Speaking TV programme guides

Would they help people with visual impairments, and are they feasible?

Call for inputs

Publication date: 10 July 2014

Closing Date for Responses: 8 September 2014

About this document

This document is a ‘call for inputs’ on speaking TV guides. Ofcom is seeking views on whether these guides could help blind or visually impaired people, and if it would be feasible to introduce them across the UK’s most popular TV services.

Around two million people have visual impairments that make it difficult or impossible for them to use on-screen TV programme guides, though watching TV remains important to them. We are seeking views from interested parties, particularly visually impaired viewers and TV service providers.

In particular, we would like to know whether TVs and set top boxes that allow people to hear information in on-screen TV programme guides could make it easier for blind or visually impaired viewers to choose what they want to watch.

Ofcom would also like to hear whether other forms of assistance – such as mobile apps – currently offered by TV providers could be a suitable alternative to speaking EPGs.

We will consider carefully what respondents say, before deciding whether or not changes to our guidance to EPG providers may be appropriate.

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Section 1

Summary

Call for inputs

1.1 In this call for inputs, Ofcom is seeking the views of interested parties, in particular of visually-impaired viewers and TV service providers, on the benefits of and scope for on-screen programme guides (often known as Electronic Programme Guides or EPGs) that can read out programme information. Please send us your response by **8 September**. Annex 1 explains how this can be done.

Many people who are blind or visually impaired can find EPGs on television difficult or impossible to use

1.2 Most TV viewers are familiar with the on-screen programme guides or EPGs that come with our digital TV services, whether provided by Freeview, Freesat, Sky, Virgin, BT or TalkTalk. On average, people watch just over 4 hours of TV a day[1], and these guides play an important part in helping viewers choose live programmes, make recordings and select catch-up or other on demand content to view.

1.3 Most of us take these EPGs for granted. However, as we explain in section 2, an estimated 1.8 million blind or visually-impaired people in the UK can find it difficult or impossible to use EPGs, even though they watch just as much TV as everyone else. The number of people with sight problems is projected to increase, as the UK population ages.

1.4 Those who find it difficult or impossible to use EPGs are unlikely to benefit fully from the wide range of broadcast programming now available, even though much of it is audio described. As EPGs become an important gateway to online content, such as live-streamed TV channels and on-demand films, the gap between the benefits available to those with and without visual impairments is likely to widen significantly.

Ofcom has a duty to require EPG providers to make their EPGs accessible

1.5 Recognising the importance of EPGs to consumers, Parliament gave Ofcom a duty (explained in section 2) to provide guidance on the practices to be followed in the provision of EPGs. These practices must include the incorporation of such features as Ofcom considers appropriate for ensuring that people with disabilities affecting their sight or hearing (or both) may use EPGs for the same purposes as other people, so far as practicable.

1.6 To this end, Ofcom's *Code of practice on electronic programme guides* requires EPG providers, amongst other things, to 'make such adjustments to their EPGs as are practicable to secure that they can be used by people with disabilities affecting their sight or hearing for all the same purposes as they are used by other people'.

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[1] *The Communications Market Report: United Kingdom*, Ofcom, August 2013 http://stakeholders.ofcom.org.uk/market-data-research/market-data/communications-market-reports/cmr13/uk/

1.7 The practices we can require extend only to the use of EPGs in relation to the listing or promotion of programmes included in programmes services (TV channels), not to programmes included in catch-up or other on-demand services. However, given our other duties (also summarised in section 2), we want to encourage relevant parties to ensure that those parts of EPGs that provide a gateway to catch-up and other on demand services are also accessible to people with visual impairments.

We think 'speaking EPGs' could be the best way of helping people with visual impairments to make better of use programme guides

1.8 EPG providers have already incorporated a variety of accessibility features in their EPGs, including features that allow high contrast displays, a choice of colours for backgrounds and text, the ability to magnify text, and audible cues for programmes with audio description. Some have also developed apps that can be used with mobile devices (such as phones or tablets) to voice information about TV programmes, and control some aspects of the TV. We summarise these in section 3. Ofcom's understanding is that these features are helpful to some people with visual impairments, but do not meet the needs of all, particularly those with no useful vision, and those with restricted vision who may struggle to afford or use unfamiliar devices.

1.9 Ofcom has considered whether there may be scope for EPG providers to do more to improve the usability of their EPGs. In particular, we have sought to assess the potential for speaking EPGs, having regard to commercial and technological developments, and to the discussions we have had with several of the leading EPG providers. We have also considered representations from the Royal National Institute of Blind People (RNIB).

1.10 On the basis of information gathered so far, Ofcom considers that:

a) including features in EPGs that allow text to be voiced (so-called text- to-speech, or TTS) may make it much easier for people with visual impairments to use EPGs for more of the same purposes as sighted people;

b) it may now be practicable for providers to incorporate such features in future versions of their EPGs; and

c) ancillary devices and applications that some EPG providers are offering as an alternative are likely to be helpful to some visually-impaired TV viewers, but may be difficult to use and expensive to afford for many visually-impaired viewers, so may not be adequate substitutes.

1.11 We now wish to seek evidence and comments in relation to these propositions.

We would welcome your views and any evidence you can provide

1.12 Ofcom would welcome responses from any people or organisations with an interest in this issue, in particular from visually-impaired TV viewers and EPG providers. We have asked some specific questions in this document, but would also welcome any other comments in relation to the issues considered in this document. Annex 1 explains how you can respond to this document, including by phone if you would find that more convenient.

1.13 This document is available on Ofcom's website in a PDF version which is compatible with most screen-readers. We have also prepared an audio version of this document,

which can be found on Ofcom's website at http://www.ofcom.org.uk/static/consultations/7940-speaking-tv/speaking-tv.mp3 Please note that the audio version may take some time to load.

1.14 If you would like this document in an alternative format or another languages, you can call our Advisory Team from Monday to Friday between 09:00 and 17:00 on 020 7981 3040 or 0300 123 3333. If you are deaf or speech-impaired, you can use our textphone numbers, which are 020 7981 3043 or 0300 123 2024. We will consider all reasonable requests.

1.15 We explain in Annex 1 how you can respond to this document, including by phone if you would find that more convenient.

Section 2

Legal framework and background

Introduction

2.1 In this section, we set out some context for the call for inputs, including:

a) the duties placed upon Ofcom and requirements imposed on EPG providers in relation to the accessibility and usability of EPGs;

b) the estimated number and circumstances of people with visual impairments, and the range of conditions leading to sight loss; and

c) the particular circumstances of older people, who account for the majority of those with visual impairments.

Duties of Ofcom and requirements imposed on EPG providers

Statutory provisions

2.2 Ofcom has specific duties in relation to the accessibility of EPGs, set out in section 310 of the Communications Act 2003 ('the Act'). In particular, these are to draw up, and from time to time review and revise, a code giving guidance as to the practices to be followed in the provision of electronic programme guides (section 310(1)).

2.3 Section 310(3) provides that the practices to be required by the code must include the incorporation of such features in electronic programme guides as Ofcom consider appropriate for securing that persons with disabilities affecting their sight or hearing or both –

a) are able, so far as practicable, to make use of such guides for all the same purposes as persons without such disabilities; and

b) are informed about, and are able to make use of, whatever assistance for disabled people is provided in relation to the programmes listed or promoted.

2.4 Ofcom's duties under section 310 do not extend to improving the usability of EPGs in relation to non-broadcast content. However, section 10 of the Act gives Ofcom a duty to take such steps and to enter into such arrangements as appears to it calculated to encourage others to secure -

a) that domestic electronic communications apparatus is developed which is capable of being used with ease, and without modification, by the widest possible range of individuals (including those with disabilities); and

b) that domestic electronic communications apparatus which is capable of being so used is as widely available as possible for acquisition by those wishing to use it.

2.5 Section 10 also says that Ofcom has a duty from time to time to review whether further steps are needed, or further arrangements should be entered into, for the purpose of performing the duty summarised above.

2.6 In carrying out its duties, Ofcom must have regard to a range of factors set out in section 3 of the Act, including the needs of persons with disabilities, of the elderly and of those on low incomes (section 3(4)(i)). Further, under section 3(5), in furthering the interests of consumers, Ofcom must have regard, in particular, to the interests of those consumers in respect of choice, price, quality of service and value for money.

Ofcom's Code on Electronic Programme Guides

2.7 Paragraph 6 of Ofcom's Code on Electronic Programme Guides ('the Code') [2] sets out general principles with which EPG providers must comply. Amongst these is a requirement, in particular, to make such adjustments to their EPGs as are practicable to secure that they can be used by people with disabilities affecting their sight or hearing for all the same purposes as they are used by other people.

2.8 Paragraph 7 of the Code says that 'Ofcom expects EPG providers to consult disability groups about the way they meet their obligations under the code'.

2.9 Paragraph 8 of the Code notes that 'much of the functionality of EPGs is dependent upon set top box hardware and software, as well as the data made available by broadcasters', but makes clear that 'Ofcom expects the needs of people with disabilities affecting their sight or hearing to be an integral part of planning for the future development of EPGs'.

2.10 In section 4, we discuss the accessibility features that are already incorporated in EPGs, including some with text to speech.

People with visual impairments

The number of people with visual impairments is significant, and expected to grow

2.11 Research undertaken by Access Economics estimated the prevalence of visual impairment in the UK population, by age, gender and ethnicity in 2008.[3] On this basis, it was estimated that 1.8 million people had partial sight or blindness in 2008, of whom 1.13 million (63%) were female and 664,000 (37%) were male. About 218,000 people were estimated to have no sight, of whom 140,000 (64.3%) were female and 78,000 (35.7%) were male.

2.12 The research found that there are people of all ages with visual impairments, but that the group is skewed heavily towards older people. The research suggested that, of the estimated 1.8 million blind and partially-sighted people in the UK in 2008, just under a quarter (418,810) were under 65 years old, and more than three quarters (1,378,178) were 65 or older. These numbers excluded the many more people who can see reasonably well with prescription lenses but who may struggle when reading an EPG.

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[2] *Code on Electronic Programme Guides*, Ofcom (http://stakeholders.ofcom.org.uk/broadcasting/broadcast-codes/epg-code/)

[3] *The economic impact of partial sight and blindness in the UK adult population,* July 2009, Access Economics (http://www.rnib.org.uk/aboutus/Research/reports/otherresearch/Pages/fsluk1.aspx)

2.13 Applying these prevalence rates to future population projections, the research also estimated how the numbers of people might change over the next few decades. On this basis, the total of those with partial sight and blindness in the UK was projected to grow to 2,262,124 by 2020, and to over 4 million by 2050[4]. Much of this would be driven by the UK's ageing population, leading to an increase in the number of people with age-related macular degeneration and cataracts.

Visual impairment has many causes

2.14 The five main causes of visual impairment are age-related macular degeneration, cataracts, diabetic retinopathy, glaucoma, and refractive errors:

a) age-related macular degeneration (AMD) is an incurable eye disease and a leading cause of blindness in older people. AMD occurs with degeneration of the macula, which is the part of the retina that enables central vision and seeing fine detail. Damage to the macula results in central vision loss. According to the Access Economics research, people with AMD accounted for 16.7% of all those who are blind or partially sighted (and a higher proportion of those who are blind, rather than partially sighted);

b) cataracts, formed from clumps of protein on the surface of the eye's lens that have the effect of scattering light, can result in clouding of a small area of the lens. Over time, the cataract may grow larger and cloud more of the lens, making it hard to see. They often occur in older people. People with cataracts comprise 13.7% of the blind and partially sighted;

c) glaucoma is a group of diseases that can lead to damage to the eye's optic nerve and result in blindness. Glaucoma accounts for 5.3% of those who are blind or partially sighted;

d) diabetes retinopathy (DR) is a complication that can arise from diabetes, a group of metabolic diseases in which a person has high blood sugar. DR can result in micro-aneurysms on the tiny blood vessels inside the retina. As the disease progresses, some blood vessels that nourish the retina are blocked, causing vision loss. People with DR account for 3.5% of those who are blind or partially sighted; and

e) in their more extreme forms, irreversible refractive errors (e.g. short or long sightedness) can result in profound sight loss (including blindness) that cannot be corrected with refractive lenses. People with refractive errors account for 53.5% of those who are blind or partially sighted.

2.15 Less common conditions such as neuro-ophthalmic disorders (main disorders in children), retinitis pigmentosa and other retinal conditions account for the remaining prevalence of partial sight and blindness. These account for 7.4% of those who are blind or partially sighted.

[4] *The economic impact of partial sight and blindness in the UK adult population,* July 2009, Access Economics, p. 45 (http://www.rnib.org.uk/sites/default/files/FSUK_Report.pdf)

TV is important to blind and visually-impaired people

"Contrary to what people might think, blind and partially sighted people do watch a lot of TV and I would certainly put myself in that category…' Male TV viewer[5]

2.16 A survey commissioned by Ofcom in 2006 found that blind and visually-impaired people watched more television than those without sight impairments.[6] For a number of reasons, this is hardly surprising:

a) many will have watched television regularly before their sight became impaired, and will not want to give up a familiar and enjoyable pastime;

b) many will live in a household with sighted people, and will want to share in the same activities;

c) many television programmes have a significant audio component (e.g. news) and can be followed without vision; some are accompanied by audio description, a narrative fitted in within the dialogue, explaining what is happening on screen;

d) people with visual impairments are likely to have more leisure time than those without. Many are of retirement age; others may be unemployed. Older people in particular are likely to have more leisure time than people of working age, but have less money to spend on leisure activities, and be less able to engage in physically demanding activities; and

e) television helps people to cope with social isolation, to which older people are prone. Between 30% to 40% of older people in the UK live alone[7]; 14% of them have no living children[8], rising to 23% among the very old.[9] Some older people are effectively housebound for much of the day.

Despite this, most people who are blind or visually-impaired are likely to find using a conventional EPG difficult or impossible

How different levels of sight loss affect vision

2.17 The extent of sight loss amongst those who are visually impaired varies considerably. Those with profound sight loss cannot tell by the light where the windows are. Those with severe sight loss (12%) cannot see well enough to recognise a friend close to his or her face. Those with 'moderate' visual impairments (25%) cannot see well

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[5] An introduction to Voice Guidance on Panasonic talking TVs (YouTube) (http://www.youtube.com/watch?v=FCMg5XQhXGc)

[6] At a time when, on average, UK residents were watching around 3.46 hours a day, those with visual impairments were watching 3.8 hours of television a day. *Provision of access services: research study conducted for Ofcom*, Ofcom, March 2006 (http://stakeholders.ofcom.org.uk/binaries/consultations/accessservs/annexes/provision.pdf)

[7] Eurostat: The social situation in the European Union 2005-2006 (Edition: April 2006) (http://ec.europa.eu/employment_social/social_situation/docs/ssr2005_2006_en.pdf).

[8] Young, Harriet and Grundy, Emily (2008) Longitudinal perspectives on caregiving, employment history and marital status in midlife in England and Wales. Health and Social Care in the Community, 16 (4). pp. 388-399. ISSN 1365-2524 (http://eprints.lse.ac.uk/53809/).

[9] Office for National Statistics: Social Trends – Full Report (Edition No 37: 2007) (http://www.ons.gov.uk/ons/rel/social-trends-rd/social-trends/no--37-2007-edition/social-trends-full-report.pdf).

enough to recognise a friend across the room, or to read a large print book. Most people who are blind or visually impaired are categorised as having 'mild' sight loss (63%), but as this cannot be corrected by lenses, even they may not recognise a friend across the road, and will face difficulty seeing buttons on a remote control or seeing the picture on a TV screen.

2.18 Thus, even those with mild visual impairments would face considerable difficulties in using a conventional EPG. In effect, they must work much harder than viewers without sight impairments to decipher and use on-screen information. Depending on the amount and type of vision they have, they may have to:

a) sit very close to the screen and use magnification to be able to read information in an EPG;

b) spend longer scanning the screen because of their limited field of vision; and

c) concentrate much harder to work out what they need to know based on the limited amount of information they can glean.

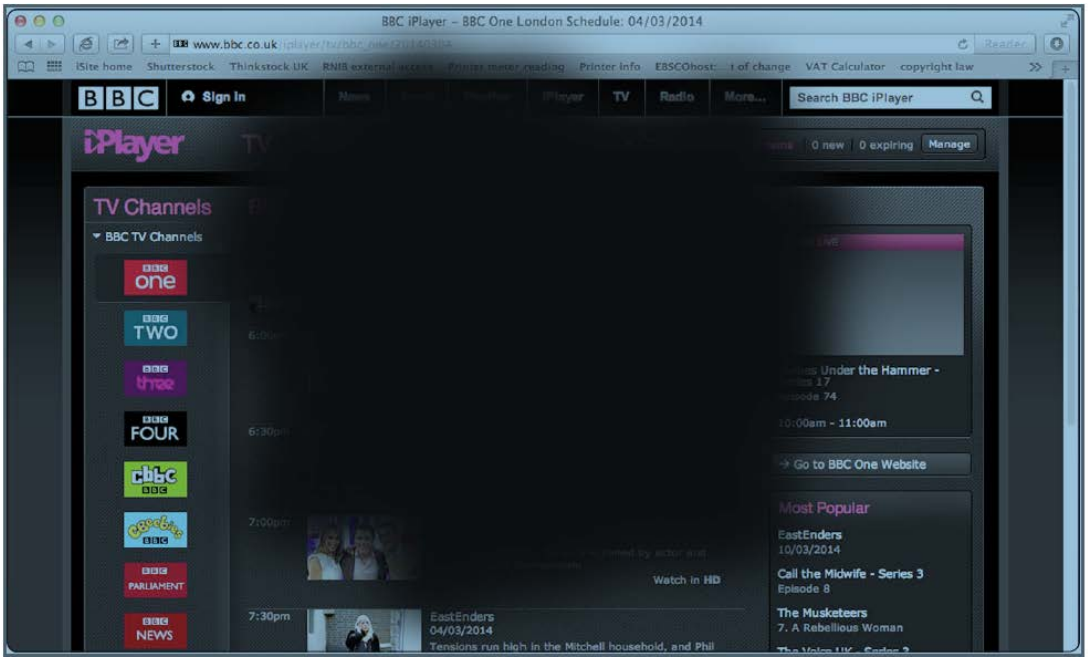
Ofcom's roundtable

2.19 To improve our understanding of how visual impairment affects people's use of EPGs, Ofcom convened a roundtable with visually-impaired people in April 2014. The roundtable was also attended by the major EPG providers – Sky, Virgin, YouView, Freesat and Digital UK (which manages the Freeview EPG) – and by groups representing the interests of blind and visually-impaired people – the RNIB, the Macular Society and the Royal Blind / Scottish War Blinded charity.

2.20 The visually-impaired people at the roundtable talked about their experience of using (or not using) EPGs to find out about TV programmes, as well as other means of finding out what was on TV.

2.21 All found using conventional EPGs either difficult or impossible. One participant reported that his peripheral vision meant that he had to scan and rescan the EPG in order to decipher the information it provided. Figure 1 below gives an impression of what someone with peripheral vision might see.

Figure 1: How a screen might appear to someone with central vision loss



Source: RNIB

2.22 Another participant explained that, although she was able with difficulty to see portions of the EPG, she found the whole process too onerous, and instead used her laptop computer to find and view films and TV programmes, even though she would have preferred to watch programmes on a larger TV screen.

2.23 The use of 'speaking' mobile phone apps to find out about TV programmes was also demonstrated. Those who were 'tech-savvy' found them a useful tool. However, they also felt that the complexity of the layered menus, which were not always intuitive, would make them difficult for some people to use.

2.24 A few participants had used 'speaking' EPGs (explained in more detail in section 3), and those who had not encountered them hoped that they could be become more generally available.

2.25 Industry representatives at the roundtable explained some of the measures that had been taken to help people with some sight to use EPGs, and the work that was planned to make EPG apps for mobile devices easier to use. However, it was recognised that these would not be suitable for everybody, and that many would find speaking EPGs helpful. Technology did not pose a particular constraint to the introduction of speaking EPGs, although some existing platforms might be subject to technical constraints, at least in the short term. However, the main barrier was commercial – the incentives on manufacturers and service providers to enable speaking EPGs were quite weak, as other features would produce a better commercial return.

2.26 It is clear that the difficulties encountered by some people with partial sight are enough to discourage some people from attempting to use conventional EPGs. A study in 2002 on how blind and partially-sighted viewers used EPGs found that most participants relied on family or friends to tell them what was on TV, or on their

memory of when certain programmes (e.g. soaps) were on TV. Alternatively, they might browse through different channels.[10]

2.27 However, some blind or visually-impaired people must cope by themselves – research suggests that there are some 123,000 households in the UK including people with severe, mild or moderate sight loss that do not include a sighted adult.[11]

2.28 The net result is likely to be that many viewers with visual impairments face a restricted choice of viewing. Indeed, a survey carried out in 2008 found that people with visual impairments who could not see the EPG tended to watch a more limited repertoire of channels than others. They relied heavily on memorising channel numbers, and had to relearn them when channels were re-ordered.[12] This was echoed in the discussion at Ofcom's roundtable.

Some people can find other ways of substituting for conventional EPGs, but older viewers face additional barriers to coping with sight loss

2.29 The impact of visual impairment will also vary according to the personal circumstances of each person. Some people who were born with visual impairments or acquire them early on in life, have grown up with the use of assistive devices. As a result, they may be adept at making use of the text to speech facilities offered by computers equipped with screen reading software, and a variety of other devices (including some smartphones). At Ofcom's roundtable, a blind person demonstrated how a smartphone app could be used to find out information about TV programmes, but also how complex and non-intuitive this process might be for most people.

2.30 Older people, who comprise the large majority of those with visual impairments, can face additional barriers to coping with sight loss:

a) those who have retired and rely upon pensions may be unable to afford devices incorporating assistive technology[13], or reluctant to risk the expenditure because they are unsure how much it will help; and

b) while some remain in full possession of other faculties[14], older people often experience a decline in some of their abilities, including visual and auditory

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[10] Mark David Rice. *A Study of Television and Visual Impairment: Prospects for the Accessibility of Interactive Television* (2002). (http://homepages.abdn.ac.uk/j.masthoff/pages/EuroITV03/Posters/Poster3.pdf)

[11] *Study on Access to Smart Meter Benefits for Blind and Partially Sighted Consumers,* SQW in partnership with i2 media research and Astutim, March 2013 (https://www.gov.uk/government/uploads/system/uploads/attachment_data/file/175653/access_to_smart_meter_benefits_for_bps_consumers.pdf)

[12] *People with visual impairments and communications services* , July 2008, Ofcom (http://stakeholders.ofcom.org.uk/market-data-research/other/tv-research/visual/)

[13] A recent report suggests that the average pension pot is under £37,000, and that this would generate a retirement income of just £1,340 a year, resulting in a very modest supplement to the state pension. *Help to save – defusing the pensions timebomb,* Policy Exchange, January 2014 (http://www.policyexchange.org.uk/images/publications/help%20to%20save.pdf)

[14] Research suggests that the impact of conditions and impairments associated with very old age and particular types of disability vary widely among those who experience them. Key factors affecting this include the availability or otherwise of family support, the socio-economic background of the people concerned, and attitudes towards technology. *Consumer research with 'older old' consumers and those living with cognitive, physical and sensory disabilities,* Toynbee Hall, September 2012 (http://www.paymentscouncil.org.uk/files/payments_council/payments_council_-_policis_and_toynbee_hall_older_old_and_disability_report_24.10.12_final.pdf)

perception, attention span, memory, motor functions and touch, and speech production.[15]

2.31 There are other, less obvious, barriers. For example, it is not unusual for people of all generations to take time to confront the reality of permanent sight impairment, and to adopt coping strategies. One younger participant in Ofcom's roundtable explained that it took a long time to come to terms with sight loss. Older people may lack confidence in their ability to master unfamiliar technology, and may even be unwilling to try it out, either because they fear wasted expenditure, or because they do not want to risk failure.

[15] Schaie, K. W. (1990). Intellectual development in adulthood. In J. E. Birren & K. W. Schaie (Eds.), Handbook of the psychology of aging, 3rd ed., (pp. 291-309). New York: Academic Press. (http://www.uwpsychiatry.org/sls/Intell%20Dev%20in%20Adulthood.pdf)

Section 3

EPG accessibility features

Introduction

3.1 Many EPGs already incorporate features for people with visual impairments. In this section we summarise:

a) the relevant accessibility features in EPGs offered by the most popular TV services, both subscription and free-to-air;

b) EPGs and TV programme guides that use text to speech, whether integrated into TV receivers (both TVs and set top boxes) or made available through secondary devices, such as the Sky Talker, or apps for smartphones and tablets.

Accessibility features of EPGs on most popular TV platforms[16]

3.2 The table below identifies the main accessibility features on the most popular TV platforms – both subscription and free to air.

Figure 2: EPG accessibility features in the most popular TV services

Platform	**Sky**[17]	**Virgin** TiVo Box & V+HD	**BT TV**	**YouView** Youview+ for BT TV	**Freeview**	**Freesat** (including Freetime)
High contrast EPG	No	No	No	Yes – Accessibility Settings	Some[18]	Some, including Freetime boxes, which allow changes to transparency of dialogue boxes.[19]
Access to AD	AD setting in menu; AD	AD setting in menu; AD activation	AD settings in menu; AD button on	AD activation from	All Freeview HD products have AD[20]	All Freesat products have access

[16] As of April 2014
[17] Based on: Sky Digibox; Sky+; SkyHD; Sky+HD (Thomson box); Sky+HD (BSkyB, Pace and Samsung boxes)
[18] For example, the Goodman's 'Smart Talk' set top box.
[19] Source: Humax Foxsat HDR User Manual (http://www.humaxfoxsathdr.co.uk/leaflets/Humax-Foxsat-HDR-User-Manual.pdf).
[20] *Does Freeview provide audio description for the visually impaired?* Freeview (http://www.freeview.co.uk/articles/faq/more-about-freeview/accessibility/does-freeview-provide-audio-description-for-the-visually-impaired.html)

	activation from information bar/"Help" button on remote control	from information bar (TiVo)	remote control	information bar; AD button on remote control		to AD[21]
Change AD volume	No	No	Yes – Accessibility Settings	Yes – Accessibility Settings	Only on products capable of pre-mix AD[22]	No
Can highlight AD content in EPG	Yes	No	No	No	No	No
Other features	Audio signal (beep) on AD content	"Audio Cues": Sounds that show actions and reactions to button presses on the remote control (TiVo)	No	"Zoom" button on remote control to make menus and guides bigger		

Speaking EPGs

3.3 Both Panasonic and Samsung now offer televisions equipped with speaking EPGs. These allow viewers to use the 'up' and 'down' and 'ok' buttons on their remote controls to navigate EPG menus. When an item is selected (see example in Figure 3 below) the text is read out. The same applies to menus including channel listings, programme details, and accessibility settings.

[21] *Accessibility*, Freesat (http://www.freesat.co.uk/get-freesat/accessibility)
[22] *Access Services for Digital Television*, Frans De Jong, October 2004 (https://tech.ebu.ch/docs/techreview/trev_300-de_jong.pdf)

Figure 3: Screen shot of a Panasonic television, showing an on-screen menu of text to speech options

3.4 Speaking EPGs are also available in set top boxes manufactured under the TVOnics and Goodman[23] brands in the UK, and the Bush[24] and Hills[25] brands in Australia, which were made available to eligible households at the time of digital switchover in Australia.

3.5 Each of the set top boxes has similar features. The TVOnics box, for example, offers a fully accessible EPG, enabling visually-impaired viewers to find out what's on, and to record and playback programmes. It also enables access to settings menus, e.g. to set parental controls and re-tune the receiver. The box uses natural-sounding synthesised speech, which can be adjusted to five different speeds, and can also be set to cut down the amount of information read out once users are familiar with it.

3.6 None of the set top boxes currently available with pay TV services in the UK are equipped with speaking EPGs.

User feedback

3.7 A blind television viewer demonstrated at Ofcom's roundtable how he was able to use TTS to navigate different levels of the EPG on his Panasonic television. He had been unable to use conventional EPGs, but was now able to use the TTS-enabled EPG to find out what was on, and to turn on audio description. He particularly valued the independence that a speaking EPG provided.

3.8 Similar sentiments were expressed by a blind TV viewer reviewing the Panasonic for RNIB's website:

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[23] *Goodmans Smart Talk Freeview box,* Which?, November 2010 (http://www.which.co.uk/technology/tv-and-dvd/reviews-ns/goodmans-smart-talk-freeview-box/)
[24] Source: Bush BHAS03 set top box (http://www.bushaustralia.com.au/details.aspx?pid=229&stid=9)
[25] Source: Hills Talking set top box. (http://www.hillsantenna.com.au/talkingstb)

"The text-to-speech is really important because again I don't have enough sight to be able to see the text on screen, so if I don't have speech in the television to tell me what channel I'm watching, or what's coming up next on the electronic programme guide I'm really kind of fumbling around in the dark." - Male TV viewer[26]

3.9 A viewer with partial vision also found this feature useful:

"I have central vision loss and I am reviewing my new Panasonic TV with Voice Guidance ... I am by no means a techy type, but I did find the setting up straightforward… Once the voice guidance is set up you use your TV like any other. The difference is you have far more control, information and choice. … It is absolutely brilliant to be able to surf the channels and hear what channel you are on, what programme is showing and what programmes are coming up…" [27] *- Female TV viewer with central vision loss*

3.10 The same viewer welcomed 'the fact that the software is built into the mainstream product and is no additional expense or hassle'. Participants in Ofcom's roundtable hoped that speaking EPGs would be incorporated in consumer receivers, and a pay TV operator told the roundtable that this view had been echoed by a focus group of visually-impaired viewers that it had convened. They preferred the EPG to be accessible through the TV, rather than through secondary devices.

3.11 The Australian Government commissioned a trial involving customers who were blind or had a vision impairment living in the Regional Victoria switchover area, as well as a small control group of 'sighted' scheme customers. Among other things, the research found that:

a) the survey showed nine out of ten respondents (88%) had adopted the 'talking' remote control as their main remote control, and nearly three quarters of trialists (71%) rated it as excellent or very good;

b) the two most useful functions of the 'talking' set top boxes were the 'talking' menus (70% rate these as very or quite useful), and the 'talking' programme guides (62%), particularly amongst people with a sight impairment and even more so amongst those participants in the research that were blind; and

c) two thirds of visually impaired, blind or seeing respondents (67%) said that their enjoyment of watching TV had increased 'a lot' or 'a bit' as a result of receiving the 'talking' STB; amongst visually-impaired viewers the figure was 63%, blind viewers 75% and seeing viewers 71%.

3.12 Although this research was conducted in Australia, we see no reason why the findings should not be equally applicable in the UK.

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[26] *Get the Picture - making television easier for people with sight loss*, RNIB (http://live.rnib.precedenthost.co.uk/sites/default/files/video-transcript-accessible-tv.doc)

[27] *Panasonic Television with Voice Guidance,* Steph Cutler, September 2012 http://www.rnib.org.uk/livingwithsightloss/tvradiofilm/productreviews/Pages/panasonic_tv_userreview.aspx

Initial assessment of speaking EPGs

3.13 In the light of feedback from users and lobby groups, Ofcom has identified a number of potential advantages and disadvantages of speaking EPGs incorporated into televisions or set top boxes.

Potential advantages

3.14 Setting up a TTS-enabled EPG may be easier when it is integrated into the TV receiver (whether a set top box or digital television), than if it requires the user (or someone on their behalf) to pair a third party device using wi-fi.

3.15 A broader range of visually-impaired people may find it easier to use integrated TTS, as it can be activated by the remote control, which many will find simpler to use than, say, a touch-screen device such as a smart phone or tablet. In any case, some alternatives (e.g. Sky Talker, YouView app) still require the user to operate the remote control.

3.16 Speaking EPGs integrated into televisions and set top boxes may be less susceptible to unplanned software changes that may conflict with the speaking EPG, particularly where the EPG provider controls software changes.

3.17 Within the last two years, TV manufacturers have begun to make integrated speaking EPGs on their mid-range TVs, as well as those at the higher end, and one now makes integrated speaking EPGs in all new TVs.

Potential disadvantages

3.18 TV receivers with integrated TTS-enabled EPGs remain relatively expensive.[28] Although some TVOnics and Goodmans-branded set top boxes equipped with speaking EPGs remain, Ofcom understands that they are no longer being manufactured.

3.19 Most speaking EPGs do not have easily accessible instructions, and require help from a sighted person to set up.

Secondary devices

Sky Talker

3.20 In 2011, Sky launched the Sky Talker, which was developed in association with the RNIB. When connected to a Sky box, the Sky Talker can be controlled by the usual remote control. As viewers move through channels, the Sky Talker will announce the channel number, channel name and programme name automatically. The Sky Talker also provides verbal feedback when the Sky+ *Pause*, *Play* and *Rewind* buttons on the remote control are used. However, the remote control does not vocalise the EPG, so it does not enable users to hear information about programmes in the future.

[28] This may change over time if more manufacturers make use of the same chipsets, securing economies of scale (as happened when manufacturers of TV receivers and set top boxes adopted chipsets that enabled audio description, now standard in most TV equipment).

Figure 4: Sky Talker with connection cables

3.21 Nonetheless, some visually-impaired viewers clearly value the Sky Talker device:

> *"It allows me to mooch around and find something I want to watch. That's a simple pleasure I haven't been able to experience since I lost my sight more than a decade ago. It feels good."*[29]

Mobile devices

3.22 Freesat, Freeview, Sky, Virgin, YouView have developed apps for installation on devices on certain (but not all) mobile devices such as smart phones and tablets. Most work with iOS or Android operating systems, but not with other systems.

3.23 The apps are aimed primarily at people without visual impairments, and are intended to allow users to:

a) find out what programmes are available to watch (in all cases);

b) set recordings (in several cases); and

c) act as a remote control when paired with the TV or set top box (in a few cases).

3.24 The apps are compatible to a greater or lesser extent with the TTS facility made available by the mobile device manufacturer - Voiceover for Apple devices using iOS, Talkback for devices using the Android operating system. The precise capabilities of the apps, and the extent to which they have been adapted for use by people with visual impairments vary from one app to another, and over time. The summary in Figure 5 below explains the capabilities offered by the main apps in April 2014, since when some may have changed.

[29] *[AI] televisions available with talking menu guide*, Access India (http://accessindia.org.in/pipermail/accessindia_accessindia.org.in/2014q1/088342.html)

Figure 5: Text to speech capabilities in mobile device apps[30]

App	Sky+HD (no app for older boxes)	Virgin TV Anywhere (TiVo boxes) / Virgin TV Guide	Freeview TV Guide	Freesat (only works with HD and Freetime boxes)	YouView (Talk Talk, BT TV, Youview retail boxes))
Compatibility (n/a with Blackberry, Windows or Nokia)	iOS, some Android	iOS, some Android	iOS, some Android	iOS only	iOS, some Android
Functionality	Read listings, make recordings. Can be used as a remote control, with some Sky HD boxes	Read listings, make recordings. Can be used as remote control with Tivo boxes	Read listings, make recordings	Read listings. With Freetime, allows recordings, can be used as remote control	Read listings, make recordings
Optimised for text to speech?	No; programme grid not supported. Reads out abbreviations as words, and times as numbers.	Yes; reads out most information in most views. But cannot prompt users to insert PIN when required	Content is arranged in columns, so not intuitive.	Most on-screen buttons do not include labels that can be read by TTS, so app is largely inaccessible	In most views, programme start time and finish, channel title but not number
Programme information spoken	In most views (except grid and prog. synopsis), channel number and programme title.	In most views, programme title and channel number	All info in single channel view, in and programme synopsis. Most in 'Top Picks', none in 'Favourites'	In grid and single channel view, channel number and programme title, start and finish time.	No; viewers must dive down to programme synopsis to find out whether AD is available. No access to 'On Demand' content
Identifies whether AD available?	Only in prog. synopsis	No	No	No	Only in prog. synopsis

3.25 It appears that none of the apps are fully optimised for use with text to speech. For example, most potential users of the Freesat app would be thwarted by the absence of TTS-readable labels for the 'buttons' on the home screen of the app. These buttons allow users to switch to different features of the app. When a button with TTS-readable labelling is selected, the TTS facility will explain what

[30] As of April 2014

features the button provides access to. Without these labels, users would not know what the buttons were for, so would be unable to make progress. Similarly, the Virgin Media apps do not prompt users to insert a PIN when this is required, which would bring the process to a halt.

3.26 It should be noted that performance and capabilities are subject to change, as new versions of the apps are developed, and as new devices come on to the market.

User feedback

3.27 Virgin Media's app, regarded by RNIB was one of the more accessible, received some positive feedback from blind users.

> *"For a blind person, this app is priceless. For a long time, some of us have had #Tivo boxes, but no way to use them … Now that's all changed. I give a thumbs up to #VirginMedia for their efforts … I can now access the features of a box I've been paying for that until recently, only my sighted wife was able to benefit from properly."*[31]
>
> *"The TV guide was quite accessible, I really liked the simplicity of the layout. I was able to find my way around the TV guide with no difficulty. … However, one thing I did note was the inconsistency in button labelling ... The absence of button labelling is very important, in particular for less confident VoiceOver users. If I had not double tapped the programme, I wouldn't have known that this was the way in which programmes can be set to record.*[32]

Initial assessment of secondary devices

3.28 In the light of feedback from users and lobby groups, Ofcom has identified a number of potential advantages and disadvantages of TTS-enabled secondary devices.

Potential advantages

3.29 Youview points out that enabling the EPG to be controlled by a broad range of mobile devices (e.g. smartphones and tablets) and assistive equipment (e.g. 'sip-and-puff' devices for people with people with disabilities affecting the use of their upper limbs) means that it has the potential to benefit a wide range of people with disabilities than an EPG that simply incorporated TTS.

3.30 Virgin suggested in 2011 that the development of apps that can be used with text to speech features on mobile devices (such as VoiceOver on an Apple device, or TalkBack on an Android device) would allow for speedier provision of accessibility

[31] Andre Louis, an i-Phone 4S user, whose views were sought by Virgin Media (https://www.actionforblindpeople.org.uk/your-community/blogs/andre-louis/virgin-media-tv-anywhere-app-for-ios-podcast-review/)

[32] Sonali Rai, visually-impaired staff member of RNIB http://www.rnib.org.uk/livingwithsightloss/computersphones/updates/techknowmore/Lists/Posts/Post.aspx?id=167

than would incorporating text to speech in a set top box, which could take three years or so.[33]

3.31 As Sky Talker is supplied by Sky, it is more likely that Sky will ensure that it remains compatible with its set top boxes. Although the Sky Talker is reported to be easily installed with the help of a sighted person, Sky will make an engineer available to install and demonstrate the unit if necessary.

3.32 EPG providers can externalise some of the costs of providing TTS by using apps for mobile devices, as TTS functionality is provided by the device manufacturer, and the consumer is responsible for purchasing the device. Incorporating TTS in future set top boxes would require EPG providers to undertake additional development work, with little or no prospect of commercial payback.

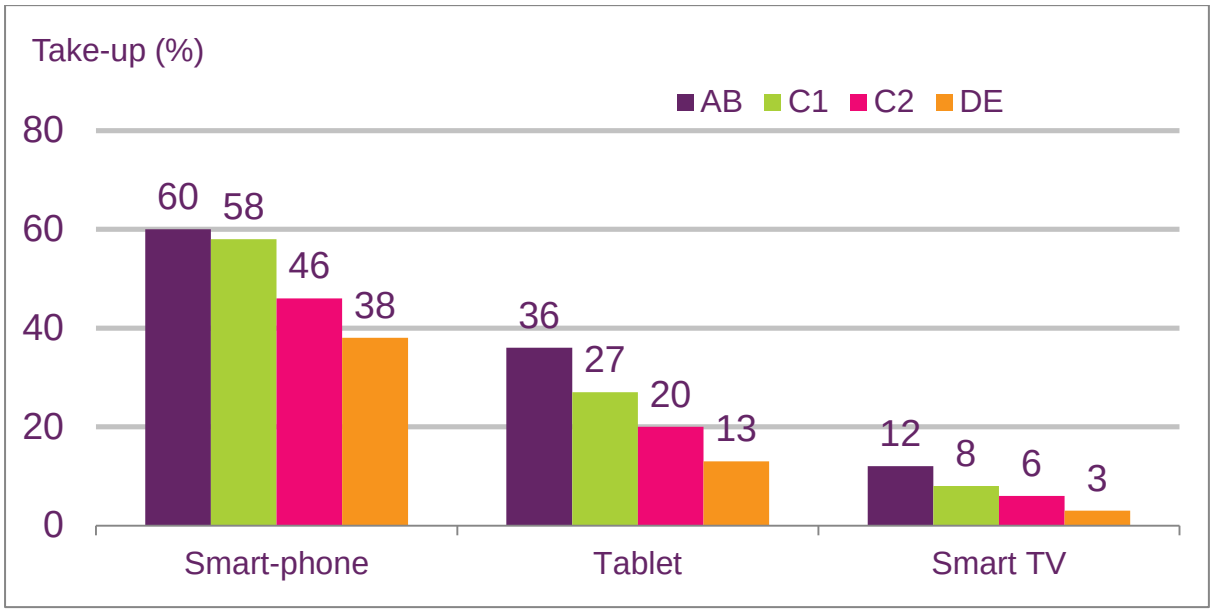
Potential disadvantages

3.33 Visually-impaired people must pay for any secondary devices they want, but these may not be affordable to all. Many are likely to be of pensionable age (see section 3), on modest incomes. People of working age may have relatively small incomes, because their visual impairments make it difficult to find well-paid employment or, indeed, any job. Compatible mobile devices may not be cheap.[34] Unsurprisingly, fewer people in lower socio-economic groups own smart phones and tablets than those in higher groups (see Figure 6 below).

[33] Ian Mecklenburgh, Virgin Media, speaking at Streaming Media 2011, in October 2011 (http://www.streamingmediaglobal.com/Articles/Editorial/Featured-Articles/Viewers-Moving-Beyond-EPG-Says-Virgin-Streaming-Media-Europe-78349.aspx)

[34] For example, Youview notes that "the Youview app for Android … has been optimised for the following smartphones – Samsung Galaxy S3, Samsung Galaxy S2, LG Nexus 4, HTC One S, and Samsung Galaxy Ace". Contract-free prices for these smartphones vary from £200 to more than £400 (https://play.google.com/store/apps/details?id=com.youview)

Figure 6: take-up of mobile devices, by socio-economic group[35] (2012)



3.34 Possibly for similar reasons, older people are much less likely to own a smartphone; a recent survey found that while only 11% of those aged 65-74 and 2% of those aged 75+ owned smartphones, compared to over three-quarters of 16-24 year olds. A report published late last year[36] cited similar findings, indicating that 13% of those aged 65 or more owned smart phones, and 5% owned tablets. This suggests that those most likely to have visual impairments are least likely to own a mobile phone or tablet.

3.35 Even those with a smartphone may not have one compatible with relevant apps. At the time of writing, none worked with Blackberry, Windows or Nokia mobile devices. Indeed, not all Android devices are compatible. Given the wide and continually changing range of mobile devices, ensuring that TTS-enabled apps work with all of these is, in practice, almost impossible. For example, Virgin Media's app only works on selected devices[37], though the company says that it is continuing to work on making it compatible with a wider range[38].

3.36 One of the reasons why this is a time-consuming process is that manufacturers of Android devices often choose to customise the Android software. Customisation can interfere with the ability to load Android apps from Google's Play store and also with accessibility features built into Android. For example, says the RNIB, a number of e-readers are so heavily customised that Android's accessibility is effectively neutered.

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[35] Extracted from table 4.23, *Communications Market Review 2013*, Ofcom, August 2013 (http://stakeholders.ofcom.org.uk/market-data-research/market-data/communications-market-reports/cmr13/uk/)

[36] *UK Mobile Insights Report 2013 Q4 - An overview of recent research and data on smartphone and tablet ownership in the UK*, November 2013 (http://weareapps.com/MobileInsightsReport.pdf)

[37] Virgin TV Anywhere on Android devices (http://store.virginmedia.com/content/dam/eSales/Downloads/tva_android_devices.pdf)

[38] *TV Anywhere Android - Device Support Requests*, Virgin Media http://community.virginmedia.com/t5/TV-Anywhere/TV-Anywhere-Android-Device-Support-Requests/td-p/2097328

3.37 Of the visually-impaired who may have a suitable mobile device, many may not be aware that relevant TTS-enabled apps are available. Research suggests that, amongst older people, there is 'very little understanding of the range of applications available'.[39] Many have virtually no experience of mobile applications, and many were not comfortable even with texting.

> *"I don't understand apps and things like this on phones. I'm afraid I think the more technology they introduce the more complicated it becomes, rather than easier. Again, you know, using these apps as an example, I mean they're beyond me."*[40]

3.38 Most EPGs with integrated text to speech can be operated using a limited number of buttons on a remote control; in some cases this can be done by voice commands. By contrast, most secondary devices (smartphones and tablets) use touch screens. Ofcom's understanding is that they can be particularly difficult for older people, who constitute the majority of people with visual impairments.

3.39 Some research suggests that older adults face obstacles to using information technology appliances, for two main reasons: firstly, declining memory and/or cognitive control functions which make learning difficult[41]; secondly, prejudicial attitudes towards information technology systems that may make them feel they cannot learn how to use them.[42] Indeed, it is clear from some blogs used by technically literate blind users that even they find some ancillary devices too complex to use easily.[43]

3.40 Secondary devices often have more limited functionality than conventional EPGs, and do not provide access to all the information that would be provided in an EPG (see Figure 5 above). The Sky Talker, for example, does not read out text from most of the EPG, nor does it replace the need to use a remote control to operate the EPG.

Input sought

3.41 Ofcom would welcome views from respondents on any of the issues raised in this paper or pertinent to the issue of accessibility to EPGs for people with visual

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[39] *Consumer research with 'older old' consumers and those living with cognitive, physical and sensory disabilities*, September 2012, Payments Council, p. 25 (http://www.paymentscouncil.org.uk/files/payments_council/payments_council_-_policis_and_toynbee_hall_older_old_and_disability_report_24.10.12_final.pdf)

[40] Ibid.

[41] Hedden, Trey & Gabrieli, John D. E. *Insights into the ageing mind: a view from cognitive neuroscience*. Nature Reviews Neuroscience 5, 87-96 (February 2004). (http://www.nature.com/nrn/journal/v5/n2/abs/nrn1323.html)

[42] How Can We Make IT Appliances Easy for Older Adults?: Usability Studies of Electronic Program Guide System, *Noriyo Hara, Toshiya Naka and Etsuko T. Harada*, December 2009 http://www.intechopen.com/books/human-computer-interaction/how-can-we-make-it-appliances-easy-for-older-adults-usability-studies-of-electronic-program-guide-sy

[43] "Any time you start talking about the android OS as it relates to the visually impaired community the same thing always comes up… The complexity of it all… "This phone works really well, this phone doesn't, this one doesn't at first but if you add this and take this away… Install this… You're going to have to uninstall this preloaded software" honestly… It's all quite ridiculous". Blogger: #12 AnonyMouse "I have to agree completely", source: *My experience with an Android product, and my return to the iPhone*, *applevis.com*, 24 October 2013 (http://applevis.com/forum/ios-ios-app-discussion/my-experience-android-product-and-my-return-iphone)

impairments. Ofcom would particularly welcome the views of people with visual impairments (and groups representing their interests) on the issues raised below:

Q1. Do respondents agree with Ofcom's initial assessment that apps for mobile devices have the potential to be useful for those people with visual impairments who feel confident using touch-screen technology and can afford a suitable mobile device? If not, why not?

Q2. Do respondents agree with Ofcom's initial assessment that apps for mobile devices are less likely to meet the needs of the majority of visually-impaired people who are 65 or older, both because they are less likely either to own a suitable mobile phone and because touch-screen apps present a number of actual and perceived barriers to use. If not, why not?

Q4. Do respondents consider that would it be reasonable for visually-impaired viewers to pay more than sighted viewers for the ability to use EPGs or substitutes for the same purposes as sighted viewers? If so, why?

Q5. Do respondents agree with Ofcom's initial assessment that the speaking EPGs integrated into TVs and set top boxes may be easier for people with visual impairments to use than touch-screen apps? If not, why not?

Section 4

What are the barriers to speaking EPGs?

Introduction

4.1 In this section, we consider the progress that has been made towards overcoming the barriers to adopting text to speech for EPGs. We also invite views on remaining barriers to implementation, and how these might be overcome.

Progress towards facilitating text to speech capability in EPGs

4.2 Ofcom's understanding is that many of the barriers to the adoption of text to speech for EPGs have now been surmounted. In particular, Ofcom notes that:

a) there are now widely accepted technical standards. The Digital TV Group, which comprises manufacturers, broadcasters and organisations representing sensory-impaired viewers, has completed a technical specification for Text to Speech, which was later adopted by DigitalEurope and taken to the International Electrotechnical Commission (IEC). This led to the IEC setting up a project group and creating *International Standard IEC 62731:2013: Text-to-speech for television - General requirements*. IEC 62731:2013 specifies the text-to-speech functionality for digital television receivers such as set top boxes, integrated digital TVs, recorders and other products whose primary function is to receive TV content;[44]

b) the underlying technology is now widely available, and can be licensed as middleware applications from a number of suppliers, such as Ocean Blue, Nuance and Wizzard, or developed from readily-available open source software available from the web. The technology can be embodied in middleware on a range of chipsets, obtainable from a variety of suppliers, including STMicroelectronics, RC Systems and Toshiba;

c) the technology is not expensive. AT&T researchers have demonstrated the ability to provide an EPG with voice recognition and text to speech using 'commodity hardware and software to reduce barriers to entry'.[45] Industry sources have told Ofcom that chipsets incorporating text to speech are available at a modest premium to chipsets without this capability. Ofcom notes that text to speech technology has been incorporated in a wide range of modestly priced consumer devices, often as an ancillary rather than mainstream feature; and

d) text to speech is a relatively mature technology that has been successfully deployed in a growing range of specialist and consumer devices, including screen readers used by people with visual impairments to read computer screens (both as separate products and bundled with popular computer operating systems), as well as TVs, set top boxes, smart phones, tablets and e-Books.

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[44] *Text-to-speech for television - General requirement,* International Electrotechnical Commission (http://webstore.iec.ch/Webstore/webstore.nsf/Artnum_PK/47506)

[45] *EPG: Speech Access to Program Guides for People with Disabilities*, Michael Johnston & Amanda Stent, October 2010 (http://www.research.att.com/export/sites/att_labs/people/Johnston_Michael_J/library/publications/assets_paper_2010.pdf)

Early versions that produced robotic synthesised outputs have been succeeded by those using more natural sounding speech.

What are the remaining barriers to implementation?

4.3 Ofcom would welcome input from TV service providers (both subscription and free to air), manufacturers, technology providers and others with relevant expertise on any remaining barriers to implementation, and how these might be overcome. In particular:

Q6. Do pay TV service providers such as Sky, Virgin, Talk Talk and BT TV see additional obstacles that would prevent them from committing to including text to speech capabilities in the next planned upgrades to the receivers they offer to subscribers? If so, what are these obstacles? Absent regulation, would these obstacles make it impossible on commercial grounds to commit to the necessary investment?

Q7. If the cost of providing speech-enabled receivers to all those who subscribe to particular pay TV services would entail a substantial delay to the roll-out of such receivers to all subscribers, would it be feasible, quicker and more cost-effective to offer suitable equipment first to viewers with visual impairments?

Q8. Do respondents consider that would it be reasonable to expect visually-impaired viewers to pay extra for equipment that allows them to use EPGs or substitutes for the same purposes as sighted viewers? If so, why?

Q9. Do licensors such as Freesat and Freeview see obstacles to using their leverage to require manufacturers to incorporate speaking EPGs in future versions of their branded products, such as Freetime and Freeview Connect?

Q10. What are the main types of cost that pay TV service providers would face in incorporating speaking EPG features into the next generation of their set top boxes?

Q11. What is the scope for connected platforms to avoid the need for specific TTS provision within consumer equipment by using cloud-based resources (e.g. speech files on a central server delivered to the device as required)?

Annex 1

Responding to this call for inputs

The issues

A1.1 Ofcom invites written views and comments on the issues raised in this document, to be made **by 5pm on 8 September 2014**. It would be helpful if your response could include direct answers to the questions asked in this document, which are reproduced below. It would also help if you can explain why you hold your views and how Ofcom's proposals would impact on you.

A1.2 Ofcom would welcome views from respondents on any of the issues raised in this paper or pertinent to the issue of accessibility to EPGs for people with visual impairments. For ease of reference, we have divided the specific questions we are posing in this document into two lists – those on which Ofcom would particularly welcome the views respectively of people with visual impairments, and of

Questions on which Ofcom would particularly welcome the views of people with visual impairments

Q1. Do respondents agree with Ofcom's initial assessment that apps for mobile devices have the potential to be useful for those people with visual impairments who feel confident using touch-screen technology and can afford a suitable mobile device? If not, why not?

Q2. Do respondents agree with Ofcom's initial assessment that apps for mobile devices are less likely to meet the needs of the majority of visually-impaired people who are 65 or older, both because they are less likely either to own a suitable mobile phone and because touch-screen apps present a number of actual and perceived barriers to use. If not, why not?

Q4. Do respondents consider that would it be reasonable for visually-impaired viewers to pay more than sighted viewers for the ability to use EPGs or substitutes for the same purposes as sighted viewers? If so, why?

Q5. Do respondents agree with Ofcom's initial assessment that the speaking EPGs integrated into TVs and set top boxes may be easier for people with visual impairments to use than touch-screen apps? If not, why not?

Questions on which Ofcom would particularly welcome the views of TV service providers (both subscription and free to air), manufacturers, technology providers and others with relevant expertise

Q6. Do pay TV service providers such as Sky, Virgin, Talk Talk and BT TV see additional obstacles that would prevent them from committing to including text to speech capabilities in the next planned upgrades to the receivers they offer to subscribers? If so, what are these obstacles? Absent regulation, would these

obstacles make it impossible on commercial grounds to commit to the necessary investment?

Q7. If the cost of providing speech-enabled receivers to all those who subscribe to particular pay TV services would entail a substantial delay to the roll-out of such receivers to all subscribers, would it be feasible, quicker and more cost-effective to offer suitable equipment first to viewers with visual impairments?

Q8. Do respondents consider that would it be reasonable to expect visually-impaired viewers to pay extra for equipment that allows them to use EPGs or substitutes for the same purposes as sighted viewers? If so, why?

Q9. Do licensors such as Freesat and Freeview see obstacles to using their leverage to require manufacturers to incorporate speaking EPGs in future versions of products authorised to use their brands, such as Freetime and Freeview Connect?

Q10. What are the main types of cost that pay TV service providers would face in incorporating speaking EPG features into the next generation of their set top boxes?

Q11. What is the scope for connected platforms to avoid the need for specific TTS provision within consumer equipment by using cloud-based resources (e.g. speech files on a central server delivered to the device as required)?

A1.3 If you want to discuss the issues and questions raised in this call for inputs, or need advice on the appropriate form of response, please contact Jack Genovese at jacopo.genovese@ofcom.org.uk or on 020 7981 3725.

How to respond

A1.4 If you are able to respond via the online web form, please do so. This incorporates the coversheet shown at the end of this Annex. Completing the coversheet helps us to speed up our processing of responses, and to ascertain whether you would like any of your response kept confidential.

A1.5 If you are responding by email, post or fax you can download a copy of the coversheet in Word or RTF format from the 'Consultations' section of our website at www.ofcom.org.uk/consult/. For larger responses - particularly those with supporting charts, tables or other data - please email jacopo.genovese@ofcom.org.uk attaching your response in Microsoft Word format, together with the coversheet.

A1.6 If you would like to phone in your response, you can call 020 7981 3725.

A1.7 Please put any parts of your response you consider should be kept confidential in a separate annex to your response and include your reasons why this part of your response should not be published. This can include information such as your personal background and experience. If you want your name, address, other contact details, or job title to remain confidential, please provide them in your cover sheet only, so that we don't have to edit your response.

A1.8 Responses may alternatively be posted or faxed to the address below, marked with the title of the consultation.

Jacopo Genovese
5th Floor
Riverside House
2A Southwark Bridge Road
London SE1 9HA

Fax: 020 7981 3806

A1.9 If we are able to publish responses before the consultation period closes, this can help those individuals and organisations with limited resources or familiarity with the issues to respond in a more informed way. For this reasons, Ofcom encourages respondents to indicate on the coversheet that Ofcom may publish their responses upon receipt, rather than waiting until the period for responses has ended.

A1.10 If you submit your response via the online webform or by e-mail, we do not need a hard copy as well. Ofcom will acknowledge receipt of responses if they are submitted using the online web form but not otherwise.

Publication of responses

A1.11 We believe it is important for everyone interested in an issue to see the views expressed by consultation respondents. We will therefore usually publish all responses on our website, www.ofcom.org.uk, ideally on receipt. If you think your response should be kept confidential, can you please specify what part or whether all of your response should be kept confidential, and specify why. Please also place such parts in a separate annex.

A1.12 If someone asks us to keep part or all of a response confidential, we will treat this request seriously and will try to respect this. But sometimes we will need to publish all responses, including those that are marked as confidential, in order to meet legal obligations.

A1.13 Please also note that copyright and all other intellectual property in responses will be assumed to be licensed to Ofcom to use. Ofcom's approach on intellectual property rights is explained further on its website at http://www.ofcom.org.uk/about/accoun/disclaimer/

Next steps

A1.14 Following the end of the response period, Ofcom intends to consider the responses with a view to deciding whether or not to consult on specific proposals. You can register to receive free mail Updates alerting you to the publications of relevant Ofcom documents. For more details please see: http://www.ofcom.org.uk/static/subscribe/select_list.htm

Ofcom's consultation processes

A1.15 Ofcom has published the following seven principles that it will follow for each public written consultation:

Before the call for inputs

A1.16 Where possible, we will hold informal talks with people and organisations before announcing a big consultation to find out whether we are thinking in the right direction. If we do not have enough time to do this, we will hold an open meeting to explain our proposals shortly after announcing the consultation.

During the call for inputs

A1.17 We will be clear about who we are seeking views from, why, on what questions and for how long.

A1.18 We will make the document as short and simple as possible with a summary of no more than two pages. We will try to make it as easy as possible to give us a written response. If the consultation is complicated, we may provide a shortened Plain English Guide for smaller organisations or individuals who would otherwise not be able to spare the time to share their views.

A1.19 A person within Ofcom will be in charge of making sure we follow our own guidelines and reach out to the largest number of people and organisations interested in the outcome of our decisions. Ofcom's 'Consultation Champion' will also be the main person to contact with views on the way we run these processes (see paragraph A1.23 below).

A1.20 If we are not able to follow one of these principles, we will explain why.

After the call for inputs

A1.21 We think it is important for everyone interested in an issue to see the responses of others to the call for inputs. We would usually publish all the responses we have received on our website. In our statement, we will give reasons for our decisions and will give an account of how the views of those concerned helped shape those decisions.

A1.22 Ofcom seeks to ensure that responding to a call for inputs is easy as possible. If you have any comments or suggestions on how Ofcom conducts the process, please call our helpdesk on 020 7981 3003 or e-mail us at consult@ofcom.org.uk . We would particularly welcome thoughts on how Ofcom could more effectively seek the views of those groups or individuals, such as small businesses or particular types of residential consumers, who are less likely to give their opinions through a formal consultation.

A1.23 If you would like to discuss these issues or Ofcom's consultation processes more generally you can contact Graham Howell, Secretary to the Corporation, who is Ofcom's consultation champion:

Graham Howell
Ofcom
Riverside House
2a Southwark Bridge Road
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Cover sheet for response to an Ofcom consultation

BASIC DETAILS

Consultation title:

To (Ofcom contact):

Name of respondent:

Representing (self or organisation/s):

Address (if not received by email):

CONFIDENTIALITY

Please tick below what part of your response you consider is confidential, giving your reasons why

Nothing ☐ Name/contact details/job title ☐

Whole response ☐ Organisation ☐

Part of the response ☐ If there is no separate annex, which parts?

If you want part of your response, your name or your organisation not to be published, can Ofcom still publish a reference to the contents of your response (including, for any confidential parts, a general summary that does not disclose the specific information or enable you to be identified)?

DECLARATION

I confirm that the correspondence supplied with this cover sheet is a formal consultation response that Ofcom can publish. However, in supplying this response, I understand that Ofcom may need to publish all responses, including those which are marked as confidential, in order to meet legal obligations. If I have sent my response by email, Ofcom can disregard any standard e-mail text about not disclosing email contents and attachments.

Ofcom seeks to publish responses on receipt. If your response is non-confidential (in whole or in part), and you would prefer us to publish your response only once the consultation has ended, please tick here. ☐

Name Signed (if hard copy)