

# WHOLESALE HIGH SPEED ACCESS SERVICES

Lessons from the UK and around the globe

Supplemental report

Telecom Notice of Consultation CRTC 2009-261-7

Expansion of proceeding initiated by Telecom Notice of Consultation  
CRTC 2009-261

Towerhouse Consulting LLP

JUNE 2010

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## 1 SUMMARY

- Towerhouse Consulting LLP prepared a report in February 2010 which provided international context on the regulation of wholesale broadband services outside North America.
- The study dealt primarily with the situation in the UK but also provided a selection of further international benchmarks.
- It demonstrated that properly targeted regulation delivers benefits in terms of greater range of service provision and lower prices for both business and residential customers.
- The regulatory environment and the market have continued to evolve since February 2010.
- These developments - which are examined in detail in this further report - serve to confirm and strengthen the conclusions in our February 2010 report.
- Great Britain continues to see strong investment and greater speeds: BT has announced significantly increased NGA roll-out plans
- Our predictions about the likely course of regulation are almost entirely borne out by Ofcom consultations on the regulation of wholesale broadband and NGA markets on 23 March 2010.

## 2 INTRODUCTION

In this supplementary report we summarise the conclusions of our previous report, provide an update on more recent regulatory and market developments, and assess whether these necessitate any change to our conclusions. We conclude that nothing has changed in the four months since our original report that would cause us to revise our original conclusions. Indeed, significant developments have taken place in the market which validate our conclusions. Those have prompted regulators to start work on the next generation of regulatory measures which will be needed to underpin competition.

By way of reminder the conclusions of our earlier report were as follows:

- There is ample reason to believe that the UK approach to regulation - particularly with regard to functional separation - is now regarded as orthodox rather than innovative; and that a functional separation remedy should form part of a toolkit of remedies available to national regulators.
- There is every reason to believe that functional separation, together with the right level of product-specific regulation, enhances the investment environment and boosts broadband markets more generally.
- There are some specific lessons which can be drawn from the UK's experience in the regulation of next generation access networks.
- The UK approach renders debate about matters like speed-matching obsolete and removes the need for the regulator to concern itself with them.
- BT's Next Generation Access services are subject to functional separation and so-called "equivalence of input" obligations whereby the Openreach division is obliged to provide BT's retail arms and other providers with equivalent services.
- Ofcom has also required Openreach to offer both active and passive<sup>1</sup> wholesale access products.
- The overall regulatory structure in the UK is one which focuses regulation only where it is necessary. The approach is adaptable and is applied in relation to other access products such as wholesale leased lines and ethernet. The UK approach to these other services supports the approach taken for wholesale broadband.

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<sup>1</sup> Broadly, a passive product is one which does not have electronics attached - e.g. unbundled loops; an active product is one which does have electronics as part of the service e.g. a bitstream or other wholesale broadband product. Passive access products, by definition, tend to be closer physically to the end user. Passive products are also by definition uncontended. Ofcom's vision of an Active Line Access (ALA) product displays characteristics of both - being close to the end user and uncontended but also employing electronics. It is intended to be a decent proxy for a passive input in the world of next generation access.

- Functional separation has now been formally adopted by the European Commission as a remedy for national regulators throughout the EU<sup>2</sup> and elsewhere.
- Investment has not stopped despite regulatory obligations to provide wholesale access services - in fact, quite the contrary. Investment in next generation access network rollout has increased despite the UK experiencing a time of unprecedented economic crisis.

In this update we mirror the structure of our original report, examining the UK, the wider EU, Australia and New Zealand in turn.

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<sup>2</sup> <http://europa.eu/rapid/pressReleasesAction.do?reference=MEMO/09/491>

### 3 UK UPDATE

Both BT and Virgin Media have continued to vie with one another in announcing ever greater availability of high speed broadband. While Virgin Media has the edge in terms of headline speeds, BT has the advantage of greater network reach. Virgin's network currently serves around 50% of UK homes and it is believed that Virgin may be considering extending this network reach - either by installing new fibre or by utilising new (to Virgin) methods such as overhead wire access to customer premises<sup>3</sup>.

#### 3.1 BT's investment in Great Britain<sup>4</sup>

BT has continued to announce investments (via its Openreach division) in the roll out of Fibre to the Cabinet (FTTC). Since the company first announced plans for a limited trial in parts of London and Cardiff, they have slowly extended the reach of the new services in a series of announcements. In terms of detailed plans, by the end of 2010 BT is hoping to connect up to 4 million premises, with the total rising to 10 million by the Summer of 2012 (40% of UK premises). In mid May 2010, BT announced annual profits of £1bn and said that it planned to invest a further £1bn (£2.5bn in total) to extend the roll out of fibre to around 66% of UK premises by 2015. BT's FTTC products offer users broadband speeds of up to 40 Mbps downstream and 10 Mbps upstream. The technology could see faster speeds in the future.

Meanwhile BT Wholesale has continued to roll out its ADSL2+ broadband product (which provides speeds of up to 24Mbps over BT's 21st Century Network (21CN). These are now available to 14 million premises, 55% of the market with 1.1 million end users connected to the network.

All of this underlines the fact that contrary to some assertions, regulation in the UK is not dissuading BT from investing in next generation access networks. On the contrary - the regulatory environment in the UK appears to encourage NGA roll-out.

The increased footprint places BT in a much better position to resell its service to other providers on a wholesale basis allowing companies such as Sky or TalkTalk to avoid the prohibitively high costs of deploying their own infrastructure. BT is seeking to build demand for the new services with a national advertising campaign for its "BT Infinity" service and a number of the bigger service providers are conducting trials using BT's wholesale products.

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<sup>3</sup> Virgin Media are currently conducting trials with overhead wire access as explained below.

<sup>4</sup> Great Britain is the UK excluding Northern Ireland

### 3.2 BT Investment in Northern Ireland

BT has also announced investment<sup>5</sup> in somewhat slower broadband services in Northern Ireland where the regulatory situation is different from the rest of the UK. The Government of Northern Ireland provided £18 million while BT provided £30 million to install 1,175 new fibred (FTTC/VDSL) cabinets. In Northern Ireland BT is not subject to functional separation, nor the equivalence obligations faced by BT on the mainland. There is significantly less competition than elsewhere in the UK (none of the alternative network operators other than Virgin Media has network in Northern Ireland). The regulatory and market conditions are therefore similar to those which persist in Canada. Despite the lack of regulation, lack of meaningful competition and the growth in the economy that has resulted from the peace process in Northern Ireland over the last ten years, BT had not previously extended its next generation investments to Northern Ireland. Only when the devolved government announced an £18 million investment in December was BT prepared to invest its own money. The investment did amount to £30 million but the fact remains that despite much more favourable market conditions in Northern Ireland, prior to any government intervention, BT channelled **all** of its next generation investment into the British mainland where it had to respond to the threat of competition.

The Northern Irish project is focussed on the business community and is designed to ensure 85% of businesses in Northern Ireland will have access to 2 Mb/s services in rural areas and 10Mb/s services in the most densely populated urban areas by 2011. 1,175 new fibred (FTTC / VDSL) cabinets will be provided across 166 Northern Ireland exchange areas during the next 18 months. These business services will be slower than those offered to residential customers on the British mainland and will require an £18M subsidy from the tax payer.

The lessons are clear. Where BT is freed from wholesale regulation, customers can expect to see slower services and to see them later than they have been made available elsewhere. Indeed it seems that in the benign regulatory environment of Northern Ireland, the services would not have happened without a significant taxpayer funded contribution to the cost. On the British mainland BT is investing without any state support to provide 40Mb services to 66% of premises.

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<sup>5</sup> [www.openreach.co.uk/orpg/news/productbriefing/nga/nga00410.doc](http://www.openreach.co.uk/orpg/news/productbriefing/nga/nga00410.doc)

### 3.3 Virgin Media continues to ramp up speeds

Virgin Media's focus has been on increasing the speed of services within its existing network footprint. Since February Virgin has announced that it will start offering a 100 Mb/s service to 12.6 million homes by the end of the year<sup>6</sup>.

### 3.4 Technological options to extend broadband coverage

The two competing access technologies in the UK at present are the fibre to the cabinet services deployed by BT, and the cable network of Virgin media.

Virgin's cable network only passes around 50% of homes so they have also been exploring ways to expand their addressable market. While BT and others are exploring options for opening up access to ducts Virgin has turned to a technology which only BT currently uses - traditional overhead wires. Virgin Media is now in the process of trialling 50Mb/s in rural areas using telegraph poles. The tests will last for around six months and are expected to help link up rural communities to the fibre optic network, bringing higher speeds to those who may have otherwise missed out.

There have also been developments for those operators looking to extend network coverage using more conventional underground means. One of the most costly elements of rolling out a network is the installation of the ducts through which fibres are laid. In the UK this is often estimated as being around 85% of the rollout cost. For years BT's rivals have called for access to be given to the incumbent's ducts on the basis that much of it was installed at public expense when the company was state owned. In recent months there have been reports that BT is now investigating ways which would allow it to share cabling ducts with rivals<sup>7</sup>. This could allow other operators to deploy their own fibre-to-the-home solutions, expanding to areas which BT deem unviable. While in opposition the recently elected Government (or at least the Conservative party) announced that if elected it would force BT to open up its ducts for sharing. Ofcom has consulted on the issue as part of its "Wholesale Local Access" consultation<sup>8</sup>.

Ofcom is currently looking at the issue of duct access. The logical solution would be to create an open access system for ducts controlled centrally which would hopefully help reduce the disruptive roadworks needed to deploy new networks and boost broadband competition - both bugbears with the public and governments. This will not necessarily resolve every access issue since BT does not always have spare capacity in its duct network but in general it ought to be a progressive step.

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<sup>6</sup> <http://www.thinkbroadband.com/news/4170-virgin-media-to-launch-100-meg-broadband-in-2010.html>

<sup>7</sup> <http://www.thinkbroadband.com/news/4150-bt-plan-to-share-it-cable-ducts-with-rivals.html>

<sup>8</sup> <http://www.ofcom.org.uk/consult/condocs/wla/summary/>

The proposals in the consultation documents are described in more detail below but, in this area, the proposal is to introduce a new remedy known as Physical infrastructure access ("PIA"). This remedy would allow BT's rivals to deploy fibre in the access network using BT's ducts and poles - either to support deployment of FTTP technology, or to support deployment of FTTC technology (by enabling a backhaul connection between street cabinets and an operator's own network). The consultation period closed on 1<sup>st</sup> June and if the proposal is implemented BT will be required to produce a draft reference offer for duct access within three months, with a view to launching a product within eight months.

Duct sharing would open up interesting opportunities for other network operators. Virgin Media, for all their developments on broadband speed, have done little to expand their broadband network since it was originally built. Access to spare BT ducts would allow them to expand to other parts of the country at a much lower cost than the original cost of having to dig. Whether they are prepared to grant access to their own ducts as a price for that prize remains to be seen. In our experience Virgin are ultra cautious and are likely to fiercely resist calls for them to open up access to their ducts.

### 3.5 Political Developments

Prior to the UK general election on 6th May it became clear that in what was predicted as being the UK's first 'internet election', the issue of broadband was featuring as an election issue for the first time. The then Government promised to intervene<sup>9</sup> in the market to ensure that the majority of the population had access to superfast broadband (without specifying speeds). The then Minister for digital inclusion was quoted as saying "If you just leave it up to the market [super-fast broadband will] only go to into the cities"<sup>10</sup>

The previous Government planned to introduce a £6 per year levy on all electronic communications links to produce a fund which could be invested in superfast broadband provision for those areas not served (or likely to be served) by the market. This fund was to be spent by a new body, Broadband Delivery UK, set up in March 2010 to deliver the commitment to universal 2 Mb/s availability.

The opposition Conservative party published ambitious plans for most people to have access to 100 Mb/s broadband but favoured a market led approach with Government intervention being reserved for those parts of the country where it had been proven that the market would not provide service.

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<sup>9</sup> <http://interactive.bis.gov.uk/digitalbritain/2010/03/building-britains-digital-future/>

<sup>10</sup> Jim Knight, Minister responsible for digital inclusion [http://news.bbc.co.uk/1/hi/uk\\_politics/8579333.stm](http://news.bbc.co.uk/1/hi/uk_politics/8579333.stm)

Despite the formation of a coalition Government, the Conservative party policy on broadband seems to have prevailed and been enshrined in the new Government's coalition agreement<sup>11</sup>. The Government now states that

*"We will introduce measures to ensure the rapid roll-out of superfast broadband across the country. We will ensure that BT and other infrastructure providers allow the use of their assets to deliver such broadband, and we will seek to introduce superfast broadband in remote areas at the same time as in more populated areas. If necessary, we will consider using the part of the TV licence fee that is supporting the digital switchover to fund broadband in areas that the market alone will not reach."*

Prior to the election the Conservative technology manifesto had promised to hold back from intervention in the short term and encourage private sector investment by "opening up network infrastructure, easing planning rules and boosting competition". This, it was claimed, would make the UK "the first country in Europe to extend superfast 100Mbps broadband across most of the population", and that "this is up to 50 times faster than Labour's planned broadband network". According to the manifesto, only in 2012 will the Conservatives use funding from general taxation to plug any gaps in superfast provision left by market forces.

The UK's new Culture Secretary, Jeremy Hunt, gave his first speech on broadband on 8<sup>th</sup> June 2010<sup>12</sup>. In it he confirmed that the previous Government's commitment to a 2Mbps universal service remained in place despite the change of Government. But he described the target speed as "paltry" and set out a series of actions, which he hopes will boost the U.K.'s broadband infrastructure. The first step will deliver the 2 Mbps universal service obligation. The second is to launch three test projects to bring superfast broadband to rural areas which are unlikely to be served by the market. It is hoped this will provide the Government with information which will assist it in targeting its resources for future broadband rollout in other rural areas. The third Government action will be to improve access infrastructure including opening up access to BT ducts and poles and allowing telecoms providers access to gas, electricity, and water infrastructure. The Government will begin consultation on 15 July.

It remains to be seen whether the new Government will deliver on its promises of removing barriers to investment (such as the taxation of fibre) and if it does, whether these

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<sup>11</sup> [http://www.direct.gov.uk/en/NI1/Newsroom/DG\\_187877](http://www.direct.gov.uk/en/NI1/Newsroom/DG_187877)

<sup>12</sup> [http://www.culture.gov.uk/news/ministers\\_speeches/7132.aspx](http://www.culture.gov.uk/news/ministers_speeches/7132.aspx)

changes will prompt even greater investment by the private sector than we have already seen.

### 3.6 UK Regulation

While the UK's future broadband policy direction has been dependent on the outcome of the general election, the regulator has been examining what changes need to be made to UK regulation to meet the latest developments in the market, and in particular BT's significant roll out of FTTC services. On 23<sup>rd</sup> March 2010 Ofcom launched two consultations<sup>13</sup> on its latest proposals for regulation of the wholesale local access (WLA) and wholesale broadband access (WBA) markets in the UK. WLA is the market for the connection between the customer premises and the central office, while WBA is the market between WLA and the retail broadband market.

The move to next generation broadband has prompted concerns about the potential threat this causes to the level of competition which the UK currently enjoys. Ofcom's assessment is that 46% of UK homes currently have access to superfast broadband and they believe their proposals will support the further development of superfast services. Ofcom believes that BT's rivals may wish to deliver services over BT's network rather than building their own, so the regulatory remedies are aimed at facilitating such access while retaining appropriate incentives for BT to build the network.

Ofcom's consultations launched on 23 March 2010 are almost entirely consistent with the predictions in our February report. The main proposals are:

- a) Continuing the current regulatory approach with a split of WBA into three different geographic markets<sup>14</sup> defined according to the potential for competition based on a number of factors including population density, the location of central offices on the BT network, and the presence of competitors both at these central office locations and from Virgin Media. The greatest regulatory intervention is seen as being needed in those markets where BT is the only operator or faces very little prospect of competition, and at the opposite end of the scale are those central offices where there are four or more providers.
- b) In the WBA markets, Ofcom will set price control rules only in the geographic market in which BT is the sole operator. In the market where there are just two or three competitors, Ofcom is to impose a cost orientation obligation.
- c) Ofcom proposes that the WLA market will cover copper loops, cable networks and optical fibre - but not cellular, fixed wireless or satellite networks.

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<sup>13</sup> [www.ofcom.org.uk/media/news/2010/03/nr\\_20100323](http://www.ofcom.org.uk/media/news/2010/03/nr_20100323)

<sup>14</sup> Plus the tiny "Kinston upon Hull" market

- d) The WLA proposals include a new unbundling remedy - virtual unbundled local access (VULA). This will apply where BT has deployed its NGA network, and will give providers a virtual connection, rather than a physical line, to end users and much greater control than using current Openreach products. Ofcom considers VULA the most likely and cost-effective basis for future NGA competition (and will also be used by BT's downstream businesses).
- e) In order to encourage investment by BT, VULA will permit BT some pricing flexibility in order to allow BT to recover a fair rate of return. But it will be subject to a strict prohibition on undue discrimination in order to ensure that pricing is not excessive nor terms unreasonable in areas where BT does not face strong competition. Ofcom considers that BT's pricing will be constrained in other areas by competition from Virgin Media.
- f) Ofcom has separately issued variations to BT's undertakings to allow BT's Openreach division to control and operate electronic equipment necessary to provide superfast broadband services using FTTC and FTTP. The aim is to commit BT to providing fit for purpose FTTP and FTTC non-physical wholesale products (including to itself on an "Equivalence of Inputs" basis). The FTTC variation also requires BT to conduct a consultation with industry to assess the demand for and industry views on the design of FTTC non-physical inputs.
- g) Another new remedy of physical infrastructure access (PIA) will allow other operators to deploy fibre through access to BT's ducts and overhead poles. This could be used to deploy fibre to the premises (FTTP) or fibre to the cabinet (FTTC) services. This would allow other operators to deploy network beyond the 40% coverage planned by BT, and Ofcom believes that this remedy will enable BT's rivals to roll out networks more quickly than BT and to deliver superfast broadband in areas not currently served by either BT or Virgin Media. However it raises many complex issues (e.g. need for clear rules for capacity reservation, maintenance procedures, how to deal with congested infrastructure, new build, whether to impose a requirement for over-build etc) but Ofcom is hoping many of these can be resolved by industry discussion. Basically BT will be required to share information about the available capacity and quality of facilities available. Ofcom has proposed that access be priced at a level that will make a suitable allowance for risk and ensure that BT still has an appropriate incentive to invest in superfast broadband services.
- h) BT will be required to produce draft reference offers for duct access, and a duct access product, and to discuss these with industry.
- i) In addition, Ofcom is set to find BT has significant market power nationwide in next generation access services. Non-discrimination obligations are likely to be imposed.

Ofcom's view is that the new regulatory remedies are entirely supportive of the UK's Digital Britain initiatives and they believe the proposals should lower barriers to NGA investment.

Having reviewed the Ofcom proposals, the European Commission gave its approval to the plans on 2<sup>nd</sup> June 2010<sup>15</sup>. But the Commission want virtual unbundling to be only a transitional step on the road to full fibre unbundling - something they want to see happen "as soon as technically and economically possible".

The Commission believes that virtual unbundling falls short of offering all the benefits provided by physical unbundling. The Commission also stressed that the virtual unbundling remedy is appropriate in light of the specific circumstances in the UK, suggesting that the same approach need not necessarily be expected to apply elsewhere. Digital Agenda Commissioner Neelie Kroes said,

*"In this specific instance, virtual unbundling seems the best option to safeguard competition and enable consumers to benefit from a wider range of services provided over next-generation fibre infrastructure. However, this interim solution is not a long-term alternative to physical fibre unbundling, which should be imposed as soon as possible."*

According to the Commission, a virtual unbundled local access product (VULA) should allow product differentiation and innovation similar to LLU and thus give access-seekers a sufficient degree of control, including quality of service, over the local connection to the end-user. However, it does not give alternative operators the same freedom to offer retail products as they could through a fully unbundled fibre line.

The Commission has stressed that telecoms regulators should, as a matter of principle, mandate unbundled access to the fibre loop irrespective of the network architecture used by the dominant operator. The Commission also confirmed that, contrary to Ofcom's proposal, prices for VULA should be cost-oriented. According to the EU regulatory framework, such prices can be adjusted to take into account investment risk, according to the specific contractual setting, in order to drive both competition and investment in NGAs.

The consultation on the proposals closed on 1 June 2010.

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<sup>15</sup><http://europa.eu/rapid/pressReleasesAction.do?reference=IP/10/654&format=HTML&aged=0&language=EN&guiLanguage=en>

## **4. THE WIDER EUROPEAN CONTEXT**

### **4.1 Summary**

Despite the existence of a common regulatory framework in Europe, its implementation by member states is patchy and inconsistent. This holds back Europe's overall performance. Those member states which have implemented remedies such as functional separation and mandatory wholesale access on the national incumbent operator tend to have the greatest degree of competition with a wide choice of services at lower prices than is typically found in those countries which have tended to shield the incumbent from the full effects of competition.

### **4.2 EU 2020 Strategy**

Since our previous report there has been ongoing debate as regards the best form of regulation to ensure that Europe's broadband provision does not lag behind other parts of the world. The European Commission's major policy announcement this year has been the launch (on 3<sup>rd</sup> March) of the EU 2020 Strategy for "smart, sustainable and inclusive growth". This is a broad economic strategy covering many areas of policy but broadband is an integral part of the strategy. The objective is to ensure universal broadband access by 2013 with all Europeans having access to speed in excess of 30 Mbps by 2020 and to have 50% or more of European households connected to services faster than 100 Mbps.

### **4.3 Digital Deficit Study**

As part of the policy debate on how best to achieve these objectives, the pro competition industry group ECTA commissioned a report by the respected consulting firm Analysys Mason. The brief was to examine the telecoms regulatory landscape in six EU countries, Belgium, Germany, Italy, Poland, Portugal and Spain as well as to produce a pan-European analysis of business services. The resulting "Digital Deficit Study"<sup>16</sup> broadly supports the conclusions of our own report for MTS Allstream.

Headline conclusions include:-

- Competition in the telecoms sector is a key driver for lower prices and substantially more attractive broadband speeds.
- The take-up rate of superfast broadband in Germany could double if networks were opened to competition.

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<sup>16</sup> <http://www.ectaportal.com/en/REPORTS/Europe-Digital-Deficit-Study/Europe-s-Digital-Deficit-Study/>

- Incumbent retail market shares are high, stable and even in some cases increasing.
- Dominant firms in Europe have engaged in a catalogue of potentially anti-competitive and discriminatory conduct.
- Competitive market entrants are struggling to make a return on their substantial investments while dominant firms continue to reap consistent profits.
- EU regulation has not had a negative impact on the financial performance of incumbents. According to the research incumbent EBIT margins have been maintained even whilst they have been making the significant investments required to build 'next generation' fibre networks.
- More competitive markets consistently deliver better prices for consumers and businesses - and in the case of broadband significantly higher speeds. Where material competition from 'unbundling' of the incumbent network exists typical consumers receive 8Mbps instead of 2Mbps. Equally, in the UK and elsewhere, the arrival of large-scale unbundling correlates with strong declines in the price of 8Mbps broadband.
- Many European consumers and businesses have a limited choice of supplier, and as a result are paying more than they should or are receiving sub-standard speeds or services. The report calculates that lower prices and higher volumes that could be generated from improved competition would be worth €25 billion per annum.

A previous study prepared for the Commission estimated that effective take-up of broadband across the EU27 would deliver an extra 1.1 million jobs and a GDP increase of €850 billion by 2015<sup>17</sup>. The Analysys report suggests these benefits may not be realised in full unless there is sufficient competition in the telecoms sector.

Looking to the future, the Digital Deficit Study found cause for concern with the roll out of next generation services in some countries. For example in Belgium where VDSL has been deployed, high speed services are not offered by the incumbent and the service costs €70 per month compared to just €20 in France (where similar speeds are provided over ADSL). This mirrors our earlier comparison of the provision of services in mainland Britain as compared with Northern Ireland.

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<sup>17</sup> [http://ec.europa.eu/information\\_society/eeurope/i2010/docs/benchmarking/final\\_report-micus-broadband\\_impact-short.pdf](http://ec.europa.eu/information_society/eeurope/i2010/docs/benchmarking/final_report-micus-broadband_impact-short.pdf)

#### 4.4 Regulatory Scorecard for 2009

On 1<sup>st</sup> June 2010 the pro competition group ECTA released the latest version of their widely respected “Regulatory Scorecard”. The report compares the regulatory environment of the electronic communications sector in 22 countries (19 EU Member States plus Norway, Switzerland and Turkey). The annual Scorecard is produced in consultation with National Regulatory Authorities and telecoms companies and it is widely accepted as an authoritative source of information on the state of telecoms regulation and competition in Europe.

This year’s results show that where non-discrimination is strongly enforced and competitors have access to bottleneck infrastructure at fair prices (for example the Netherlands, the UK and Denmark) residential and business customers get better services at lower prices and this in turn seems to drive higher levels of broadband usage. By contrast, market entrants in the Czech Republic and Bulgaria face the most difficult market conditions and lag behind EU average on broadband take-up.

Inconsistent availability of essential high-speed business connections makes the seamless connection of European multi-national corporations - large and small - very difficult, undermining competitiveness and increasing the cost of doing business across Europe. The European Commission’s recent Implementation Report<sup>18</sup> shows that competition in the overall European broadband market has stalled and investment has slowed, with some dominant firms having both increased their market share and reported strong financial results. This finding is supported by the ECTA scorecard.

Although the ECTA scorecard concludes that Europe’s competitive position is being damaged by inconsistency of regulation across the Union, the underlying finding is that promoting competition by means of remedies such as open access boosts growth.

For the first time the report highlights the importance of the regulation of ‘next generation’ fibre access networks but inconsistent regulation is holding some countries back from the sort of benefits being seen in the Netherlands and the UK. Current regulatory approaches range from explicit restrictions on access adopted in Germany and Spain at one end of the spectrum and lack of any regulatory action in a number of Member States, through to measures imposing mandatory fibre ‘unbundling’ allowing more choice for consumers in the Netherlands.

The consequences are illustrated by the EU’s market data published in the EU Competitiveness Report: the average price for a basic (4-8 Mbps) broadband connection is €17 per month in the Netherlands, €34 in Poland and €61 in Portugal. A high speed

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<sup>18</sup><http://europa.eu/rapid/pressReleasesAction.do?reference=IP/10/602&format=HTML&aged=0&language=EN&guiLanguage=en>

“triple play” product (internet, TV and telephone) costs €65 in the Netherlands, €83 in Germany and €105 in Spain.<sup>19</sup>

ECTA argues that the scorecard shows that consumers benefit from better telecoms services and higher investment levels in countries where the national regulator has strong powers and uses them. The Netherlands has long had a pro-active regulator and the incumbent, KPN, has embraced the open access model. As a result the country is the most well connected country in Europe with low prices, broad choice and high broadband speeds.

The ECTA scorecard rankings are supported by OECD data such as the following comparison of broadband takeup levels included in a presentation to analysts given by Dutch Regulator OPTA in February 2010.<sup>20</sup>

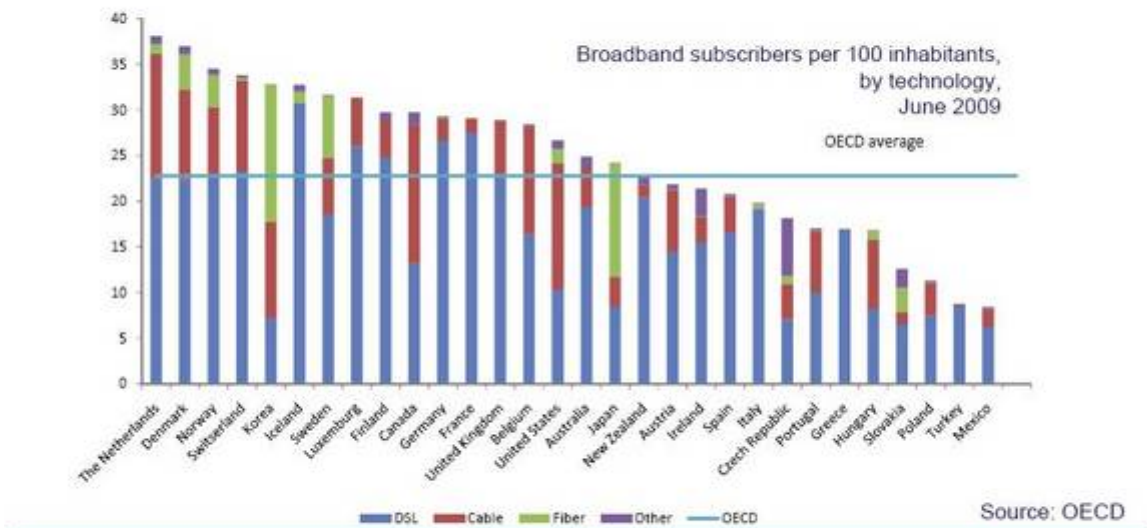
The OECD data does not take into account the average speed of the connections. So it shows that the US and Canada have high take-up rates but relatively poor average speeds. Japan is only just above the average penetration but the majority of connections have speeds in excess of 10Mbps.

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<sup>19</sup> BROADBAND INTERNET ACCESS COST (BIAC) report, Second half of 2009, Prices as at 1-15 October 2009, Median offer for 4-8 Mbps and Median offer for Bundle "Internet access+Tel+TV" Basket 20+Mbps.

<sup>20</sup> <http://www.opta.nl/en/download/pubcatie/?id=3131>

## Broadband: international comparison

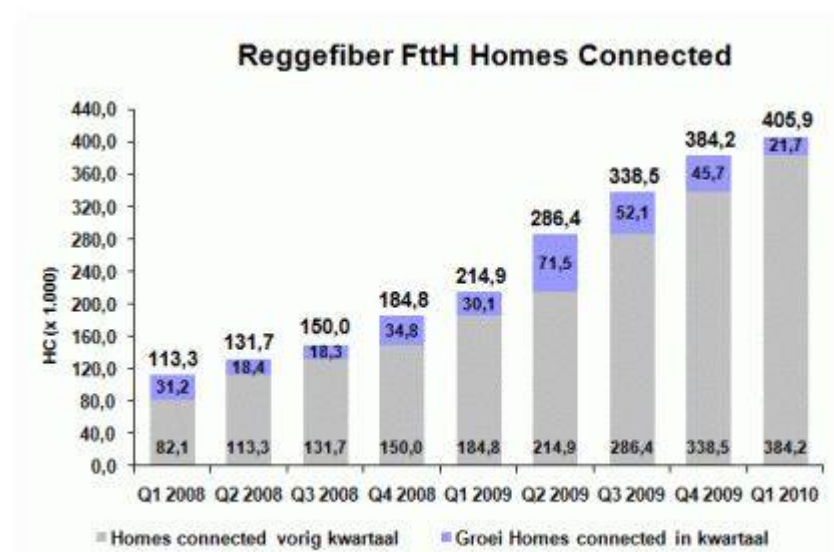
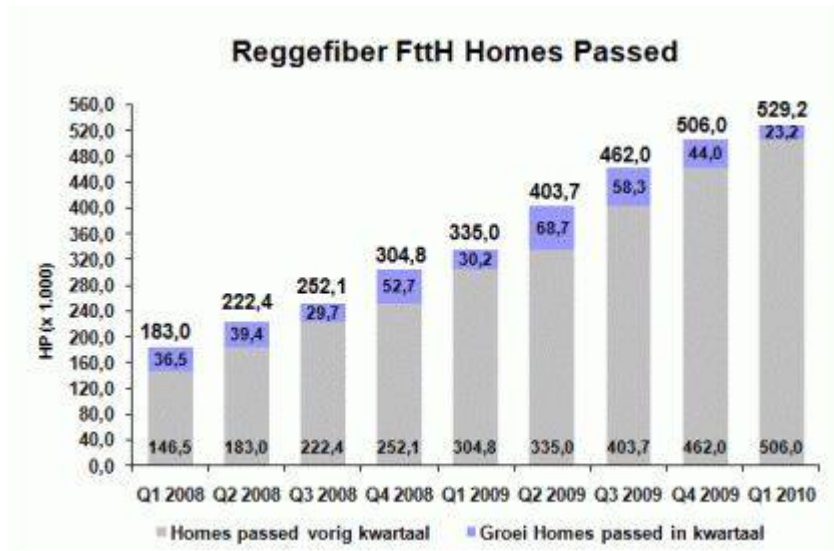


OPTA has also reported that the number of fibre to the home connections more than doubled during 2009, rising from 185,000 to 384,000.<sup>21</sup> This is an encouraging level of take-up since OPTA reports that fibre is available at present to around 506,000 homes<sup>22</sup>. Fibre deployment in the Netherlands is particularly interesting since it is not being carried out by the incumbent, KPN, but rather is being deployed on an open access basis by a company known as Reggefiber. This company was established in 2005 by an investment company (Reggeborgh). In May 2008 Reggefiber and KPN established a joint venture to roll out fibre throughout the Netherlands. KPN bought 41% of the shares of Reggefiber. KPN is one of the service providers using the Reggefiber network to connect to its customers. Looked at on a nationwide basis the numbers may appear low, but looked at on a regional basis according to the areas being targeted by Reggefiber, they appear more impressive.<sup>23</sup>

<sup>21</sup> <http://www.opta.nl/en/download/publicatie/?id=3193>

<sup>22</sup> <http://www.opta.nl/en/download/publicatie/?id=3207>

<sup>23</sup> <http://www.reggefiber.com/results.html>



#### 4.5 German experience highlights drawbacks of less effective regulation

The consequences of less robust regulation are clearly illustrated by looking at the German example. Germany has slipped down two of the leading market indices, the ECTA Regulatory Scorecard and Professor Leonard Wavermann's Connectivity Scorecard. Wavermann describes Germany as having lost ground and delivered a "middling performance" ranking 13<sup>th</sup> out of 25 countries<sup>24</sup>. Germany has slipped from 12<sup>th</sup>

<sup>24</sup> <http://www.connectivityscorecard.org/images/uploads/media/TheConnectivityReport2010.pdf>

place in the 2008 ECTA Scorecard to 15th in 2010. Deutsche Telekom's (DT) broadband retail market share is just above the EU average at 46% according to the Commission's most recent, 15th Implementation Report. More worryingly DT has been re-gaining market share in recent months due largely to DT's VDSL network being protected from competition. Previously Germany had enacted the now infamous 'regulatory holiday' law protecting the former monopolist from competition and restricting the regulator's discretion to regulate. This was challenged by the European Commission but had to go as far as the European Court of Justice to be finally annulled as being in breach of EU law.

Despite the successful repeal of the regulatory holiday law, problems remain in Germany since a proper non-discrimination regime is entirely missing, partly because of restricted NRA powers. The German regulator is the only one in the EU which lacks the power to impose full non-discrimination (equivalence of inputs) obligations. In terms of NGA the regulator lacks the power to force DT to share details of its fibre deployment plans, something which is essential to prepare suitable NGA regulations and to allow competitors to invest efficiently in NGA. The regulator is further weakened by the absence of full powers to fine the dominant operator for breaches of its obligations which harm competition since it does not have the power to impose periodic penalty payments.

Germany is the only EU member where the dominant operator is not subject to any form of accounting transparency. It is impossible for a rival to verify whether they have been discriminated against or whether DT has abused its dominance and squeezed their profit margins by overcharging. DT of course was previously found guilty by the European Commission of engaging in margin squeeze against its competitors and distorting competition to the detriment of consumers. The ECTA study refers to an estimate by the respected firm WIK Consult that German competitors have been overcharged by €2 billion by DT in recent years.

Whilst Germany previously benefitted from early measures to open DT's copper network to competition the country is now paying a high price for the lack of access regulation on NGA. DT has a VDSL network and has been speaking about plans to upgrade its bottleneck network to fibre, but consumer choice is limited and prices are high for advanced broadband products because DT is sheltered from competition.

Yet even in Germany, the tide is now turning against protectionist regulation. In December 2009 the regulator BNetzA had ordered Deutsche Telekom (DT) to provide rivals with access to "access infrastructure" including ducts and "multi function street cabinets". On 26<sup>th</sup> March 2010 the regulator decided<sup>25</sup> to implement significantly lower charges for that access than DT had been hoping for.

BNetzA President Matthias Kurth said,

*"The charges now determined provide clarity for broadband expansion and allow for the co-investments requested by all parties. These decisions are therefore an important milestone for the implementation of the Federal government's broadband initiative. The charges set out allow competitors access to Deutsche Telekom AG's connection infrastructure at fair prices. By using replacement costs as the basis, the charges provide incentives for efficient investments in a modern broadband infrastructure. In addition they allow Deutsche Telekom AG an adequate secondary use of its existing infrastructure."*

The existence of a regulatory holiday did not in fact cause DT to increase investment in next generation network, as some would suggest it should. In fact their investment dropped while they were sheltered from the full effects of competition. Since the regulator granted DT protection from competition on its VDSL network on 23rd February 2007<sup>26</sup> Capital Expenditure fell below the 2006 level.<sup>27</sup>

Year	CAPEX
2006	€3,250
2007	€2,805
2008	€3,134

DT's rivals have promised to deliver greater competition if given fair access to DT's infrastructure and their arguments seem now to be having some impact. It seems that the regulator now hopes that by allowing alternative network operators to install their own DSLAMs into DT's multifunction street cabinets and allowing them to install fibre in DT's ducts, the German Government's broadband expansion targets can be met. In a clear warning to DT not to challenge the ruling Herr Kurth said,

*"Both sides have repeatedly asserted that they wish to advance the expansion of broadband in Germany in a timely manner. Now that all prerequisites are clearly spelled out, I expect both Deutsche Telekom AG and the competitors to implement the recent decisions made by us without delay in order to serve the interests of the consumers. It would be regrettable if the Federal government's ambitious targets for broadband expansion were to be delayed unnecessarily by court action."*

<sup>25</sup> Federal Network Agency's Newsletter - TELECOMMUNICATION - Federal Network Agency sets out charges for access to connection infrastructure of Deutsche Telekom AG 26 March 2010

<sup>26</sup> <http://www.t-regs.com/content/view/376/1/>

#### 4.6 EU 15th progress report on implementation of a single market

Published on 27<sup>th</sup> May, this report is the EU's annual review of the market in 27 member states. The main thrust of this year's report was criticism of the slow progress to a single EU market. This situation is partly due to different regulatory approaches across the EU. Some telecoms regulators are slower than others to implement or enforce EU rules. For example, in wholesale broadband markets, some national regulators have implemented regulations for the fibre networks of incumbent operators, while others confine regulation to copper-based networks.

The implementation report found that despite the economic downturn in 2008-09 Europe's use of high-speed internet has continued to grow. The average EU take-up of fixed broadband per capita reached 24.8% in January 2010 - more than 123 million lines. But the picture varies hugely from country to country. What does seem clear is that countries that have implemented wholesale access remedies see greater take-up of services. For example Denmark and The Netherlands are world leaders with nearly 40% of the population now using broadband.

The European Commission also found that competition, which had been improved by the regulation of wholesale inputs, is now stagnating or even deteriorating in many parts of the European DSL market. The reasons for this are clear to the Commission:-

*"This is partly due to the lack of effective enforcement of regulatory remedies. In some cases, certain access products were made available only recently, for example naked DSL in the Czech Republic, Spain and Cyprus. The relevant reference offers for bitstream or LLU products, such as for ADSL or VDSL, are sometimes delayed (e.g. in Italy, Germany, Belgium, Bulgaria, Luxembourg, Slovakia where the bitstream regulated product only became available in 2009) and operators in some cases need to negotiate the concrete access conditions on a commercial basis, leading to significant disputes and lack of legal certainty"*<sup>28</sup>.

Although there has been a consistent pattern of declining market share for incumbents in recent years, that trend has slowed, and in some cases been reversed. The market share of incumbent operators is now stabilising around 45% of the broadband market but in some cases the incumbents are regaining market share. BT has the lowest incumbent market share of all EU Member States after Romania. However, in 2009, BT gained some market share, a pattern followed in other countries such as Denmark, Latvia, Austria, Finland Belgium, Bulgaria, Czech Republic, Malta, Portugal and Romania. The range of

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<sup>27</sup> Deutsche Telekom annual reports 2006, 2007, 2008

<sup>28</sup> [http://ec.europa.eu/information\\_society/policy/ecom/doc/implementation\\_enforcement/annualreports/15threport/15report\\_part1.pdf](http://ec.europa.eu/information_society/policy/ecom/doc/implementation_enforcement/annualreports/15threport/15report_part1.pdf) page 49

countries where incumbents are gaining market share suggests that factors other than the type of regulatory remedies employed are responsible.

In terms of speed and price of services the Implementation Report found that there was a continuing migration towards faster services and a drop in prices paid by consumers. The fastest category of lines (10 Mbps and above) increased its share of the broadband market from 14% of all broadband in January 2009 to 23% in January 2010.

The increased take-up follows a doubling in the number of high speed products offered (in this case defined as being services offering speeds in excess of 20 Mbps). Products with speeds greater than 20 Mbps represent 33% of all products commercialised by broadband operators. Lines of speeds between 8 and 20 Mbps follow with 23%. Offerings with speeds between 2 and 8 Mbps, the most popular services with customers, only account for 23% of the available broadband products.

The Commission also concludes that in relation to current generation broadband services, the market is now maturing and stabilising. Local loop unbundling continues to record positive growth and has become the main form of wholesale access for new entrants with 73.7% of DSL lines, up from 69.2% in January 2009.

Countering claims that EU regulation leads to less investment by new entrants, the report also reveals that the share of lines based on resale, which represents a type of access for low-investment intensive new entrants, has shrunk by 3.5% in the last 12 months. In almost all countries LLU or bitstream are the predominant means of access. However the EU average numbers disguise a wide range of wholesale regulatory approaches adopted by member countries.

Consistent with our own findings, the Commission reports that:-

*“effective sector regulation has been a key factor in driving competition, in particular in those countries where DSL is a predominant technology. Sector regulation has fostered competition and growth in the DSL market and consequently a significant lift in the broadband market.”<sup>29</sup>*

The Commission is keen to see consistent application of telecoms regulation in order to encourage the roll-out of investment-intensive infrastructure such as Next Generation Access (NGA) networks. The EU Commission is currently working in a Recommendation on NGA networks which will be formally adopted in the next few months.

In the meantime a clear political signal of the future direction of EU policy was given in a Ministerial declaration in Granada on 24<sup>th</sup> April 2010. This stated that the member states

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[http://ec.europa.eu/information\\_society/policy/ecomm/doc/implementation\\_enforcement/annualreports/15threport/15report\\_part1.pdf](http://ec.europa.eu/information_society/policy/ecomm/doc/implementation_enforcement/annualreports/15threport/15report_part1.pdf)

had all agreed that there was a need to “provide a strong impulse to the roll out of competitive next generation high speed networks through promotion of competition between broadband providers and by implementing a predictable regulatory regime for the promotion of efficient investment in high speed broadband infrastructure and related services, based on swift implementation of the revised EU e-communication services framework.”<sup>30</sup>

#### 4.7 European Commission’s NGA Recommendation

On 28<sup>th</sup> May 2010 the new Body of European Regulators (BEREC) adopted its first Opinion<sup>31</sup> at a Plenary meeting in Helsinki. This gives the reaction of regulators across the EU to the latest, unpublished, draft of the European Commission’s NGA recommendation. The Commission is expected to adopt the NGA recommendation after the summer break. This Opinion is important because in framing their final recommendation the Commission must take “utmost account” of the BEREC opinion. BEREC’s view is generally positive with some suggestions for ways in which the recommendation might be improved. The regulators share the view that enhancing legal certainty and promoting investment, competition and innovation in the market for broadband services, in particular in the transition to NGA networks is vital for Europe. In order to do this they endorse the Commission view that the ladder of investment principle should be maintained and should be reflected in the remedies imposed by member states.

The draft Staff Working Document on which BEREC has commented confirms the Commission’s previous approach to NGA regulation (contained in the revised draft NGA Recommendation of July 2009). The four key principles proposed by the Commission are:

- i. the principle of facilitating market entry and competition by means of the ladder of investment principle and a full range of wholesale access products at the regulator's disposal;
- ii. the principle that for specific physical bottlenecks symmetric access obligations imposed on all undertakings could complement asymmetric obligations;
- iii. the principle that investment risk should be rewarded by means of a risk premium incorporated in the regulated costs of capital, and by means of selective risk-sharing pricing mechanisms;
- iv. the principle that certain cooperative arrangements resulting in increased investment in NGAs and competition are desirable.

Although BEREC has highlighted a number of areas where there is room for improvement, BEREC concludes that

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<sup>30</sup> [http://www.eu2010.es/export/sites/presidencia/comun/descargas/Ministerios/en\\_declaracion\\_granada.pdf](http://www.eu2010.es/export/sites/presidencia/comun/descargas/Ministerios/en_declaracion_granada.pdf)

<sup>31</sup> [http://berec.europa.eu/doc/bor10\\_25\\_recommendationNGA.pdf](http://berec.europa.eu/doc/bor10_25_recommendationNGA.pdf)

*“the NGA Recommendation is a timely step to ensure the roll-out and deployment of NGA across Europe while recognising that Member States are at different stages of NGA roll-out and deployment.”*

#### **4.8 CONCLUSIONS FROM EU**

Despite problems in some member states of the EU, and the resulting concern about the inconsistency of regulation and availability and take-up of services across the Union, the fact remains that in countries such as the Netherlands, the UK and others that mandate wholesale access, particularly in relation to fibre networks, the benefits are greater choice, higher speeds and greater take-up of broadband.

## 5 AUSTRALIA AND NEW ZEALAND

### 5.1 Australia

As set out in our previous report, we believe that Australia provides a very useful comparison for Canada since Australia has a similar population size and density to that of Canada<sup>32</sup> and has been considering the use of functional separation alongside issues relating to next generation access investment. The Australian Government has identified Telstra's vertical and horizontal integration as "the primary cause of competitive problems in Australia's telecommunications industry"<sup>33</sup>.

The developments in Australia in the period 1 February 2010 to [1 June 2010] have been more concerned with the practical implementation of the national broadband strategy than with policy decisions about how or if the Government should fund superfast broadband, although there is still plenty of political wrangling over aspects of the Government's policy and the future role of Telstra is far from clear.

As discussed in our last report, the Australian Government committed in April 2009 to the roll-out a National Broadband Network (NBN) - an FTTH network to connect 90 per cent of the Australian population at a speed of up to 100 Mbit/s, with rural areas to be serviced by 12 Mbit/s connections provided using satellite and wireless technologies. The estimated Aus\$43 billion roll-out costs are to be funded initially by Government with private investors contributing once the network is built (the Government has committed to selling its stake within 5 years of the network being built<sup>34</sup>). The planned network is to be built and managed by NBN Co - a company which has already been set up.

NBN Co was originally proposed as a wholesale company that would provide network services to competing retail service providers:

*"NBN Co is building the infrastructure that will enable innovation by retail service providers - our customers. Through the delivery of an open access, wholesale-only broadband network we will help to ensure that competition delivers benefits to consumers."<sup>35</sup>*

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<sup>32</sup> UN population density statistics:

Country	Surface area km <sup>2</sup>	Population 2007	Density pop/km <sup>2</sup>
Australia	7,692,024	21,072,000	3
Canada	9,984,670	32,976,000	3
UK	242,900	60,975,000	251

<sup>33</sup> Australian Government Discussion Paper 'National Broadband Network: Regulatory Reform for 21<sup>st</sup> Century Broadband' April 2009

<sup>34</sup> <http://www.totaltele.com/view.aspx?ID=453409>

<sup>35</sup> <http://www.nbnco.com.au/our-services>

However, Telstra picked up on suggestions in a consultation document on the proposed legislation that NBN might be able to become a “government funded reseller” and sell to government bodies direct.<sup>36</sup> The overriding principle set out in the legislation however is that NBN Co must operate as a wholesaler only. Telstra’s concerns stem from a clause which states that the Minister can bring forward legislative instruments to dis-apply this requirement from a particular service. The consultation has now closed and the Australian Government is considering the responses received and therefore the proposals have not yet been implemented.

The design and build of the network has commenced with five first release sites on the mainland recently announced and a tender process underway to identify the location-specific detailed design developers. The roll-out is further ahead on Tasmania.<sup>37</sup> The industry has also been developing standards, guidelines and processes for the delivery of wholesale and retail services in the NBN environment. The Commsalliance website<sup>38</sup> contains detailed documents related to seven work-streams.

The NBN Co approach has recently been validated by a joint KPMG/McKinsey report.<sup>39</sup> Although there is no clarity as yet on how NBN Co and Telstra will interact, the report suggested that, even without using Telstra’s existing infrastructure, the NBN was feasible, although obviously a deal whereby NBN could use Telstra’s assets would make the roll-out more cost-effective. The report concluded that NBN Co could create a viable high-speed broadband network within the Government’s initial Aus\$43 billion and there were opportunities to significantly reduce that cost. It also suggested the Government should retain full ownership of the NBN until roll-out was complete to ensure policy objectives, including competition objectives, were met but concluded that NBN Co could build a strong and financially viable business case, could be earnings positive by year six and should be able to pay significant returns to equity holders following completion of rollout. It suggested the Government could expect a return on its equity investment sufficient to fully cover its cost of funds.

The NBN Co proposal is not without its critics however and, even in the light of the KPMG/McKinsey report, the opposition party have been reported as considering the plan “reckless and irresponsible”.<sup>40</sup> They would apparently scrap the project if elected and plan to oppose the telecoms reform legislation package which would provide for the forcible functional separation of Telstra if it fails to submit appropriate proposals for structural separation. The next Federal election must be held on or before 16 April 2011. The legislation also proposes curbs on Telstra’s expansion into mobile services via a ban on it

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<sup>36</sup> <http://www.telstra.com.au/abouttelstra/download/document/tls724-shareholder-letter.pdf>

<sup>37</sup> See <http://www.nbntasmania.com.au/> for details.

<sup>38</sup> <http://www.commsalliance.com.au/Activities/nbn>

<sup>39</sup> A link to the report, which was released on 6 May 2010, can be found at [www.minister.dbcde.gov.au/media/media\\_releases/2010/040](http://www.minister.dbcde.gov.au/media/media_releases/2010/040).

<sup>40</sup> [www.itwire.com/it-policy-news/regulation/38873-opposition-would-cancel-nbn-despite-report](http://www.itwire.com/it-policy-news/regulation/38873-opposition-would-cancel-nbn-despite-report).

acquiring 4G spectrum and a possible requirement for it to sell its pay television interests. Consideration of the telecoms reform package has been delayed in the upper house and reports suggest its introduction to the Senate could be further delayed beyond May because of budget bills that require debate.<sup>41</sup>

It has been suggested that the proposed structural (or enforced functional) separation of Telstra is designed to remove an effective network competitor from the Government-owned NBN.<sup>42</sup> It is certainly true that, as negotiations over how Telstra and NBN will work together drag on and with the telecoms reform legislation package held up, Telstra is trialling Fibre to the Premises with speeds of 100 Mbit/s to around 1500 homes in Point Cook and offering bundled services including internet, digital free-to-air TV, FOXTEL from Telstra and multiple HomeLine services from one cable.<sup>43</sup> It has also recently won awards for its efforts to link communities to its high-speed backbone services.<sup>44</sup>

Be that as it may, an ABC news article of 6 May 2010<sup>45</sup> suggests Telstra risks being sidelined by NBN Co and that Communications Minister Stephen Conroy was not prepared for the negotiations to continue indefinitely. It remains to be seen whether Telstra will structurally separate on a voluntary basis or will force the government to undertake a compulsory functional separation.

## 5.2 New Zealand

As summarised in our previous report, New Zealand's experience stands in stark contrast to that of Australia. Whereas the Australian government has identified the incumbent's vertical and horizontal integration as a barrier to competition but has not yet tackled that problem, in New Zealand action has been taken and next generation rollout is already underway. Telecom New Zealand has already been functionally separated into a network business (Chorus), a wholesale business (Telecom Wholesale) and a retail business (Telecom Retail and Gen-I). As part of the separation process which culminated in March 2008, Telecom New Zealand agreed to certain milestones designed to upgrade its network and roll out faster broadband services. As Paul Reynolds, CEO, said at the time:

*“A central feature of the Undertakings, our commitment to the accelerated rollout of a world-class fast broadband network, is already under-way. Installation by our*

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<sup>41</sup> <http://www.businessweek.com/news/2010-03-18/telstra-split-vote-delayed-for-at-least-two-months-update1-.html>

<sup>42</sup> See, e.g., <http://www.abc.net.au/news/stories/2010/03/09/2841247.htm>.

<sup>43</sup> <http://www.telstra.com.au/abouttelstra/media-centre/announcements/point-cooks-fibre-broadband-network-ready-.xml>

<sup>44</sup> In March it won an ATUG award ('Best Communication Initiative Regional) for its Arnhem Land fibre project, a Aus\$34 million project which received funding from the Northern Territory Government, Rio Tinto Alcan and the Northern Land Council (<http://www.telstra.com.au/abouttelstra/media-centre/announcements/telstra-fibre-project-win.xml>).

<sup>45</sup> [www.abc.net.au/news/stories/2010/05/06/2892504.htm](http://www.abc.net.au/news/stories/2010/05/06/2892504.htm).

*Chorus networks business of the 3,600 roadside cabinets that are the building blocks of this network is happening now.*<sup>46</sup>

The intention was for at least 80 per cent of PSTN lines to be high speed broadband capable by 2012.<sup>47</sup> On 3 May 2010, it announced it had reached the half-way point. Chorus CEO Mark Ratcliffe commented, as the 1,800<sup>th</sup> fibre-fed cabinet was turned on:

*"Bringing broadband equipment closer to people means they can experience faster broadband speeds, so for two years now Chorus has been busy extending the fibre network into neighbourhoods around New Zealand. In that time we've laid 1,500km of new fibre just for this project and connected 340,000 customers to our fibre-fed cabinets, so things are really humming along".*<sup>48</sup>

This is clearly having an impact on the penetration of broadband services. A recent survey by the Commerce Commission into competition in the telecoms market showed that:

*"Alternative providers of broadband services on Telecom's network have increased their market share from 24 per cent to 37 per cent in the last three years. Over the same period, broadband uptake has doubled and New Zealand has improved its position when compared with 30 other OECD countries from 22 in 2006 to 18 by 2009. Uptake of broadband is now at or around the OECD average and broadband speed availability and quality have improved significantly."*<sup>49</sup>

The Commerce Commission has also confirmed since our last report was written that, although Telecom Wholesale would have to provide its unbundled bitstream access service (which is used to provide regulated broadband services) on regulated terms (including pricing obligations) if it were to use VDSL technology, Telecom Wholesale can still use VDSL technology to provide higher quality services on a commercial basis provided they are delivered on an equivalence of inputs basis.<sup>50</sup> This is designed to encourage innovation in the broadband market and provide incentives for investment in new DSL technologies.

As our last report described, the New Zealand Government has also announced a national, partly publicly funded ultra-fast broadband (UFB) network. The Government has recognised that regardless of the regulatory model adopted, the cost of providing

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<sup>46</sup> [http://www.telecom-media.co.nz/releases\\_detail.asp?id=3537&page=5&pagesize=10&filtertext=&m1=1&y1=2008&m2=12&y2=2008&filter=filter](http://www.telecom-media.co.nz/releases_detail.asp?id=3537&page=5&pagesize=10&filtertext=&m1=1&y1=2008&m2=12&y2=2008&filter=filter)

<sup>47</sup> <http://www.comcom.govt.nz/operational-separation/>

<sup>48</sup> <http://www.chorus.co.nz/n699.html>

<sup>49</sup> <http://www.comcom.govt.nz/telecommunications-media-releases/detail/2010/2009-annual-monitoring-report-shows-increasing-competition-in-telecommunications-markets>

<sup>50</sup> <http://www.comcom.govt.nz/telecommunications-media-releases/detail/2010/vdsl-decision-confirmed-by-commerce-commission>

nationwide high speed broadband is likely to be too high for the private sector alone. In order to deliver the political aspiration of nationwide coverage, Government funding will be required. Open access will be fundamental to the project in order to ensure that once the network is built, competition at the retail level will deliver benefits for end users. The ultra-fast broadband initiative means the New Zealand Government will contribute half the cost of building an open access FTTH network to 75 per cent of the population via a publicly owned company, Crown Fibre Investment Co. It has identified 33 regions and requested companies to tender to become a Local Fibre Company (LFC) in one or some of those regions. LFCs will not themselves provide retail services but companies that do so may be involved, provided that they do not have majority voting control on the board of the LFC.

A tender for the UFB initiative was put out in 2009 and responses were required by the end of January 2010. Eighteen companies were reported to have responded, including two competitive national solutions and all thirty-three areas received at least one proposal.<sup>51</sup> Partners are expected to be finalized by June<sup>52</sup> and the contenders for a national solution are reported to include Axia and a consortium of nineteen electricity and fibre companies, known as New Zealand Regional Fibre Group (NZRFG).<sup>53</sup>

NZRFG's strengths are seen as being that it includes regionally based electricity companies who are familiar with regulated environments and generally have strong community support, it includes companies with their own power poles and underground ducts to lay cable and it has no retail telecoms interests.

Axia is reported to be proposing to build a fibre grid across the country as it has done in Alberta and France and to wholesale fibre services to retail companies offering voice, data, video, cloud computing and other next generation network services<sup>54</sup>. This grid could also provide backhaul for wireless solutions including 3G, 4G and WiMax. If successful it would use the government subsidy and look to obtain funding from the capital markets. Axia is also proposing to ask the government to commit its own traffic to the network to provide base revenues and in return operate as a regulated monopoly with no geographic differences in pricing.<sup>54</sup> Axia announced in May that it is talking to Vodafone about a possible link-up.<sup>55</sup> Vodafone is planning to provide retail services but under the rules it could take a stake of up to 49%.

In addition, Telecom New Zealand has recently announced that it is considering functional

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<sup>51</sup> <http://www.voxy.co.nz/business/crown-fibre-holdings-receives-33-proposals-ultra-fast-broadband-roll-out/5/36936>

<sup>52</sup> <http://www.techday.co.nz/telecommunicationsreview/news/fibre-2010-did-david-skilling-seal-choruss-fa/16499/>

<sup>53</sup> <http://www.techday.co.nz/telecommunicationsreview/news/fibre-2010-telecoms-rival/16522/>

<sup>54</sup> <http://www.techday.co.nz/telecommunicationsreview/news/fibre-2010-the-canadian-way/16535/>

<sup>55</sup> <http://www.totaltele.com/view.aspx?ID=455323>

separation to enable Chorus to become an LFC. As a sign of its commitment to taking part in the UFB process, the CEO of Chorus, Mark Ratcliffe, has temporarily stood down to work full-time on the bid. In a press release of 25 May 2010,<sup>56</sup> Paul Reynolds, the CEO, is reported as saying:

*“The Government’s UFB initiative will fundamentally reshape the structure of the entire telecommunications industry in New Zealand and Telecom is therefore undertaking a thorough assessment of the merits of structural separation. In making a thorough assessment of structural separation we need to have a detailed understanding of the regulatory environment, and this warrants detailed discussion and analysis with Government before any decisions regarding its viability can be made”.*

Simultaneously, Telecom New Zealand asked the Government to consider amendments to its functional separation undertakings to avoid the need to “lock Telecom, the industry and the Government into some choices which should be considered as part of the UFB initiative and the potential structural separation of Telecom”.

The proposed changes are to: suspend the forced bulk migration of existing broadband customers onto a new copper-based broadband service, although this new broadband service will still be provided to all new customers; remove the requirement for Telecom to migrate 17,000 customers onto a new VoIP over copper service by the end of this year; and remove the requirement for Telecom to build a new set of wholesale systems that are not consistent with the industry structure implied by UFB. At the time of writing, it was unclear how these requests would be received by the Government although Steven Joyce said he was “conscious of the importance of certainty around the issues raised and will expedite Telecom’s request through the usual process with an open mind.”<sup>57</sup>

A call for expressions of interest in the rural broadband initiative has also been published since our last report was prepared<sup>58</sup> and interest is reported to be high with nine substantial expressions of interest covering the entire country.<sup>59</sup> Plans for this NZ\$300 million initiative were finalized in March<sup>60</sup> and it aims to ensure that 97% of schools have fibre connections enabling speeds of 100 Mbps and 97% of rural households have access to broadband with speeds of at least 5 Mbps within 6 years. The cost will be met in part by a direct government grant of NZ\$48 million and in part by a NZ\$252 million contribution over six years from a new Telecommunications Development Levy introduced as part of a

<sup>56</sup> <http://phx.corporate-ir.net/External.File?item=UGFyZW50SUQ9NDc0ODh8Q2hpbGRJRD0tMXxUeXBIPtM=&t=1>

<sup>57</sup> <http://www.beehive.govt.nz/lease/minister+telecom+announcement>

<sup>58</sup> <http://www.beehive.govt.nz/release/call+expressions+interest+rural+broadband+initiative+0>

<sup>59</sup> <http://www.beehive.govt.nz/release/strong+support+rural+broadband+initiative>

<sup>60</sup> <http://www.beehive.govt.nz/release/rural+telecommunications+plans+finalised>

reform of the funding of the TSO. The government is not ruling out participation from the UFB LFCs.

### 5.3 Conclusions from Australia and New Zealand

Governments around the world are grappling with the problem of how best to support the roll out of super-fast broadband. The question of whether and how best Governments might intervene is not a question that we seek to address in this paper. However, most Governments seek to ensure that their citizens reap the benefits of full competition at the retail level in terms of diverse service offerings and affordable pricing. They typically do so either by creating suitable regulatory structures to encourage private investment in new networks or by using public money to fund new infrastructure to be used on an open access basis, or a combination of the two.

Whether to encourage network or service competition is an issue that has been discussed by regulators for years. Australia and New Zealand have both chosen to inject public finances into a separate entity that will build and manage a fibre network to bring high-speed broadband to homes across their respective countries via an open access model. However, there are differences in approach, stemming largely from the position of the incumbent.

The New Zealand experience is interesting. Having put in place a regulatory structure that encouraged the market to deliver NGA, the NZ Government has nevertheless decided to invest public money in a FTTH solution and a rural broadband initiative. It is a truism that illustrates that even the best regulatory regime cannot of itself guarantee that the market will deliver **universal** high-speed broadband coverage. (It is also worth considering that even governments may not always invest efficiently.) As described above, Telecom New Zealand (via Chorus) is reported to be considering participating in the Government scheme. The structure of the regulatory regime is such that Telecom New Zealand is not forced or precluded from so doing. However, there are restrictions on retail operators being majority owners of LFCs. Response to the Government tenders has been positive and the Government has other options. In the meantime Chorus is upgrading its network.

While Telecom New Zealand is already functionally separate, Telstra has been left as a vertically integrated operator. The Australian Government is now seeking to address that by requiring Telstra to participate in the NBN or be required to functionally separate. The negotiations are dragging, with the price for the copper network reportedly being a sticking point,<sup>61</sup> and the legislation is also delayed. NBN is advancing plans for roll-out but how or if Telstra will participate is still unclear.

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<sup>61</sup> <http://www.theaustralian.com.au/business/opinion/telstra-desperate-for-nbn-deal-but-haunted-by-price-fears/story-e6frg9if-1225844010802>