

Netflix - bandwidth and broadcasting headaches

Netflix illustrates how market and technology shifts are posing headaches for carriers and broadcasters. Canada has recently addressed some of the issues but expect more developments.

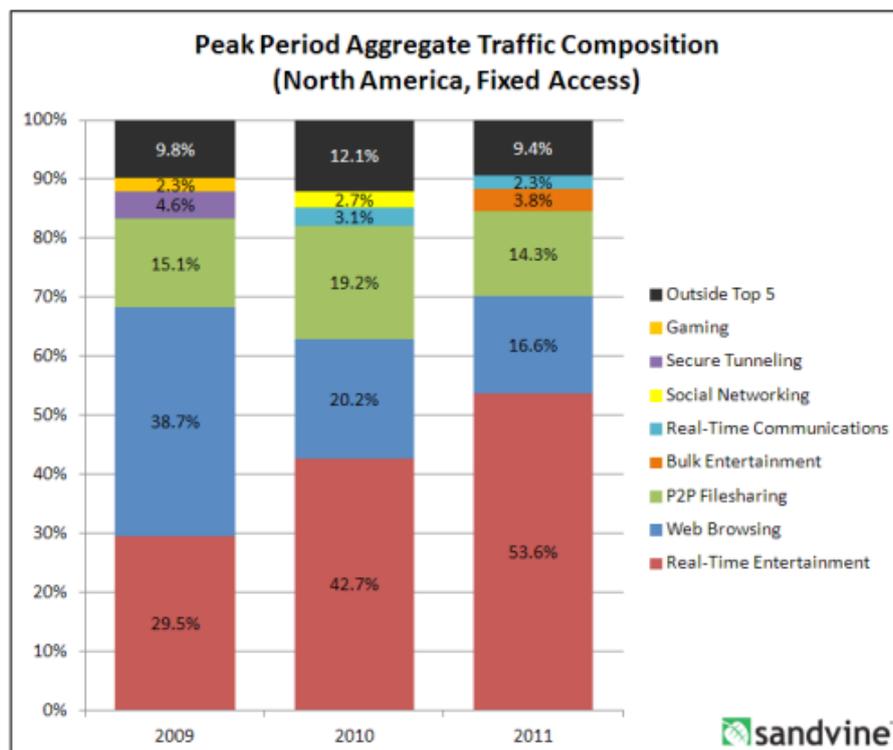
In 2007, Netflix started streaming back-list movies to subscribers in the USA and now has over 23m customers there. It began offering unlimited movie downloads in Canada for \$7.99 a month in 2010. By August 2011, the service had signed up 10% of Canadian broadband households; a feat that took six years in the United States.

Its runaway success is puzzling as it is simply aggregating entertainment content: *“In a media culture committed to the proposition that ‘content is king’ the robust success of a mere distributor is something incomprehensible and frankly, a little unnerving, especially when those responsible for the creative lifeblood that flows through its veins struggle for profitability”* (Knee J, ‘Why Content Isn’t King’, *The Atlantic*, July/August 2011)

Its success poses headaches for carriers and broadcasters. The headaches remain after the Canadian regulator’s (CRTC’s) recent decisions.

Bandwidth headaches

Digitisation of broadband networks (both fixed and mobile) is causing tectonic shifts in business models. Traditionally, carriage and content went together: not any more. Entertainment was the ‘killer app’ that spurred the building of cable networks. The builders assumed they would be the providers of the content. But the impetus for delivering content over broadband is now coming from non-traditional sources that do not build the networks they rely on.



Not only have the builders of networks been deprived of the revenues that they expected out of video but also have to augment their networks to keep-up with the growth in video traffic; on which they earn very little. Over half the downstream traffic on fixed networks in N America is now accounted for by real time entertainment (see the chart above).

Sandvine reports that Netflix accounted for 32.7 *per cent* of all North American peak fixed access downstream content in the Fall of 2011. That puts Netflix way beyond the other three top Internet protocols or services by daily volume—approaching double HTTP (17.48 per cent), almost three times YouTube (11.32), and nearly four times BitTorrent.

Some carriers' knee-jerk reaction to the first manifestation of this kind of traffic was to block file-sharing networks like BitTorrent. This was clearly discriminatory (not compatible with net neutrality).

Bandwidth pricing

The obvious neutral solution is volume based charging. This goes against the grain for those accustomed to unlimited downloads on broadband. And it is bad news for Netflix at about 2GB per hour (double with high definition) and average usage around 40GB per month. Twenty OECD countries have no data caps at all among their broadband offers. But things are changing. One of the twenty is the USA where Netflix has most of its customers. In May 2011, AT&T slapped 150GB and 250GB data caps on its DSL and U-Verse customers.

In Canada in 2000, the CRTC, permitted cable carriers to introduce usage caps and/or usage-based billing (UBB) charges for their wholesale services if UBB was also applied for their retail customers. Later, this option was extended to telephone companies offering broadband access.

On 25 January 2011 (Decision 2011-44), the Commission set the UBB rates at retail minus 15 percent. But the concession was not enough for many independent ISPs which together account for just 6 percent of the residential retail market - they were hoping for the CRTC to grant them a 50% discount.

The January decision ignited a consumer backlash and a wave of public scorn hit Ottawa ahead of the May federal election, quickly turning into a hot-button issue for a minority Conservative government and opposition parties alike. Also Netflix Inc. expressed serious concerns about its future in Canada - "[usage-based billing] *is something we're definitely worried about,*" (Reed Hastings, chief executive of Netflix). On Feb. 3 2011, the federal Cabinet advised the CRTC that if it did not review the decision and come back with a new one, it would be reversed.

The revised model that the CRTC finally produced on 15 November 2011 offers two options. First, for companies that proposed a usage-based model, their tariffs have to be based on the approved capacity model, effective 1 February 2012. For companies that proposed a flat rate model, their tariffs were approved effective immediately.

The capacity model requires ISPs to choose what bandwidth of pipe it wants in order to carry traffic between aggregation points (eg street cabinets) and the handover point. This is similar to the wholesale model proposed for the new broadband network in Australia. If ISPs do not order enough capacity, their traffic will become congested without affecting other ISPs.

This should appease Netflix and others but where is the incentive for ISPs to buy bigger pipes to accommodate traffic for which they little or nothing? The headache remains.

Broadcasting headaches

Even though Netflix does not have the rights to access to current content, its backlist of movies is sufficiently attractive that many of its customers are 'cord cutters' – they discontinue their pay television boxes to watch Netflix movies on, say, their iPads.

That is obviously bad enough but broadcasters say that they are also disadvantaged. Cable and satellite companies in Canada argue that Internet-based movie distributors like Netflix should fund Canadian broadcast content and face other regulations that cable and satellite distributors such as Rogers Communications Inc. must meet.

But in October 2011, the CRTC decided against regulating online-streaming companies such as Netflix Inc.; noting there isn't "*any clear evidence*" that so-called over-the-top services (OTT) are negatively affecting the broadcasting system.

Coming hard on the heels of Netflix we have serious players with different business models. They include Apple TV, Google TV and facebook movies. Like Netflix, they are over-the-top providers using others' broadband networks.

To some extent, broadcasters rely on owning content rights. But even these can be undermined by technology. In the USA in 2006, US pay TV operator Cablevision introduced a service that allowed customers to record, pause, and replay television content from servers located in Cablevision data centres rather than from hard drives in their living rooms. Cablevision was challenged by Twentieth Century Fox and, in March 2007, a district court found in favour of the copyright owner but this decision was reversed in August 2008 by the Second Circuit Court of Appeal.

There is currently a similar case in Australia where a mobile operator, Optus, has a cloud-storage service which enables customers to playback any of 15 free-to-air programs. It gives its mobile customers 45 minutes of free viewing for what it claims is just a time-shifting and format-shifting service. Optus argues that what it offers is equivalent to customers recording the content on their own hard drives for personal use, which does not breach copyright. Key sporting organisations are concerned about the impact on revenues. The main mobile network operated by Telstra paid A\$153m for the rights to stream matches live over the Internet over five years. The Australian case is to be heard in December 2011.

So, like the carriers, the headaches for broadcasters are only just beginning.

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