sharma, the Apple iPhone created a 6,500 per cent surge of data on the AT&T network since the introduction of the 3G device in 2008.

This surge prompted the operator's CEO to claim its network experience was not of a "sufficient standard" to meet consumer demands for data in urban centres such as New York and San Francisco.

Meanwhile in the UK, iPhone operator O2 apologised to its customers for poor network performance, before CEO Ronan Dunne committed the company to a £100 million (\$\$203 million) network infrastructure upgrade.

Flat-rate data plans and the popularity of bandwidth hungry iPhone applications, vid-

eo and peer-to-peer (P2P) services have ensured operators look seriously at their network architecture.

In many cases carriers have built more capacity into the network, while seeking to enforce bandwidth limits and manage congestion through policy control and data offload.

The impact of the iPad could be even larger than the iPhone though, with the device's bigger screen and higher video resolution an important factor.

In the US, AT&T, although mindful of the iPhone effect, is offering a US\$30 unlimited data plan for iPad owners. Many iPhone users changed their relationship with mobile data. Far from respecting it as a scare resource, consumers have happily transitioned to an all-you-can-eat mentality.

There's every reason to expect that iPad users will be data-hungry too. After all, Apple claims that more than 5,000 iPad specific applications are already available and that almost all the 200,000 iPhone apps will already run on the device.

## Longer hours

Moreover, the size of the Apple iPad Wi-Fi + 3G device could prompt owners to spend even longer hours online watching movies and playing games on a device that is aimed at the more static user.

Anecdotally at least, many operators are preparing for a deluge of data in the coming year, with iPad a serious factor.

Recent network tests conducted on the iPad by Bytemobile comparatively measured the volume of mobile data traffic generated on the device and the iPhone by the same popular applications.

The results indicated that the iPad generated more than 2.5 times the volume of mobile data produced by the iPhone for identical tasks. It's an astonishing figure and one that could have serious consequences for network planning should the device become

popular globally. One million 3G-connected iPads on AT&T's network, equates to more than two and a half million iPhones – and the iPhone is a device that exceeds regular smartphone data use by a factor of ten.

Apple, realising the potential for network congestion problems, has built a data use warning system into the iPad, with users informed when they reach 20 per cent, 10 per cent and zero of their allocated data plan available. It might not help operators control costs and reduce strain on the network.

Enforcement of those limits remains an issue, especially for those subscribers on "unlimited" plans. Perhaps the solution to the congestion issues lies in the heart of the network?

Data released in a recent Bridgewater Systems report indicates that policy control – how, when and under which circumstances subscribers can access networks, applications and services – will contribute annual cost savings of over 10 per cent to operators. This equates to over US\$15 billion in annual cost reduction by 2013 in the US market alone.

Mobile data offload could have an even greater impact on network congestion caused by the iPad, with the device likely to be popular with users in urban centres where Wi-Fi hotspots are plentiful.

Offload to Wi-Fi – or femtocell indoors can help reduce peak network load by up to 15 per cent. Perhaps even more important to the operators' bottomline, offload will save between 20-25 per cent in costs per annum by 2013.

The lesson is stark. In any market where the iPad sells in the millions, operators will need to be innovative in their network management strategies.

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