# EMERGING DISRUPTION OF THE TELECOMMUNICATIONS AND MEDIA MARKETS BY MOBILE DEVICES

The net neutrality debate has focused on the power play between telecommunications operators and content providers. Telecommunications operators want to deliver their own content services in competition with pure play content providers. Content providers perceive that telecommunications operators can and will limit their access to the consumer by making it difficult or expensive to deliver content.

## POWER PLAY BETWEEN OPERATORS AND CONTENT PROVIDERS

This is an argument about:

- Who controls the customer: is it the operator, the content provider or a mixture of both;

- Traffic management: the operator faces a combination of subscriber and content provider determining traffic volumes and distribution;

- Who gets content related revenue: The operator may find itself locked out of a valuable market receiving little compensation for carrying content traffic.

Up until recently, content was delivered over a common PC interface. This gave the consumer access to most content and services with little restriction. Content providers were forced to compete in an open market which limited their power. Nevertheless, particularly strong brands emerged.

This can be seen in person to person services and ecommerce.

**In person to person services, a** key element of this process was the migration away from ISP provided value added services to services hosted by major online brands. This was first seen in email where ISP based services rapidly gave way to global services like Hotmail, Yahoo and then Gmail. The trend continued with social networking and ecommerce.

The value of person to person services like email and social networking to individual users grows with the total number of users. This 'network' effect means that the larger the network of users the greater the value to individuals in the network. ISPs are always limited in size and therefore cannot hope to demonstrate sufficient value to maintain their position in a competitive market for person to person services.  Moreover, subscribers recognize that they will ultimately want to change access provider without changing their identity on a social network or email service. Therefore, a service provided by the access provider will have less utility.

In fixed and mobile *telephone* service markets, this move from service provision by the network access provider to an alternative service provider has been limited for:

- technological reasons,

- regulatory restrictions

- and because telephony already offers universal access to any other telephone subscriber.

The network effect applies irrespective of who supplies the service and the value is therefore same. Nevertheless, differential tariffs for on-net and off-net calls and high tariffs for international calls means that cost to the consumer varies with supplier. This gives opportunity to global providers of VoIP and to new voice service providers such as Skype and Google.  These new service providers are able to exploit their IT based platforms by continuously introducing new and enhanced services and hence gain further advantage over their network based rivals.

**In e-commerce**, there is significant advantage in scale of operations. The greater the volume of business, the greater the buying power and the greater the wider range of goods sold profitably. As in traditional retailing, placement for maximum footfall from the target market is a significant element of success. ISPs and operators failed with e-commerce portals precisely because they could not deliver the footfall that the internet as a whole could provide. Hence, brands such as Amazon and Ebay grew to pre-eminence. This argument also applies to content services which are, after all, only a particular type of ecommerce.

Thus, access providers such as ISPs have historically found themselves to be poorly placed when delivering person to person and ecommerce services.

**Nevertheless access providers have two major advantages**. They own the customer's access to the internet and can control, to some extent, where the customer goes on the internet through intelligent management of the service provided.

In many fixed telecommunications markets lack of competition means that it is difficult for a subscriber to change access provider. This gives the operator a significant advantage over content providers in controlling use.

Nevertheless, in most mobile markets, there are at least two operators and in many markets there are more. This competition, and the ease of changing mobile operator, limits the operator's power to control the customer. If the customer perceives that the service provided does not meet their requirements, they will go elsewhere. Thus, their power over content providers, already weak, is further limited.

## GAME CHANGING IMPACT OF DEVICES AND APPS

The introduction of the iTunes Store and the iPod changed the content provision game, significantly shifting power to Apple and away from traditional music distribution. The result has been that in the first quarter of 2010, legal downloading was responsible for 40% of all music sales in the USA, up from 35% a year earlier (NPD, May 2010).

Apple's proposition relied on easy access to most popular music through the iTunes store together with a fantastic device, the iPod. The iPod encouraged purchase of music from the iTunes store although it would manage music from other sources.

This link between device and content service started a process towards a content delivery model that exploits a device with a related application at one end and content or service provision at the other. This model is exemplified by the iPod Touch and iPhone in conjunction with the iTunes Store. With the iPhone, music has to be purchased directly from the iTunes store. Any other music has to be loaded via the PC. The iPhone restricts access to the many other music sources on the internet and encourages consumers to purchase from the iTunes Store. The success of the family of iTunes store, iTunes app and iPod can be demonstrated in Apple's 2010 results.

- Apple took 70% of the USA legal digital music download market by value, Amazon, in second place, had 12% in Q1 2010 (NPD, May 2010);

- Apple had US$4.1Bn sales through the iTunes Store in 2010 (Apple, 2011);

- Apple had US$8.27Bn sales of the iPod alone (Apple, 2011).

Not only does the device promote service usage, but it enables multiple revenue streams associated with the same service, with device revenue outstripping content sales. Overall, iTunes store revenue is just 6.2% of Apple's total revenue for 2010. **This ability to exploit multiple revenue streams may give device manufacturers advantage over pure content providers.**

Compared with estimated global revenues for mobile internet services, estimated at US$42Bn in 2009 rising to US$92Bn in 2014 (IDATE, 2010), device sales and music sales represent a significant opportunity based on Apple's sales alone.

**The combination of mobile device and application gives the content provider control over service provision.** Content isn't accessed over a common browser interface. Rather every content app has a different interface and stores content on the device in a different way. The difficulty in managing and using multiple content streams means that the customer is ultimately tied to a small number of services or one service. The lack of a common interface gives rise to significant barriers to entry for content market entrants. This means that operators face difficulties in tapping revenue from content.

Nevertheless, the availability of apps on the phone gives rise to all kinds of service opportunities in competition with the access provider's own services. A Skype app on a smartphone encourages subscribers to use that for international calls instead of the access provider's own international services. The Skype app's other features, such as conferencing and video telephony, only further encourage subscribers to migrate.

**This competition with an operator's own services: international calls, email, messaging and content reduces the prospective revenues from services that the access provider could otherwise expect**. As these revenues, unlike basic telephony services, are generally not subject to market based regulation they may yield super-normal profits, making them particularly attractive to the access provider. Thus, the operator risks losing some or all of its most attractive service revenue.

In addition, the access provider finds it difficult to maintain a relationship with the subscriber except where it has a clear price advantage or where it is the sole provider of service. Thus, the access provider becomes just that, a provider of access and bundled national calls.

The combination of service, device and app also encourages massive demand for data. This is a plus and a minus for the access provider. Ultimately it leads to more demand and if that demand is satisfied profitably, higher revenues and profit. However, in the meantime, operators are required to make massive investments in access, backhaul and internet access, depressing their short term results.

## OPERATORS' RESPONSES

Access providers may respond to this changed environment by taking action to:

- Restrict and shape access to content and other services;
- Reduce traffic on their own network;
- Develop content related propositions particularly in markets where digital rights have yet to be assigned;
- Reduce market power of handset manufacturers with related content propositions.

## Restrict and shape access to content and other services

An operator can work with the handset or its network to shape the way in which the user accesses content and which services are used. These include:

- Phone settings. Phone settings can be used to drive users to own brand content.
- Creation of an own brand phone and content proposition. This has the benefit of associating the network brand with the content and phone and enables a tightly integrated content proposition to be developed.
- Traffic shaping. This can be used to discriminate between different sources of content and to ensure that traffic is prioritized in favour of the operator.

**These options all have the effect of reducing consumer value associated with the service. Value is reduced through reduced choice or worsened network performance**. In a competitive market, such reduced value will appeal only to lower ARPU customers and hence will be associated with lower service or device pricing and/or lower traffic volumes.

**Restrictive phone settings and traffic shaping are unlikely to be feasible in highly competitive markets** although they may be in two player markets. It is likely that an own brand phone, like own brands in other markets, is likely to sell at a discount to popular phone brands. Phone settings and traffic shaping are therefore likely to be used only to curb extreme use of phones, for example, for peer to peer downloading.

## Reduce traffic on the operator's own network

**In the long run, an operator will want to maximize profitable traffic on its network**. In the short term, it may want to manage traffic growth in line with a feasible investment strategy. It may wish to delay growth, for example, until LTE is implemented. The operator has two options:

- Data tariffs that encourage subscribers to ration their use;
- Hand-off to wifi networks.

An operator can introduce tariffs that encourage 'fair use' of the network. 'Fair use' of course means 'profitable use'. Tiered data tariffs should do this, with careful adjustments to price and traffic limit to maintain a competitive position.

Automatic use of wifi networks is possible on many phones with the effect that an application will use a wifi network in preference to the operator's own network when available. Operators can and do configure phones to enable or disable this possibility. In the end, an operator will lose revenue by allowing such prioritization. Nevertheless, it satisfies the short term requirement to manage traffic growth.

## Develop content related propositions

Two types of content related propositions are possible. Both attempt to gain revenue from content in addition to or substituting for revenue from data tariffs. An operator can do this by:

- Being first into alliances with content providers;
- Providing a high performance overlay network for subscribing content and application providers.

## Alliances with content providers

Nawras' Backstage product is an example of an alliance with content providers. It sources content for its own subscriber base and delivers it without any data charges. A consumer subscribes for 1.9 Omani Riyals per month, can listen to any amount of content and download any10 tracks permanently. This means that if not used for any other purpose, the charge represents 0.19 Omani Riyals per track, that is 49 US cents, against a minimum price of 69 cents per track at the iTunes store in the USA.

Nevertheless, it cannot be used directly with an iPhone since that will source only from iTunes store. Instead, music has to be downloaded via a PC.

Content related propositions work best in markets where the global market leaders, Apple and Amazon, do not have the right to sell content. In such markets, the operators should sell on a national scale instead of focusing on their own subscriber base otherwise they will leave a gap that can be exploited by their competitors or an international content provider.

## High performance overlay network for particular content services

Where content services are already well placed, the alternative approach of providing a high performance overlay network may be appropriate. This seems to be the way Europe is going. BT Wholesale has launched such a network in the UK, called Content Connect, to enable video streaming with cacheing at locations close to the customer. It will be used by BT Retail to deliver and cache BBC iPlayer content (BBC Website, 2011)[1].

(BBC iPlayer is a radio and video on demand service offered in the UK by BBC via the Internet and cable TV with PC, game console and Smartphone apps. It is one of the most successful such service in the world with 136 million programme requests via the Internet in January 2011 (year on year growth of 35%), approximately 6.6m weekly users and an average of more than 4 programme requests and streaming of 75 minutes of TV per TV user per week. (BBC iStats, 2011).)

Such wholesale services may well give a way out of the net neutrality problem by providing an alternative path to the content, one with a managed quality of service.

## Manage the market power of handset manufacturers with related content propositions

Tight coupling of handset and content isolates the access provider. But the access provider can work to ensure that no individual handset manufacturer is dominant. It can do this by:

---

[1]

- Encouraging open access handsets, ones where there is no tight control over the handset configuration by the manufacturer – such handsets enable open access to a variety of content services including the access providers' own;

- Promoting a variety of handsets from different manufacturers and with different operating systems so that no single manufacturer or platform has dominance.

**At a platform level, a two horse race between mobile operating systems, Apple and Google, leaves access providers in a weak position.** The attempted positioning by Nokia as a content provider has ultimately failed and its alliance with Microsoft to develop a third platform has no associated product with volume shipments some time away. So access providers are faced with a two horse race, Apple and Google, for at least two years, and possibly longer, given that the third platform will be relatively weak both in device penetration and in its content proposition for some years to come.

## TAKE HOME MESSAGES

The winners and losers in this complex three tier play are difficult to predict. Past highly performing content providers from CompuServe and AOL through to MySpace demonstrate the difficulty of creating a truly sustainable business model in content. Consumer electronics companies demonstrate the same lack of long run sustainability. The digital content market is still an emerging market and one where considerable fortunes will be made and lost. Nevertheless the strategic requirements for any success in this market and the underlying telecommunications market remain:

- excellent content,

- a strong relationship with the consumer,

- and constant product innovation.

Operators will be increasingly squeezed unless they take positive steps to:

- Maintain control of the customer

- Target upstream revenue sources

- Manage traffic on their network

- Manage the market power of handset manufacturers with related content propositions

**References.**

Apple 2011: Apple Inc Form 10K for the fiscal year ended September 25, 2010

BBC, 2011: http://www.bbc.co.uk/news/technology-12112389, 4 January 2011

BBC iStats, 2011

IDATE, 2010: Mobile 2010, IDATE, 2010

NPD, May 2010: http://www.npd.com/press/releases/press_100526.html, 27 May 2010

This speech was given by David Hughes, Director, Middle East, Intercai Mondiale at the MEET ICT 2011 conference in Bahrain, 20th – 22nd June 2011