

## **BBC Response to Ofcom Consultation: The UK Communications Infrastructure Report: Ofcom's proposed approach to its new reporting duty**

### ***Introduction***

The BBC welcomes the opportunity to respond to Ofcom's consultation document. It is important that in implementing its new duty under the Digital Economy Act 2010 (to report to the Secretary of State every three years on the UK's communications infrastructure), Ofcom ensures that the burdens it imposes on industry are proportionate and that the data it collects is fit-for-purpose (practical, relevant and useful for policy making purposes).

We welcome Ofcom's intent to rely as much as possible on information it already receives through its regulatory activities and to minimise the additional information it needs to request from industry. For instance, we believe that current reporting requirements (e.g. in DTT multiplex licenses) provide Ofcom with sufficient information to report on the availability of the DTT network.

The current consultation document is a very useful start to the process of identifying Ofcom's information needs. It addresses a number of complex and technically diverse issues across a range of industries, seeking views from a variety of industry participants up and down the value chain. It demonstrates clearly the difficulty of trying to reach common ground across a range of different industries and technologies. For instance, the terminology used in the document is inconsistent in places (e.g. the document sometimes confuses those who operate the network with those that offer services over the network). The document also contains some errors of fact (e.g. the number of DTT Multiplex operators is noted as two in A7.30, three are listed in the table in annex 7 and there are actually four in practice – Arqiva, BBC, Digital 3&4 Ltd and SDN).

Given the range and complexity of the issues under consideration, Ofcom is likely to receive a spectrum of views. It is important that industry participants have a further opportunity to consider and comment on the results of this consultation before Ofcom reaches any conclusions. We ask that, prior to publishing its Statement, Ofcom publishes for consultation a further document that summarises responses received and sets out Ofcom's preferred approach in each area.

## **BBC Response to Ofcom's questions**

Question 1. Have we got the scope right? Is the set of networks, services and operators we propose to report on appropriate and is our approach to data gathering and analysis correct?

### **Scope**

The BBC considers it important to ensure that both the breadth and the depth of the report are right to ensure that Government has a full and relevant picture of the UK communications infrastructure. The value of the report will increase over time as trends are recorded and we therefore hope that Ofcom identifies and reports consistently on a core set of networks in addition to highlighting particular networks that are of short term interest. To be comprehensive in its support for policy making, the report should also seek to report on all networks that substitute for each other and all networks that are likely to be of policy making interest in the next 5-10 years.

We therefore believe that the report should also include:

- IPTV: IPTV is a potential substitute for cable, satellite and DTT television networks that will be relevant to Ofcom's forthcoming review of wholesale digital television broadcasting platforms announced in 2006 and due to commence once Ofcom's pay TV review is completed. Ofcom itself has recognised IPTV's importance in offering "*new means of accessing content, with significant potential consumer benefits in terms of greater choice of content and control over when and how to watch it.*"<sup>1</sup>)
- Cable television: Although the consultation document refers to Virgin Media in annex 7, it is unclear whether Ofcom intends to report on the capacity, availability and resilience of cable television. We would welcome confirmation that Ofcom will collect relevant data for digital cable television.
- Analogue radio (both national and local): The potential switchover to digital radio will need to be able to assess the coverage, availability and resilience of DAB and analogue radio on a comparable basis. Moreover, Ofcom proposes to report on "*the most widely available and most commonly used public voice, data and digital broadcasting networks*" [paragraph 1.8]. Restricting the report to *digital* broadcasting networks only in terms of radio would be inconsistent with Ofcom's stated objective. In 2011, a substantial UK audience will remain dependant on analogue radio. As at August 2010 the share of radio listening via a digital platform is only at 24.6% (from 21.1% in Q2, 2009) with DAB's listening share at 15.8%, Digital TV (4.1%) and Internet listening 2.9%.<sup>2</sup> These figures suggest strongly that most UK consumers will depend upon analogue radio for the period covered by both the 2011 and 2014 reports. It is therefore vitally important for Ofcom to include analogue radio in its report

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<sup>1</sup> See, for example, paragraph 1.41 of Ofcom's Pay TV Statement, 31 March 2010.

<sup>2</sup> Source RAJAR

and to identify a consistent framework for identifying and collecting the relevant data.

When discussing digital radio (DAB), the consultation document concentrates only on national DAB and ignores the important local DAB layer. Given the important forthcoming policy considerations around local media provision and the potential need to extend coverage of the local DAB layer, we would welcome Ofcom’s confirmation that both national and local DAB will be included in its report.

**Approach**

The BBC welcomes Ofcom’s stated objective to minimise the burden it places on industry through its need to collect data for the purposes of fulfilling its new duty. We believe that in the broadcasting sector, Ofcom already collects or holds sufficient information to be able to meet its new duty in most cases.

In DTT for instance, Ofcom already holds information on multiplex coverage and receives regular reports on station availability through the reporting requirements it includes in the multiplex licenses it issues. In radio, Ofcom already has sufficient information to report on capacity in analogue radio through its spectrum management functions.

Where additional information is required, e.g. digital radio availability, Ofcom should use existing reporting requirements in related areas (i.e. DTT multiplexes) as a template for the information it needs to collect – see our answer to question 13.

We have attempted to summarise our position on coverage, capacity and availability across various broadcast activities in the table below.

	<b>Coverage</b> See Q7.	<b>Capacity</b> See Q11/12.	<b>Availability</b> See Q13/14
<b>DTT</b>	Use existing JPP resource.	Measure by reference to transmission bandwidth, and coding, multiplexing and transmission technologies used.  All parameters can be reported on from readily available data.	Under DTT Multiplex licences, average availability and exceptional outages are reported regularly to Ofcom.

<b>National DAB</b>	Ongoing work to standardise DAB coverage prediction models can generate a common model that can be used across the industry	See DTT	Similar arrangements to DTT multiplex licences would be acceptable
<b>Local DAB</b>	See national DAB	See DTT	Report as per National DAB, treating the local multiplexes in aggregate as a single national service.
<b>Analogue radio: National</b>	Ofcom already holds sufficient data to determine the coverage areas for each radio licence.  We suggest coverage is reported as a number of layers aggregated from the coverage of individual stations: e.g. one for the BBC's network FM radio services, one for its MW service and one for LW; one for each national commercial service; one for the BBC's Local and Nations Radio services; and one for the independent local radio layer.	Through its spectrum management and licensing functions, Ofcom already has sufficient information to calculate analogue radio capacity.	Given they use common network architecture, the BBC would be happy to report average availability and exceptional outages across its four FM services in a manner similar to DTT multiplex licences.
<b>Analogue radio: Local</b>	See analogue radio: National	See analogue radio: National	The BBC suggests that the various local and nations

			radio services be reported as for National radio (i.e. as if they were a single national service).
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**Question 2. Do you agree with our approach to classifying different types of networks and services? Are there better ways to define them?**

As noted above, we would welcome the inclusion in table 1 of IPTV and cable as networks to be reported on under 'television broadcast' and of local DAB and analogue radio (both national and local) under 'radio broadcast'.

**Question 3. Do you agree with our proposal to prioritise 2G mobile coverage and broadband speeds for the first report?**

The BBC is slightly surprised that Ofcom is focussing on 2G rather than 3G mobile coverage.

We welcome the proposed focus on broadband speeds, but would observe that 'actual' rather than 'up to' broadband speeds should be the focus and that the 'traffic throttling' practices of networks, which reduce artificially available download speeds of selected content, should also be included in that consideration. We would also welcome confirmation of whether Ofcom will report on mobile broadband speeds also.

**Question 4. Do you agree with our proposed reference date for the report as a date in June 2011 and are we allowing enough time for the provision of data?**

It will not be practical to report on availability within one week of the reference date (as suggested in 2.16) since the process of collating and compiling data from complex networks is not straightforward for stakeholders; it is often necessary to request it from third party network/service providers.

Given that Ofcom has two months after the reference date to prepare its report, it would be disproportionate (and indeed impractical) to seek availability data for a three month period within one week of the end of that period. We believe it is possible to provide the data within four weeks of the reference date, subject to the metrics and reporting structure being agreed well in advance.

**Question 5. How can we improve the comparability of data between different operators?**

The BBC believes that comparability between different operators should be delivered if Ofcom is clear in its data requirements and if those requirements are realistic, proportionate and technically feasible.

It is important to note that it is only reasonable to make comparisons across similar networks that perform similar functions. We would caution Ofcom against attempting to compare data such as availability and coverage across dissimilar networks.

## **Use of Electromagnetic Spectrum**

**Question 6. Do you agree with our approach for reporting on the use of electromagnetic spectrum?**

We agree that Ofcom can report on the use of the electromagnetic spectrum using data it already has available internally and need not collect further data from network operators or service providers.

## **Coverage**

**Question 7. Do you agree with our approach to measuring coverage?**

The BBC only feels able to comment on Ofcom's approach to reporting the coverage of broadcast networks.

The BBC agrees with the approach proposed to calculate predicted digital terrestrial TV coverage, i.e. using Ofcom's JPP resource. However the value of taking a measure of digital terrestrial TV coverage in 2011, half way through the UK's switchover programme, is questionable; it will not provide a full picture, since at this point the UK population will be served by a hybrid infrastructure of analogue and digital technologies. Ofcom may wish to consider whether its report in 2011 should also include a measure of the remaining analogue TV coverage.

The BBC notes a disparity between the methodology for determining terrestrial TV coverage and that for determining satellite and radio coverage, i.e. independent coverage prediction for terrestrial TV and self-reporting for satellite and radio.

In the absence of independent verification of satellite coverage, we suggest that the figures for households where satellite reception is impractical should include geographical information, not just quantitative data, in order to give a complete picture. In addition, if Sky and Freesat were to make available information they have on the ratio of successful to unsuccessful installations this could provide an indicator of coverage and enable the composite coverage of satellite and terrestrial TV to be determined with more accuracy.<sup>3</sup> We also note that it is unclear from table 5 who is considered to be a 'provider'; is it the satellite operators (Astra, Eutelsat) or the television network operators (e.g. BSkyB, Freesat) that use those satellite(s) to reach audiences in the UK?

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<sup>3</sup> We recognise, of course, that this will not take into account households who do not request satellite installation as they are already aware that they cannot receive coverage.

The BBC is aware that unlike for DTT, there is no standard prediction tool nor standard criteria to assess the coverage of either DAB (national and local) or analogue radio. Ofcom therefore runs the risk that self-provided answers from the network operators (e.g. Arqiva) or service providers (e.g. the BBC or local and national multiplex operators) will be based on inconsistent and non-comparable parameters.

We would recommend that the ongoing work on standardising DAB coverage prediction models continues in order that it can be used to provide Ofcom with consistent coverage modelling.

In terms of analogue radio, the BBC considers that Ofcom already holds sufficient data to be able to determine the coverage of each station in terms of the measured coverage areas which are calculated and published for each of the licences. We suggest that it would be appropriate for this report to consider the coverage of analogue radio services as a number of layers aggregated from the coverage of individual stations: e.g. one for the BBC's network FM radio services, one for its MW service and one for LW; one for each national commercial service; one for the BBC's Local and Nations Radio services; and one for the independent local radio layer. Ofcom may wish also to publish an assessment of the extent of community radio given the extent of licensing in this sector.

#### Question 8. How do you think we should establish an appropriate level of granularity and the right technical assumptions to make the data useful?

Generally, 100m<sup>2</sup> pixels are used by the broadcasters when assessing the coverage of their network. The conditions under which reception is being assessed also need to be specified. These might include such factors as:

- Fixed or portable reception; outdoor, indoor or in-car
- For digital systems, the required percentage locations
- The percentage of time for which reception is to be protected from interference

#### Infrastructure Sharing

#### Question 9. Do you agree our proposed approach will enable us to report adequately on arrangements for infrastructure sharing? Are there reasons why network operators would be unable to provide us with the data we have proposed to collect?

The BBC broadly supports Ofcom's proposed approach. We note, however, that in paragraph 3.24 Ofcom states that it would not be useful to gather data for "*radio and television broadcast networks, where Arqiva is the only commercial provider.*" Ofcom then proposes to focus on three areas, including TV and radio transmitter masts.

The consultation document appears to suggest that it will be for Arqiva alone to report on mast sharing for television networks and DAB (both national and local). We would welcome confirmation from Ofcom that this is the case.

We would also note that Ofcom should additionally collect information on the network operators (e.g. BSkyB and Freesat) that share common satellites and the IPTV operators (e.g. BT Vision, Talk Talk TV) that share common infrastructure.

## **Wholesale Network Access**

**Question 10. Do you agree our proposed approach will enable us to report adequately on the provision of wholesale network access? Are there reasons why network operators would be unable to provide us with the data we have proposed to collect?**

Yes, we agree that Ofcom's approach will allow it to report on wholesale network access with respect to broadcast networks. Indeed, there is sufficient information available publicly and through Ofcom's regulatory activities to allow it to report on wholesale network access in broadcast – e.g. to identify the TV and radio channels using Sky's distribution system or Arqiva's multiplex services - without having to seek further information from service providers or network operators.

## **Capacity**

**Question 11. How do you currently measure the capacity of the network?**

The BBC agrees that the capacity of digital TV and national and local radio DAB multiplexes can be measured by reference to the transmission bandwidth, and the coding, multiplexing and transmission technologies used. The number of services which can be carried will be determined by how much of the resulting available bitrate is allocated to each TV, radio or other service. All of these parameters can be reported on from readily available data. We would note, however, that potential developments to the technologies employed which could affect capacity might well be commercially confidential.

We believe that Ofcom already has sufficient information available to it through its spectrum management and radio licensing functions to enable it to report on the capacity of analogue radio.

**Question 12. Do you agree that we should define specific metrics for different types of networks?**

The BBC agrees that Ofcom should define the most appropriate metrics for different networks, always aiming to be within the boundaries of existing data where possible. We would encourage Ofcom to aim to make those metrics as comparable as possible across similar networks.



## Availability

Question 13. Do you agree with the proposed approach of gathering specific reports of outages above a certain threshold, and how do you think such thresholds should be set?

The BBC believes that this particular duty is the one which could generate the heaviest burden on industry. It is also the most commercially sensitive area for broadcasters. We therefore encourage Ofcom to take extreme care in defining its thresholds.

Availability is an important issue for the BBC and an important contractual issue for all multiplex operators. We believe that Ofcom should seek availability data from the relevant multiplex operators for digital television and local and national digital radio and from broadcasters in the context of analogue radio.<sup>4</sup>

Cable, satellite and IPTV availability data should be provided by the relevant service providers (e.g. Virgin Media, BSkyB/Freesat, BT Vision Talk Talk TV respectively).

It is important that the thresholds adopted by Ofcom recognise the relative importance to citizens and consumers of the service under consideration. For instance, lost availability of emergency service access via telephone networks (as referenced in paragraph 3.69) is significantly more important than lost radio coverage; their respective reporting thresholds should recognise this.

It is also important that availability figures provide a good representation of the performance of broadcast networks. For broadcast networks (DTT, local and nation DAB and analogue radio), we believe it is unnecessary and impractical to record 'customer service hours lost'.

Under the terms of its multiplex licence for Multiplex B, the BBC provides annual reports to Ofcom of the availability of this service. In line with guidance from Ofcom, this is presented as the availability of each transmitter in the network carrying that service calculated across two six month reporting periods in each year. The average availability is then tested against the target set out in Ofcom's technical performance code and where it is lower in any instance, we supply a short exception report detailing the circumstances leading to this.

We consider that this regime works well for Multiplex B and it would be appropriate to extend this across other services for the purpose of this report. The BBC would be content to supply availability data in a similar form for the transmission of Multiplex 1 for instance.

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<sup>4</sup> To avoid disproportionate requests to small companies, we suggest that Ofcom should restrict itself to the BBC and broadcast groups that hold more than 20 radio licenses when seeking information on local analogue radio.

In respect of our other broadcast services, the BBC considers that these should be reported on in a similar fashion but averaged across groups of services, with the groupings based on the architectures employed. So, for example, there is an extremely high degree of commonality between the infrastructure used to transmit BBC network FM radio services. In those instances, we consider that similar reporting for these services considered as a whole would be appropriate - i.e. performance averaged across BBC Radios 1, 2, 3, and 4. A similar approach could be adopted for MW and LW services. Further, as BBC Local and Nations Radio forms a single nationwide layer of coverage - and reflects a generally similar standard of engineering and architecture at each site - it is appropriate to think of those forty-six services as a single service to be reported against. We would also be prepared to report a similar level of detail for our national DAB multiplex.

In each case, we would propose to nominate a target availability figure for each bundle of services as the threshold for exception reporting; this target would be set to be broadly comparable to that currently used by the digital television multiplex licensees.

We are also conscious that a large proportion of the disruption seen on any of the transmission networks comes from two factors - one under our control, one not: planned works to enable upgrades and maintenance and failures of the public mains electricity supply respectively. Outages caused by either of these are not strictly reflective of the resilience or design of the networks, although we obviously appreciate that outages affect the consumer in the same way regardless of their cause. We suggest that it might be instructive for Ofcom to consider reporting the availability of the networks both including and excluding these factors to get a better understanding of the performance of the network in a steady-state.

When reporting exceptional outages, we believe the three relevant metrics should be duration of service loss, number of households affected (e.g. the number of households served by the transmitter or relay station that suffered the problem<sup>5</sup>) and whether the outage occurred in peak or off-peak. This would be sufficient to meet Ofcom's requirement to report on the health of the infrastructure.

**Question 14. For smaller outages, which statistical data do you think it is valuable to gather?**

See our answer to question 14 above.

We would caution Ofcom in any attempt to make comparison across unrelated networks. We note in paragraph 3.70 that Ofcom is seeking to achieve comparable measures. It is clearly important to be able to make

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<sup>5</sup> Forcing respondents to calculate expected audiences that would otherwise have consumed the service during the outage would be disproportionate and unnecessary to meet Ofcom's reporting duties.

comparisons of the same network over different time periods. It is also important to be able to compare networks that offer similar service. However, we do not believe it would be appropriate to try to compare the availability of a television broadcast network with, say, mobile networks.

**Question 15. Is a three-month reporting period sufficient to assess availability performance?**

The BBC would recommend six months as a more appropriate reporting period; the longer period provides a more reliable and informative measure. We do recognise, however, that a six month period may not be practicable for the first report – especially if Ofcom issues a second consultation document. If Ofcom does adopt a shorter reporting period for its first report, it should make clear the risks of basing policy decisions on such short term data.

## **Resilience**

**Question 16. Do you agree with our approach to reporting resilience and emergency planning and the list of data we would ideally collect from CPs?**

Risk assessments, mitigations and planned emergency responses are highly confidential for reasons of both competition and security. We would suggest that information collected for this reporting purpose is kept to an absolute minimum and is not published for any respondents under any circumstances. It should be collected from the network operators (e.g. Arqiva in DTT) rather than multiplex operators or service providers.

**Question 17. Do you already provide information to other organisations and government agencies around resilience issues? If so, what are they?**

The BBC reports to the BBC Trust.

**Question 18. Do you agree that there are additional networks and services which are of sufficient importance to include in the report? If so, what are they?**

In preparing its report, Ofcom may wish to consider the level to which the communications infrastructure is dependent on other infrastructures, such as the electricity generation network. Indeed, identifying outages caused solely by failures in the electricity network clearly demonstrates how reliant the broadcast network is on the reliability and availability of the electricity network.

Ofcom may also wish to consider reporting on 'GPS' (global positioning system), which is becoming increasingly important to the provision of location specific services over mobile for instance.

## International Comparisons

Question 19. Are there other sources of international data which we should consider? Are we focusing on the right networks and metrics? In particular, have we got the right metric for commenting on next-generation access deployments?

The BBC is not aware of other relevant sources of information that Ofcom should include in its analysis. In terms of broadcasting infrastructure, it is debatable whether international comparisons are relevant given the variety of broadcast infrastructures and technologies that exists in different countries, which will reflect local geography and technology choices. Indeed, it is unlikely that comparable metrics are readily available. We recommend that Ofcom include in its report only those networks capable of being compared internationally (e.g. where internationally agreed metrics exist); we would question whether broadcast infrastructure falls into that category.

The BBC is not in a position to comment usefully on next generation networks.