Briefing for analysts: Telecoms

8th July 2009

Stuart McIntosh
Partner, Competition
Agenda

• Introduction  Stuart McIntosh
• Super-fast Broadband  Peter Phillips
• Openreach Financial Framework Review  Craig Lonie
• Mobile Call Termination Review  David Stewart
• Spectrum  Charles Jenne
• Q&A
Super-fast broadband

Peter Phillips
Partner, Strategy and Market Developments
Regulation seeks to both deliver investment and promote competition

Promoting investment to support widespread availability of next generation access networks

Securing competition at the deepest level that is effective and sustainable

Regulatory approaches need to find the right balance to deliver both

This was the basis for our statement on NGA regulation in March, covering:

Pricing flexibility on active products to allow appropriate financial returns

Passive pricing that allows returns that genuinely reflect the cost of deployment and risk

Minimise inefficiencies in network design and build by varying the Undertakings

Support competition today based on new, more flexible wholesale ‘active’ services

Safeguard opportunities for future competition based on physical ‘passive’ infrastructure
The variation to the undertakings for FTTC showed how this balance can work in practice.

The text of the variation helps to assist investment while protecting competition.

For Openreach the variation reduces operational costs and inefficiencies by allowing OR to “own” and operate the street electronics.

For competitors it requires Openreach to:

- Provide fit-for-purpose active product
- Make it possible for competition based on alternative investments in street infrastructure to develop over time

Promoting investment to support widespread availability of next generation access networks.

Securing competition at the deepest level that is effective and sustainable.

Regulatory approaches
Market developments have continued...

- Marketing of 50Mbps available to all cable homes summer ‘09, 11% take-up of 20 or 50Mbps service
- BT ADSL2+ launched for 40%
- Total LLU coverage over 80%, including ADSL2+
- Estimates of more than 2m mobile broadband connections
- FTTP deployment started in Ebbsfleet 2008, plans additional 40k homes early 2010
- Launching service over FTTP in Wembley
- FTTC deployment plans accelerated - 1.5m homes mid-2010, 10m 2012
- Copper Fibre Coaxial

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... and Digital Britain has set out a range of policy positions from Government

<table>
<thead>
<tr>
<th>Proposed new duty for Ofcom to</th>
<th>Explicit general duty to encourage investment as a means of furthering consumers’ interests, alongside its duty to promote competition where appropriate</th>
</tr>
</thead>
<tbody>
<tr>
<td>Universal service commitment for broadband</td>
<td>2M/bps broadband service to the 11% of lines currently unable to get such a service, with a role for NGA technologies</td>
</tr>
<tr>
<td>Final third</td>
<td>Public investment to help deliver NGA to areas that the market will not invest in, to 90% by 2017, funded from a levy on line rental</td>
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</table>

The market is looking to invest in the most economic areas first

The ‘final third’ focuses on helping investment to more expensive areas

Cost per home connected (£)

<table>
<thead>
<tr>
<th>0 to ~60%</th>
<th>~60% to ~90% UK coverage</th>
<th>~90% to 100%</th>
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</thead>
<tbody>
<tr>
<td>0</td>
<td>200</td>
<td>1,200</td>
</tr>
<tr>
<td>400</td>
<td>600</td>
<td>1,400</td>
</tr>
<tr>
<td>800</td>
<td>1,000</td>
<td>1,600</td>
</tr>
<tr>
<td>1,200</td>
<td>1,400</td>
<td>2,400</td>
</tr>
</tbody>
</table>

Source: Broadband Stakeholders Group
There have also been a number of important or interesting European developments

**France**: Duct and in-building multi-fibre for dense urban (5m homes)

**Netherlands**: Fibre unbundling given KPN’s P2P network plans, with possibility of actives

**Spain**: Focussed on duct access and later active products

**Germany**: Cabinet access and sub-loop unbundling prices published

**Belgium**: Active wholesale products, but with passive options

**Commission draft recommendation**: In consultation, this outlines views on risk adjusted returns, co-investment models, passive and active regulatory remedies; and transition from copper to fibre

Our current regulatory policy positions are in line with these developments, but are specific to the UK situation

Source: Cullen International
The super-fast broadband debate will continue, and touches on a number of future regulatory issues

<table>
<thead>
<tr>
<th>Ofcom led</th>
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<tbody>
<tr>
<td>Wholesale local access market review</td>
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<tr>
<td>Wholesale broadband access market review</td>
</tr>
<tr>
<td>Detailed regulatory treatment of FTTP deployments</td>
</tr>
<tr>
<td>Implications of FTTP for undertakings</td>
</tr>
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<table>
<thead>
<tr>
<th>Others</th>
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<tbody>
<tr>
<td>Commission recommendation on NGA</td>
</tr>
<tr>
<td>Commission guidelines on state aid and NGA investment</td>
</tr>
<tr>
<td>Government’s design for USC and final third procurement</td>
</tr>
<tr>
<td>Government’s new duties for Ofcom, including investment and infrastructure assessments</td>
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</tbody>
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Questions?
Openreach Financial Framework

Craig Lonie
Director of Competition Finance
The previous framework had become out of date

When previous charges were set – in 2005/06 – around 1/4m lines had been unbundled

Now, around 6m lines have been unbundled

Meanwhile, inflation and changes in demand had pushed costs up

It was therefore appropriate to look at the prices again

<table>
<thead>
<tr>
<th>Service</th>
<th>Date set</th>
<th>Ceiling</th>
</tr>
</thead>
<tbody>
<tr>
<td>Business WLR</td>
<td>Jan 2006</td>
<td>£110.00</td>
</tr>
<tr>
<td>Residential WLR</td>
<td>Jan 2006</td>
<td>£100.68</td>
</tr>
<tr>
<td>MPF</td>
<td>Nov 2005</td>
<td>£81.69</td>
</tr>
<tr>
<td>SMPF</td>
<td>Dec 2004</td>
<td>£15.60</td>
</tr>
</tbody>
</table>
In our December consultation, we proposed a 2-year control for MPF and a 1-year control for WLR.

<table>
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<tr>
<td>MPF</td>
<td>£81.69</td>
<td>£85.00 to £91.00</td>
<td>RPI + 0.0% to RPI + 5.0%</td>
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<tr>
<td>SMPF</td>
<td>£15.60</td>
<td>£15.60 to £16.20</td>
<td>RPI – 2.5% to RPI + 1.5%</td>
</tr>
<tr>
<td>Residential WLR</td>
<td>£100.68</td>
<td>£100.68 to £104.40</td>
<td>Subject to market review</td>
</tr>
<tr>
<td>Business WLR</td>
<td>£110.00</td>
<td>£106.00 to £110.00</td>
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</table>

The range in year 1 was set by reference to a four-year glide to our estimated range for 2012/13 unit costs of between £97 and £111.

Our estimate of the indexation in year 2 assumed a starting point at the mid-point of the year 1 range.
By May, circumstances had changed

| Economic conditions had changed | Inflation had fallen and RPI became negative  
Commodity prices – including copper – had fallen sharply  
Debt and equity markets stabilised, but remained unpredictable |
|--------------------------------|--------------------------------------------------|
| Stakeholders had made some significant announcements | Sky announced its plans to migrate to MPF  
BT announced suspension of its plans for its NGN proposals  
Overall demand for fixed lines fell faster than expected  
BT announced cost-saving measures |
| Stakeholders responded to the consultation | Stakeholders provided additional information to inform our final assumptions  
The Commission requested that we did not set prices for WLR ahead of the forthcoming market review |
We took account of the developments in our decision

| We split the consultation | First, we set new MPF and SMPF prices in the May Statement  
| | Second, we have just proposed new WLR price controls |
| Some changes pushed cost estimates down:  
| | • Zero inflation in 2009/10  
| | • Opening value of copper assets was reduced  
| | • Some reallocation of costs away from regulated services |
| We updated our assumptions | Other changes caused estimates to increase:  
| | • Demand for fixed lines to fall by 7% by 2012/13  
| | • Fault rates to be reduced at 2% pa  
| | • WACC for Openreach 10.1% |
| | Others remained broadly in line with expectations:  
| | • No contribution to pension deficit (but subject to consultation)  
| | • Efficiency gains of 4% in 2009/10, declining thereafter |
We estimate Openreach’s WACC to be just over 10%

In 2005, we set prices based on a WACC of 10%
This was during a period of relative stability in capital markets

In December 2008, we proposed a range for Openreach’s WACC of 9.25% to 10.75%
The relatively broad range reflected the underlying uncertainty in international equity and credit markets

Our final prices were based on a WACC of 10.1%
Changes since 2005 include the following:
• BT’s equity beta has fallen
• The debt premium is higher, reflecting tough debt markets
• We increased our estimate of the ERP (from 4.5% to 5.0%)
• Other changes broadly balance
The effect of the changes was to move cost estimates - and MPF prices- towards the bottom of our range.

<table>
<thead>
<tr>
<th></th>
<th>Current price</th>
<th>Proposed range 2009/10, per Consultation</th>
<th>Proposed indexation in 2010/11, per Consultation</th>
<th>Price ceiling for 2009/10, per May Statement</th>
<th>Indexation in 2010/11, for one year only, to be added to October 2009 RPI</th>
</tr>
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<td>£81.69</td>
<td>£85.00 to £91.00</td>
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<td>£86.40</td>
<td>RPI +5.5%</td>
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**Explanation of basis for the MPF prices**

The price in 2009/10 was set with reference to a four year glide to our 2012/13 unit cost estimate of £97.62 and alternative approaches, which justified a charge above the glide path (but below full cost recovery).

The relatively high X for MPF in 2010/11 is a consequence of the expected RPI statistic for October 2009 – on which the control is based – which is likely to be negative.

![Graph showing price changes from 2008/09 to 2012/13 with RPI and MPF prices](image-url)

**2009/10**

- £81.69
- £85.00
- £91.00
- £97.62
- £111.15

**2010/11**

- £81.69
- £85.00
- £86.40
- £91.00
- £111.15

**RPI +5.5% likely to result in price of c£90 in 2010/11?**
## WLR charge control proposals

<table>
<thead>
<tr>
<th>New core rental service control</th>
<th>This will replace existing separate price controls for residential and business lines. We consider this is consistent with the recent Wholesale Narrowband Market Review conclusions and with our approach to LLU charge controls.</th>
</tr>
</thead>
<tbody>
<tr>
<td>No rental price rises in the first year</td>
<td>The new core WLR rental charge is proposed to start at the current WLR Basic charge of £100.68. We are consulting on possible small real terms price reductions, to 2012/13.</td>
</tr>
<tr>
<td>Increased pricing flexibility for higher care levels</td>
<td>We are consulting on whether it is appropriate to withdraw cost orientation conditions on services which offer higher care levels to WLR lines, as we expect these charges to be controlled through a chain of substitution based on the new core service.</td>
</tr>
<tr>
<td>Changes to connection / transfer charges</td>
<td>We are proposing a reduction of c.50% in the new line connection charge. The charge has not been reviewed since 2005 and is significantly above cost. Transfer charges will be increased from £2 to £3.</td>
</tr>
</tbody>
</table>
Next steps

• WLR price control statement

• Consultation on treatment of pensions

• Wholesale Local Access market review

• Possibility of appeal of MPF determination
Questions?
Mobile Call Termination Review

David Stewart
Competition Policy Director
Mobile faces a fluid future and regulation needs to adapt

- In the future, our telecommunications will be mostly mobile

- Competition between mobile operators has been driving this success

- Innovation continues: More text and data, mobile internet access

- Next generation networks, services and applications

- Mobile call termination charges historically been a focus - and hotly contested
  - Resource-intensive for all players

- Our current approach designed when networks were almost entirely providing voice services

- Termination rates affect the level and structure of retail prices and therefore impact market flexibility

- Services like mobile VoIP moving from hype to commercial reality, for early adopters (now) and perhaps for a mass market
UK consumers have benefited from falling rates over many years

Regulated termination rates

Status quo: Setting LRIC+ prices every 4 years

- Charge controls using ‘RPI-X’ caps to reduce rates.
- All 5 major operators regulated on a technology neutral basis (prior to 2007, only 2G rates were capped)
- Decision to set a price cap followed by long and complex appeals
- Rates set using “LRIC+” methodology (includes a mark-up for joint and common costs)
- Benefits to consumers measured in £bns

Source: Competition Appeal Tribunal, Competition Commission and Ofcom
UK consumers have benefited from falling rates over many years

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- Benefits to consumers measured in £bns

Source: Competition Appeal Tribunal, Competition Commission and Ofcom
We are consulting on six regulatory options

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<tr>
<th>Regulatory option</th>
<th>Approach</th>
</tr>
</thead>
<tbody>
<tr>
<td>Deregulation</td>
<td>Remove all regulation of termination from all operators</td>
</tr>
<tr>
<td>Long run incremental cost + (LRIC +)</td>
<td>Charge control set broadly on the basis of the same cost standard as it is today</td>
</tr>
<tr>
<td>Long run marginal cost (pure LRIC)</td>
<td>Revised charge control methodology with no allowance for recovery of common costs (broadly what the European Commission has recommended)</td>
</tr>
<tr>
<td>Capacity based charges (CBC)</td>
<td>A different approach to setting the structure of termination charges based on the capacity required for termination</td>
</tr>
<tr>
<td>Mandated reciprocity</td>
<td>Set mobile termination rates to be the same as fixed</td>
</tr>
<tr>
<td>Mandated Bill &amp; Keep (B&amp;K)</td>
<td>Termination charges capped at zero</td>
</tr>
</tbody>
</table>
Timeline for reviewing termination charges

- **Today**
  - Preliminary consultation
  - Analysis of options for termination regulation – a green consultation

- **Q4 2009**
  - Second consultation
  - Consultation focusing on market definitions and SMP analysis

- **Q3 2010**
  - Third consultation
  - Recommended approach to pricing controls in call termination market
  - Will also recommend levels of price control in ppm (if relevant)

- **Q1 2011**
  - Statement and any new charge controls
  - Any final price control issued and decision taken on or before 30 March 2011, subject to consultations on SMP and appropriate remedies
  - Charge control, if any, could run from April 2011 for 4 years, ie to March 2015

- **2015**
Impacts of lower MTRs

• Lower mobile termination rates are likely to benefit consumers overall (both fixed and mobile) by enabling greater retail pricing flexibility

  – Operators could offer consumers a wider variety of retail packages and tariff structures
  – Lower termination charges could ameliorate competition concerns over on/off-net price differentials
  – Lower mobile termination charges could lessen concerns over discrepancies between fixed and mobile termination rates

• Claims that low-usage customers may be worse off (if rates are reduced) require assessment on the evidence
  – If concerns are material, also need to consider alternative policy tools

• Commercial impact of lower termination on UK operators needs careful consideration, particularly regarding potential for discrepancy of impact between fixed and mobile operators
Questions?
Spectrum Update

Charles Jenne
Director of Policy, Spectrum Policy Group
Key elements of spectrum release and liberalisation programme

• **2.6 GHz award:**
  – April 2008 decision withdrawn in June 2009, following Digital Britain report

• **Liberalisation of 900GHz and 1800MHz bands to permit 3G (or other, eg. LTE)**
  – Ofcom February 2009 consultation proposed one block release (2x5MHz) of 900MHz

• **Digital Dividend to be awarded:**
  – 128MHz of cleared spectrum: June 2009 decision to clear 800MHz band
  – Geographic interleaved spectrum (first awards of Manchester and Cardiff blocks made in February 2009)
800MHz band: June 2009 decision to clear channels 61, 62, 69

Channels 61, 62 might be cleared end 2013
Channel 69 might be cleared during 2012
Illustrative LTE deployment in 800MHz band

Three packages of 2 x 10 MHz
Illustrative LTE deployment in 800MHz band
• Finland, Sweden, France, Switzerland, Germany, Spain and Denmark have decided to release the 800 MHz band, with others likely to follow

• Clearing the 800MHz band in the UK could deliver net benefits in the region of £3bn
Spectrum suitable for mobile broadband services

- **2.6 GHz**: 190 MHz
  - **Wider bandwidth – more capacity**
  - Lower frequencies better for mobile broadband especially indoor and rural coverage

- **2.1 GHz**: 138.9 MHz
  - 3G today (all 5 MNOs)

- **1.8 GHz**: 143.2 MHz
  - 2G today (mostly Orange/T-Mobile)

- **900 MHz**: 68.8 MHz
  - 2G today (only Vodafone)

- **800 MHz**: 72 MHz
  - Digital Dividend Cleared Award

- **Total spectrum in market available = 351 MHz**

- **Total spectrum coming to market through new awards = 262 MHz**

- **Spectrum coming to market = 75% increase in spectrum potentially for mobile use**
Digital Britain Proposals

• **800MHz spectrum**
  – Government will meet costs of clearing channels 61, 62 and 69 of existing users
  – Supports packaging of spectrum in way that is suitable for LTE technology
  – Coverage (and access) obligations

• **Combined award of 800MHz and 2.6GHz bands (outer bands)**
  – Support for earlier award of 2.6GHz centre band

• **Liberalisation of 900GHz and 1800MHz bands in the hands of the incumbents**
  – subject to further consideration involving guiding technical arbitration

• **Separate spectrum caps**
  – On sub 1GHz spectrum (detail subject to technical arbitration process)
  – An overall spectrum cap of 2x65MHz

• **2.1GHz (3G) licences to be made indefinite, with licence fee beyond current lifetime**
  – and possibly extended coverage obligation
Potential timing

- **Digital Britain process**
  - Guiding technical arbitration in progress
  - Government consultation in September on form of Direction to Ofcom
  - Direction would then require parliamentary approval

- **Possible timings for liberalisation and awards**
  - EU action to remove GSM restriction on 900MHz band in late 2009?
  - 2.6GHz centre band award could occur in early 2010
  - Combined 800MHz / 2.6GHz award possible in later 2010
Questions?