
Response to the second consultation on assessment of future mobile competition and proposals for the award of 800 MHz and 2.6 GHz spectrum and related issues

Ofcom Advisory Committee for Scotland

7 February 2012

The Ofcom advisory committee for Scotland welcomes the opportunity to respond to Ofcom's second consultation for the award of 800 MHz and 2.6GHz spectrum.

According to the second consultation paper, we understand that Ofcom is considering two main options:

- **Option 1:** to impose an obligation on at least one of the 800 MHz licenses to be a straightforward 98% (indoor) UK population coverage obligation;¹
- **Option 2 (Ofcom's preferred option):** to link the government investment of £150m in infrastructure to the 800 MHz license with the coverage obligation, whereby the licensee(s) would have a coverage obligation comparable to all existing 2G networks in combination (96.7% UK wide²) and extend coverage using the subsidised mobile infrastructure programme (MIP) infrastructure, to the extent the MIP infrastructure is capable of supporting 4G network equipment.

We offer our advice on each of these options below:

Comments on option 1

First, we welcome the revised coverage obligation from 95% to 98%, which appears to be more in line with addressing the digital divide issue. We also strongly support the idea of imposing specific target coverage on a nation-by-nation basis as suggested in paragraph 5.62 of the consultation. This is because applying a 'straightforward' coverage obligation across the United Kingdom as a whole of 98% would not benefit all nations equally; the nations with a greater percentage of rural communities would lose out. In order to better understand what a 98% UK-wide coverage level might mean for Scotland, we undertook a simple extrapolation of current 2G coverage for all the nations. In our analysis, we have considered the 7200 Medium Level Super Output Areas (MSOA) for England and Wales³, 1200 MSOAs for Scotland⁴ and 900 MSOAs for

¹ Paragraph 1.38 in the Ofcom consultation paper

² Scotland Communication Market Report, Ofcom, 2011

³ <http://neighbourhood.statistics.gov.uk/dissemination/>

Northern Ireland.⁵ Taking all of these MSOAs from the different nations into consideration and selecting the most densely populated MSOA first to achieve a 98% coverage UK wide yields a coverage for each of the nations on the lines shown below:

Figure 1: Possible distribution of coverage amongst nations for 98% UK coverage [Source: ACS, 2012]

Nation	Population (m)	Current 2G coverage (%)	Adjusted % coverage for 98% UK wide target for 800 MHz 4G	Expected UK coverage with at least 95% coverage for each nation for 800 Mhz 4G
England	51.5	99.0%	99.24%	99.0%
N. Ireland	1.7	87.0%	92.83%	95%
Scotland	5.2	85.0%	90.06%	95%
Wales	2.9	84.0%	93.80%	95%
Total	61.3	96.7%	98%	98.4%

From the above analysis, it can be seen that a “straightforward” 98% population coverage for the UK as a whole could result in only a 90% population coverage in Scotland. This is because the operators with coverage obligations will cover the densest areas first; Scotland will be disadvantaged because of its high proportion of rural areas. This argument is supported by the current 2G market data⁶ where, for 96.7% UK-wide coverage level, Scotland only has 85% of its population covered.

Also, as illustrated in Figure 1, we found that achieving a minimum coverage level of 95% for each of the nations (except for England) would result in 98.4% coverage UK wide.

Recommendation 1: We consider that a 98% coverage obligation UK wide is appropriate for a single license. ACS strongly supports the inclusion of a minimum coverage level of 95% for each of the nations.

Comments on option 2

Mobile Infrastructure Project

We welcome the idea of linking the UK government’s Mobile Infrastructure Project (MIP) to the coverage obligation as we strongly believe there are many synergies between addressing the digital divide and coverage obligations for the licensee(s). We also welcome the suggestion of using the

⁴ <http://www.sns.gov.uk/Downloads/AdHocChoose.aspx?cnt=1&MetaIndicatorCode=CS-arealG>

⁵ <http://www.nisra.gov.uk/geography/default.asp3.htm>

⁶ Scotland Communication Market Report, Ofcom, 2011

MIP to build mobile towers and backhaul networks that could be accessed on a non-discriminatory basis by any mobile network operators (MNOs) as it will:

- reduce infrastructure duplication, and overall decrease the cost of providing mobile services in the more rural areas (not-spots), therefore benefiting rural end-users;
- ease barriers to entry for MNOs by subsidising capital expenditure typically required to acquire and build tower sites;
- improve time to market of mobile services in rural areas as the infrastructure provider may already have the rights to the land or a tower suitable for telecommunication purposes.

However, for this strategy to be effective, we consider that a more detailed study is required to determine the location of these not-spots, which will also determine how the £150m allocated could be effectively utilised.

We consider that it will also be important to identify the not-spots, and the number of sites needed to deal with them, to provide auction bidders with an idea of what might be expected of them in terms of additional coverage, beyond existing 2G coverage. Without this, MNOs would have to invest in a license where they would not be in a position to determine the total capital and operational expenditure to make their business case.

There is concern that this second option might lead to a considerably lower coverage for Scotland, Wales and Northern Ireland than the suggested 95% for each nation in option 1, This would be the case if the £150m is not sufficient to take coverage from e.g. the current 85% 2G coverage in Scotland to 95%. Again, the study suggested above would provide information on this.

Recommendation 2: We recommend that Ofcom undertakes a comprehensive review of the not-spots and areas to be covered to a) better understand how the £150m MIP fund could be utilised and b) determine the exact conditions for the “special” license to enable MNOs to better evaluate the business case and propose a bid for the spectrum that would reflect the business case. We recommend that BDUK allocates the MIP funds according to where there is the greatest need, while at the same time, still ensuring a 95% level of coverage for each of the nations. The comprehensive review suggested would provide the information to do this.

Single v multiple special licenses

In their second consultation, Ofcom have expressed a preference to impose coverage obligations on just one licensee and not impose a wholesale access obligation on that licensee (paragraph 1.45).

We consider that all licensees should have a minimum coverage obligation to ensure competition for consumers in less populated areas. We would suggest an obligation to emulate the current 2G coverage (96.7%), Without this ACS considers it likely that other MNOs will have little impetus to

provide coverage in these areas, increasing the likelihood of an effective monopoly for the special license holder in less densely populated areas. However, in order not to disadvantage any of the nations, we also believe that a minimum coverage target by nation should also be imposed on **all licenses**.

In addition, one of these licenses (referred to hereafter as the “special license”) should extend that minimum coverage to the extent permitted by the infrastructure deployed in the context of the MIP as advocated by Ofcom in paragraph 1.41. In line with our previous analysis, the special license should extend the coverage in each nation to 95%, supported by the MIP programme.

This would mean, that, initially, the MNO with the special license would be the only provider in more rural areas as identified by Ofcom in paragraph 1.43. ACS does not consider that such a monopoly is desirable. We agree with Ofcom that, ultimately, more MNOs would compete with the special licence holder, providing they would have equal access to the MIP infrastructure. However, we note that it is unlikely that more than more than three operators would try and take advantage of the tower because it would result in a dilution of market share in rural geotypes, where the number of addressable customers per equipment (LTE base Station) deployed is already much smaller than any other geotypes. Therefore, we do not consider that space on the tower would be a limiting factor as described in paragraph 1.46 of the consultation, as on average, only a single MNO is likely to compete with the special licensee in MIP areas.

Recommendation 3: We agree with Ofcom that a single special license, with a 98% coverage obligation UK wide and a 95% coverage for each nation should be proposed as part of the auction. We also strongly support the idea of imposing coverage obligations for all of the other 800 MHz licenses, emulating current 2G coverage but with a minimum of 90% of coverage for each of the nations. This will ensure that there is competition in at least 96.7% of the UK. We note that experience from past auctions indicates that a minimum coverage obligation is highly beneficial for consumers.

Wholesale services and roaming

In our first response to the spectrum consultation we stated:

“One solution to this would be to allow roaming in rural areas and we would be interested in Ofcom exploring the implications of this in the wider context, rather than just for 999 calls. We realise that there are important commercial issues, and Ofcom would not necessarily want to remove the market advantage to providers moving into new areas. However, while national roaming will not incentivise operators to deploy their own infrastructure in rural areas, incentivising infrastructure deployment is only a means to reach the final objective of providing coverage and choice to rural customers. If this objective can be achieved by national roaming using existing infrastructure, it is hard to see why it should not be implemented.”

We would like to take this opportunity to re-iterate our support for national roaming.

On the basis that there would be a single special licence holder, we consider that national roaming should be mandated to ensure that, in areas covered by the MIP:

- end-users have a choice of providers relatively quickly, even if a single special license were to be awarded;
- end-users have good coverage, irrespective of the mobile provider they have chosen.

One of the arguments previously used by Ofcom was that mandating national roaming would not incentivise the market to deploy infrastructure. In this particular case, because the infrastructure in areas where the economics are challenging would be provided by an infrastructure provider (subsidised by the MIP), there is less of a case for promoting infrastructure competition in MIP areas.

The MNOs have previously argued that there were technical barriers to implementing national roaming. We consider that there is no technical barrier to implement national roaming, as demonstrated by the national roaming agreement between Orange and T-Mobile⁷ implemented in October 2010, where each had its own independent network at the time. We appreciate that there might be technical challenges in imposing roaming **in only certain areas (i.e. MIP areas)** but it is unclear how real these would actually be. This is an area that Ofcom could investigate, there is little likelihood that the MNOs will put effort into this area.

The issue in rural areas is that someone may need coverage in two remote areas on a daily basis, each of which is served by a different single operator. This is often the case – e.g. on either side of a mountain range - even if the two areas are only 10 miles apart by road. Currently, some consumers buy two SIM card (one from each MNO) to allow them to use one phone for both areas, clearly at considerable extra cost per minute, but this is something they are willing to accept. It is very hard to explain to the users why they can't have a UK contract with an MNO, so that at least the calls from one operator are at a reasonable cost.

Possible solutions to the non-technical operational problems put forward previously include:

- a) Giving the option to users to opt into roaming at a cost, either per day or per call. This would mean that only those willing to pay the premium according to need would do so, thus leaving the current market situation in more populated areas with multiple operators unaffected.
- b) Only permitting roaming at the start of a call thereby avoiding any issues with dropouts, call handover and associated quality issues. Thus, if a user drives out of the area covered by the operator whose network they are using, the call will end. However, if they try and make a call again, the phone will swap to another network if one is available. Again, this

⁷ Orange and T-Mobile to Enable National Roaming in the UK, Cellular news, September 2010

should ensure that only those users with no other option will use roaming, leaving the current market situation in more populated areas with multiple operators unaffected.

To reinforce this argument, Professor William Webb, Ofcom's former head of research, stated the following in a recent article⁸:

"...the only real step-change of improving customer experience outside of dense urban areas would be if national roaming were switched on (roughly doubling the number of base-stations consumers can access without the need for any new masts)."

In this context, we consider that national roaming should be revisited as a credible option by Ofcom to provide coverage in areas that would not be economically viable. Any solution which does not require any significant funding and which would benefit customers by enhancing competition should be considered seriously.

Recommendation 4: Based on the evidence presented in this section, we consider that mandating roaming in areas covered by the MIP for the "special licence holder" would result in the best possible outcome for consumers. This would be better both in terms of choice of provider as well as ensuring better coverage, particularly in areas which are not economically viable, typically those covered by the MIP. We appreciate that there might be technical challenges in imposing roaming in only certain areas and we therefore invite Ofcom to research this area in more detail. A detailed investigation of other options that avoid any technical issues, such as allowing roaming at a premium cost, should also be made. The associated cost of changing accounting systems for MNOs should be compared with the economic benefits in rural areas, where users might in any case be willing to pay for the privilege.

Response to Q5.5, regarding making spectrum available to facilitate 'fixed' wireless broadband for rural areas

The second consultation document acknowledges in para 5.87 that there was significant concern about the need for spectrum to be available through the award to deal with broadband and particularly NGA broadband not-spots, e.g. by using 'fixed' wireless broadband. This is a likely solution for NGA in sparsely populated rural areas where 'Fibre to the Home' is not a viable option, and where the 'Cabinet' is too far from homes for copper to carry high speed broadband. Essentially, fibre would be laid to one or more wireless nodes, which would then supply broadband wirelessly to a group of fairly widely scattered homes in the area.

⁸ Prof William Webb, 'Can existing WI-FI nodes boost 4G?', IET Magazine, vol 6, issue 12, December 2011

While ACS accepts the arguments in paragraphs 5.90 and 5.91 that concurrent licenses might be the best solution, and that such partial revocations would have to be used with considerable discretion, it is a matter of concern that Ofcom has no expectation that it might need to revoke any licenses within 5 years.

Pertinent to consideration of this possible exercise of licensing powers, the Scottish Government has recently published its infrastructure action plan.⁹ This includes the following aims:

‘Programme 1: Achieving a step change by 2015 will address the current digital divide and put in place infrastructure in those areas that the market will currently not go, to ensure a step change in speeds by 2015. The outcome we are seeking is a significant uplift in speeds for everyone by 2015, with speeds of 40 - 80Mbps for between 85% to 90% of premises. Our procurement strategy will seek to extend the reach further and deliver the best possible speeds for those where delivery of 40 - 80Mbps is not possible at this stage.

Programme 3: Demonstrating and delivering innovative and local solutions will be targeted at promoting locally based projects and programmes and also trialling new technologies.’

ACS is concerned that there is a potential conflict here, as in order for the Scottish Government to carry out this programme by 2015 it is very likely there will be a demand for concurrent licenses in rural areas in the next 2 to 3 years.

The Scottish Government has plans to invest some £150-200m via its new Digital Programme Office in improving Scotland’s digital infrastructure. As communications technologies converge further, we would urge Ofcom to work with the Scottish Government to come up with a more ‘joined up’ overall communications plan, where the various initiatives aimed at tackling not-spots in mobile and digital communications work together to get best value for money.

Recommendation 5: In light of the Scottish Government’s ‘Scotland’s Digital Future: Infrastructure Action Plan’ we suggest Ofcom needs to reassess the likelihood of demand for concurrent licenses in rural areas in the next 3-5 years. ACS would encourage Ofcom to work with the new Scottish Digital Programme Office to make use of synergies between the various projects to improve rural communications and gain better value for money.

⁹ <http://www.scotland.gov.uk/Publications/2012/01/1487/0>