

The UK experience of functional separation, equivalence and NGA

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Functional Separation: background and rationale

- In the 2005 Telecoms Strategic Review, we found:
 - Mesh of conflicting and restrictive regulation
 - Fragmented industry base
 - No equality of access to bottlenecks (e.g. access and backhaul networks)
- Customers increasingly demanding choice and innovation - best driven by competing infrastructure providers (i.e. unbundlers + cable)
- Need for investment in emerging technology and new platforms by competing scale operators alongside BT for UK communications sector to remain competitive

Decision to go down the functional separation route

Options consulted on

- **1. Full deregulation**
 - Reliance on EC/UK competition law to resolve issues
 - Option considered unviable by most given BT's market power for access bottlenecks
- **2. Enterprise Act investigation**
 - Investigation under UK antitrust law that may lead to a referral to the Competition Commission, and could subsequently result in the structural separation of BT
- **3. Real equality of access**
 - Product level equivalence and behavioural and organisational change by BT



Why Option 3?

- **Support** from **most** stakeholders
- **Flexibility** – enables boundary issues to be revisited over the medium to long term when significant changes occur
- Process for Option 2 would be **long, fraught** and **uncertain**
- Structural separation carries more **inefficiencies** associated with the loss of vertical integration

Equality of Access

Product-level equivalence

- Equivalence of inputs – BT use same wholesale products (price, systems, product development as others)
- **Applied to:**
 - certain existing products: Wholesale Line Rental (WLR), Local Loop Unbundling (LLU), Backhaul Ethernet Service (BES), IPStream
 - certain future access/backhaul products
 - products using BT's NGN / 21CN network

Organisational change by BT

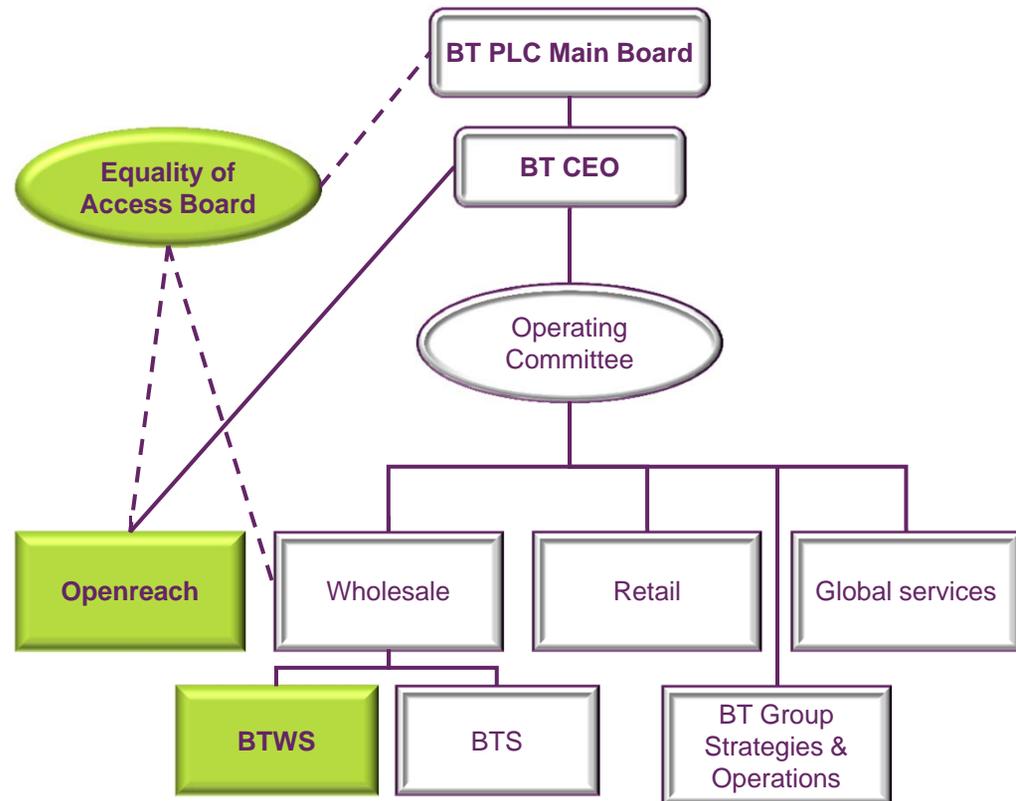
- Operational separation of unit providing bottleneck products so that incentives to treat all operators including BT equally
- **Openreach:**
 - local access and backhaul
 - separate accounts, location, systems, Long Term Incentive Plan (LTIP)
 - brand
 - Information barriers
 - independence
- Boundary around product management groups in BT Wholesale reflecting other bottlenecks

To note - Focus of 2005 Undertakings was predominantly on copper-based and business Ethernet products – reflecting market trends at the time.

BT's Undertakings led to a new structure within BT

Key changes:

- Creation of Openreach, a new ring-fenced upstream division
- New governance rules within BT Wholesale to separate SMP and non SMP activities
- Creation of Equality of Access Board supported by Equality of Access Office with role of monitoring, reporting and advising BT on BT's compliance with its Undertakings
- Creation of OTA, i.e. Office of Telecom Adjudicators to facilitate swift implementation of processes.
www.offta.org.uk



■ New organisational units within BT — Management reporting - - - Compliance reporting

Stimulation of unbundling

Fully and partially unbundled lines



Source: Ofcom Communications Market Report 2013

Impact on market structure

Proportion of unbundled exchanges and connected premises



Source: Ofcom Communications Market Report 2013

Challenges faced in implementation of the Undertakings

Key challenges in the implementation of the Undertakings since inception

- Concerns about service quality in some areas
- Some products delivered late or to a lower specification than originally anticipated
- Openreach's approach to consultation needed improvement
- Criticism that Openreach is insufficiently commercial and too compliance focused
- Industry uncertainty over BT's NGN products / plans causing concern
- Information systems separation has proven extremely challenging
- Issues of flexibility



Implications

- There has been some need for further Ofcom intervention:
 - new approach for Openreach service level agreements and compensation
- ...and some new Undertakings commitments sought from BT on:
 - process for space and power allocation
 - NGN consultation and advance notification
 - Prioritisation of product development requirements
- ...but also more flexibility and scope for cost savings given to BT through concessions on:
 - Timing and approach to systems separation
 - NGA supply arrangements

Some lessons from UK experience to date

- Functional separation (FS) – along with other important regulatory changes – has secured substantial improvements in the overall performance of the UK fixed telecoms market for consumers and businesses
- It has also allowed significant deregulation of markets (including all retail markets)
- The belief that FS has held back investment in the UK market is misconceived
- The Undertakings have needed to evolve as the wholesale market gravitates to NGA products
- In other areas, the Undertakings have required modification and revision, but the basic principles remain sound
- FS complements rather than replaces other SMP regulation under the Framework. Properly applied it can make the SMP remedies work much more effectively.
- UK culture of compliance critical to the implementation of the Undertakings

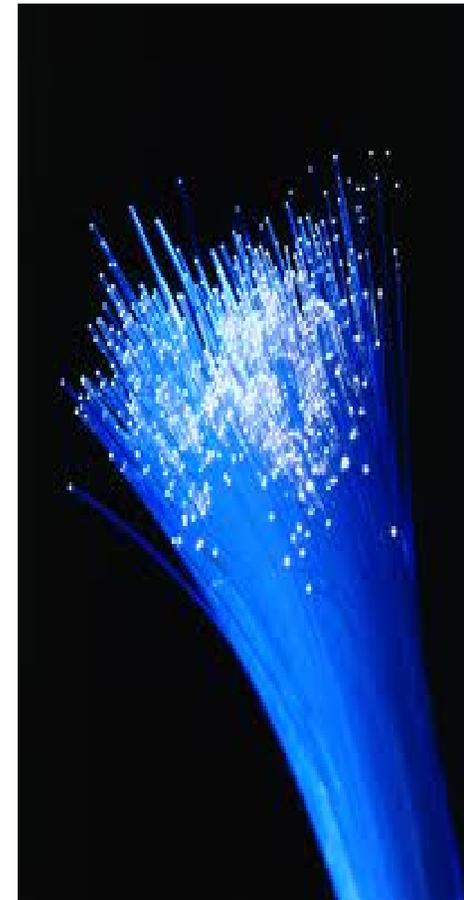
NGA and the evolution of the BT Undertakings

- BT Undertakings did not make explicit provision for NGA...but were designed to be flexible
- Ofcom consulted on and agreed 'variations' to support the upgrade of BT's to NGA (FTTC and FTTP)

The 2009 FTTC variation and the 2010 FTTP variation

Openreach allowed to deploy and operate active NGA equipment
– VDSL and GPON

Openreach required to provide an active NGA product (GEA –
Generic Ethernet Access) on the basis of equivalence



Current regulatory framework (2010-2014) – 2010 WLA decision

Promoting investment – VULA, SLU and PIA

- BT is required to provide wholesale access to its NGA network (FTTC and FTTH) on an equivalent basis, but has pricing flexibility, reflecting the investment risk.
- We envisaged Sub-Loop Unbundling (SLU) and Passive Infrastructure Access (PIA) as a means of promoting further investment in NGA - the intention being to lower the investment barriers to non-BT operators.
- The investment case is challenging: we have not seen the deployment of multiple NGA networks based on SLU/PIA in the same area nor on a standalone basis in areas subject to state aid.

Promoting competition – LLU and VULA/GEA

- LLU remains our main remedy for promoting downstream competition in current generation broadband services.
- In areas where BT has deployed NGA, downstream competition is based on access to BT's new network using Virtual Unbundled Local Access (VULA)/GEA

2013 FAMR Consultation – Key Proposals

- Given limited changes in the market since the last review, we are proposing to largely retain the current remedies (with some key adjustments).

NGA remedies

- BT will still be required to provide network access via GEA/VULA where it has deployed NGA
 - BT will retain general pricing flexibility (no price control or cost orientation obligation)
 - Ex ante margin squeeze test retained to check BT's VULA margin
- BT will also still be required to provide SLU and PIA

Rollover of existing copper-based remedies

Other considerations

- » Consistency with 2013 EC Recommendation on costings and non-discrimination (published 11 September 2013)
- » Existing margin squeeze antitrust investigation

*i.e. the margin between its wholesale VULA charges and its retail superfast broadband prices

Regulatory Remedies in Context of UK Market

	Current & planned SFFB networks	Nearer term remedies focus	Alternatives to remedies	Possible longer term focus
<p>Urban c.50%</p>		<p>Virtual Unbundled Local Access (GEA²)</p>	<p>?</p>	<p>Wavelength unbundling</p> <p>Contingent on shift to FTTP</p>
<p>Sub-urban c.16%</p>				<p>PIA</p> <p>Contingent on investor appetite to deploy rival NGA networks</p>
<p>Rural c.29%</p>	<p>with state aid (BDUK Rural programme)</p>			<p>PIA² (FTTP)</p> <p>SLU³ (FTTC)</p> <p>small scale self-build FTTP/B</p> <p>fixed wireless</p>
<p>Very Rural c.5%</p>	<p>Small CPs some with state aid (e.g. BDUK Rural Community Broadband Fund)</p>			

*BT is deploying a small amount of FTTP (i.e. single digit %, although this proportion may be higher in BDUK areas). BT originally planned c.25% FTTP.

NGA Deployment

NGA deployment in the UK is accelerating as is take up:

- Approximately 73% of homes were passed by one or more high speed networks in June 2013 – an eight percentage point rise on the previous year;
- The number of subscribers to superfast broadband services (30Mbit/s or more) increased from 1.9 million in Q2 2012 to 3.8 million in Q1 2013, resulting in 17.5% of total fixed broadband connections being classed as superfast by the end of March 2013 (approx 22% by September 2013);
- Commercial roll-outs should reach 66% of the country by Spring 2014;
- With government support, approx 90% of the country should be covered by 2016 (95% by 2017). Government currently investigating how to get to 99% by 2018.

BT under criticism from Public Accounts Committee

- In a meeting held on the 17th July, Parliament's Public Accounts Committee questioned BT over why its investment in the UK's government-subsidised broadband deployment had dramatically shrunk (and the local councils have paid more than expected).
- According to a recent National Audit Office (NAO) report, the £1.2bn BDUK scheme that initially aimed to help make fixed superfast broadband services available to 90% of the UK by the end of 2015 is now *22 months late, lacks competition, transparency in costs, and has allowed BT to get away with underfunding on its contribution.*
- In 2012 BT pledged to invest a "further £1bn" of its own money, as well as the government's BDUK funds, into providing broadband to the final third of the country where private investment had been deemed not commercially viable. However, according to NAO, BT would in fact contribute just £356m (23 per cent of capital costs) and end up owning all the assets (local councils paying the rest).

Conclusions

General Observations

- Functional Separation and Equivalence have been central to the transformation of the market in the UK.
- This has not simply been a ‘technical’ issue – the OTA in particular has played a critical role.
- ‘Equivalence’ is not only a product issue – the incumbent and CPs may have different business models.

NGA

- The emergence of NGA presents a more explicit need to address investment incentives while promoting competition - the model may need to evolve.
- The model of competition is likely to evolve to reflect the underlying economics.
- Developments in the UK are also being shaped by the rivalry between BT’s and Virgin Media’s platforms.
- We believe that Functional Separation and Equivalence will continue to play an important role in an ‘NGA world’.