

## Google UK

A response from Google to Ofcom's 'Consultation on assessment of future mobile competition and proposals for the award of 800 MHz and 2.6 GHz spectrum and related issues'

Google welcome the opportunity to respond to the consultation on the award of spectrum for the next generation of mobile services. In particular, we are keen to respond to the the part of the consultation (question 5.2) regarding the competitiveness of future data services.

### Key points

1. Google support Ofcom's stated goals in this consultation of promoting competition and promoting the availability of data services for consumers on the move.
2. It is vital for the UK economy and for consumers that the spectrum award enables service providers to meet, rather than constrain, the significant growth in demand for mobile data.
3. Innovation will be key to overcoming challenges and realising the full potential to the UK economy of new data markets and to this end unused, under-utilised and licence-exempt spectrum have a key role to play.

### About Google

Google is most well known for our search engine, which is available to internet users throughout the world. We also make Android, an open source operating system for mobile devices that in a few short years has grown from powering one device (introduced in the Autumn of 2008) to over 170 devices today, created by 27 manufacturers. We also offer dozens of other popular services, from YouTube to Gmail to Google Earth. Our products are generally offered for free for personal use, supported by revenue from advertising and sales to businesses.

**Question 4.1: What use, if any, would you make of the top 2x10 MHz of the 800 MHz band in the second half of 2012 if it were available for use? What would be the benefits for citizen and consumers of such availability?:**

**Question 4.2: If we were to offer shared access low-power licences in some way, do you have any comments on the appropriate technical licence conditions which would apply for the different options?:**

**Question 5.1: Do you agree that national wholesalers need a reasonable overall portfolio of spectrum to be credible providers of higher quality data services? In particular, do you agree that national wholesalers need some sub-1 GHz in order credibly to be able to offer higher quality data services? Please state the reasons for your views.:**

**Question 5.2: Do you agree there is a material risk of a significant reduction in the competitive pressures, at least to provide higher quality data services, in**

**retail and wholesale markets without measures in the auction to promote competition? Please state the reasons for your views.:**

1. Google support Ofcom's goals of promoting competition and the availability of data services for consumers on the move.

Google welcome Ofcom's two key objectives in the award of this spectrum: 'Promoting future competition in mobile markets' (Paragraph 1.13) and 'Promoting the availability of future mobile services for citizens and consumers' (1.24).

Google agree with Ofcom that 'the award of this spectrum is vital to the UK's economic and social growth' (1.2). Ofcom are right to anticipate that 'data services are likely to continue to grow in importance' (5.16) and we share Ofcom's hope that this spectrum 'will enable mobile operators to meet the significant growth in demand for mobile data' (1.2).

2. It is vital for the UK economy and for consumers that the spectrum award enables service providers to meet, rather than constrain, the significant growth in demand for mobile data.

At present the UK mobile market has proven to be dynamic and there is a diversity of business models for data services. This is healthy for the market and provides consumers with real choice.

Looking ahead, Ofcom recognises that new 4G spectrum licences will create new data markets of high demand. Ofcom suggests that operators may separate, prioritise and charge for different kinds of content or different kinds of service (5.16).

In whatever form these markets develop, Ofcom has two clear duties: to promote competition; and to promote the availability of these services to consumers. In Google's view, that requires real choice and access for consumers. If the operators act together to constrain content or services for which consumer demand is high then that would appear to challenge Ofcom's duties. In a competitive market, operators should compete to meet consumer demand for mobile data, rather than constrain supply of content or services that consumers want. In addition, any traffic management practices or any other differentiation of quality of service for different types of traffic must be clear and open to consumers.

Operators should not be able to act together to take advantage of their crucial role as the intermediary between consumers and the mobile internet. Ofcom must be prepared to act quickly, using its competition and other regulatory powers, to address any behaviour by licensees that could be damaging to consumers and thus the UK economy.

3. Innovation will be key to overcoming challenges and realising the full potential to the UK economy of new data markets and to this end underused and licence-exempt spectrum have a key role to play.

Above all else, Google believes innovation is the key to realising the economic potential of new data markets and overcoming infrastructure hurdles. Opportunities exist within the spectrum, for example in the 'white spaces' that are unused or underutilized, for new innovations to flourish.

In addition, licence-exempt spectrum has proved to be fertile ground for innovation. For

example, operating in the licence-exempt bands at 2.4 GHz and 5 GHz, it is WiFi (and not the licenced spectrum used by mobile operators) that has been most responsive to the growth of demand in smartphones: Ofcom's own figures show that WiFi penetration has almost doubled in the UK since the launch of the iPhone in 2007\*, and is increasingly relied upon by the mobile operators to meet the demands of consumers for data. WiFi has also been innovative at providing services in places where licensed spectrum has failed to reach (from moving trains to country pubs and village libraries).

\* According to Ofcom, between 2007, the year when the iPhone was launched, and 2010, wifi penetration almost doubled (from 34 to 66 per cent).

<http://www.ofcom.org.uk/static/cmr-10/UKCM-4.12.html>

**Question 5.3: Do you agree there is a risk of potentially beneficial sub-national RAN uses not developing without measures to promote competition? Please state the reasons for your views.:**

**Question 5.4: Do you agree with the analysis that at least four competitors are necessary to promote competition?:**

**Question 5.5: Do you agree that the specific measures we propose to take to ensure there are at least four holders of such spectrum portfolios are appropriate and proportionate?:**

**Question 5.6: Given the measures we propose to take to ensure four holders of spectrum portfolios sufficient credibly to provide higher speed data services, do you agree that it would not be appropriate or proportionate to introduce a regulated access condition into the mobile spectrum licences to be awarded in the combined award?:**

**Question 5.7: Do you consider that we should take measures to design the auction to assist low-power shared use of 2.6 GHz? If so, what specific measures do you consider we should take?:**

**Question 6.1: Do you have any comments on the proposal to include in one of the 800 MHz licences an obligation to serve by the end of 2017 an area in which 95% of the UK population lives, while providing a sustained downlink speed of 2Mbps with a 90% probability of indoor reception? Do you think there is another way of specifying a coverage obligation that would be preferable?:**

**Question 6.2: We would welcome views and evidence on the costs and benefits of imposing an additional coverage obligation focussed on particular geographical areas, and if such an obligation were to be imposed what might be the appropriate specification of geographic areas?:**

**Question 6.3: Do you have any comments or evidence on whether an additional obligation should be imposed to require coverage on specific roads?:**

**Question 6.4: Do you have any comments on our proposal not to use the combined award to address existing not-spots?:**

**Question 6.5: Do you have any comments on our proposal not to impose ?use it or sell it? obligations but to consider including an additional power to revoke during the initial term of the licences?:**

**Question 7.1: Do you have any comments on the proposals relating to the duration of the initial licence period, our rights to revoke the licence during this period, the charging of licence fees after the end of the initial period and our additional revocation powers following the initial period?:**

**Question 7.2: Do you have any comments on the proposal to amend the spectrum Trading Regulations to apply to the auctioned licences in the 800 MHz and 2.6 GHz bands, to include a competition check before we consent to a spectrum trade of mobile spectrum and not to allow transfers that would increase the number of 2.6 GHz low-power licensees?:**

**Question 7.3: We welcome views on the merits of the proposed approach to information provision, in particular concerning the type of information that may be helpful and any impacts that publication of information might have both on licence holders and the wider spectrum market.:**

**Question 8.1: Do you agree with the way in which we are taking account of the main factors relevant to spectrum packaging and why?:**

**Question 8.2: Are there other factors that we should consider to develop our approach to packaging? If so which ones and why?:**

**Question 8.3: Do you agree with our packaging proposals for the 800 MHz band? Please give reasons for your answer.:**

**Question 8.4: Do you agree with our proposal not to allow relinquishment of 900 MHz spectrum and why? Do you have any other comments regarding our packaging proposals for the 900 MHz band?:**

**Question 8.5: Do you agree with our proposal not to allow relinquishment of 1800 MHz spectrum and why? Do you have any other comments regarding our packaging proposals for the 1800 MHz band?:**

**Question 8.6: Do you agree with our proposal not to make provisions to include 2.1 GHz spectrum in this auction and why?:**

**Question 8.7: Which aspects of our packaging proposals for the 2.6 GHz band do you agree with and why?:**

**Question 8.8: Do you agree with our proposed approach for eligibility points and why?:**

**Question 8.9: Which approach to reserve prices do you think would be most appropriate to secure optimal spectrum use in the interests of citizens and consumers, and why?:**

**Question 9.1: Do you agree with our proposals for the auction design and why?:**

**Question 9.2: Do you have any comments on the proposed auction rules as explained in section 9, Annex 9 and Annex 10?:**

**Question 9.3: Do you have any comments on how we should approach the payment of deposits and licence fees?:**

**Question 10.1: Do you have any comments on our proposal to use 800 MHz price information as derived from the auction to estimate the full market value of 900 MHz spectrum?:**

**Question 10.2: Do you have any comments on our proposal to use an average of 800 MHz and 2.6 GHz price information as derived from the auction to estimate the full market value of 1800 MHz spectrum?:**

**Question 10.3: Do you have any comments on the proposed approach to convert lump sum amounts into annual payment?:**