YouView Response to Ofcom's Consultation on Speaking EPGs

September 2014

Executive summary

YouView welcomes the opportunity to respond to the Ofcom's consultation into Speaking TV programme guides.

YouView exists to enable the evolution of free to air television in the UK. It is an open platform for content providers, and consumers can connect a YouView device via any UK Internet service provider. Devices are available from retailers for a one off cost or from ISPs as part of a phone, broadband and TV package.

YouView is different from most other TV platforms because it does not own or retail content, produce devices or enter into contracts with the end consumer. Instead, it enables these relationships on behalf of its partners, which include content owners, ISPs, device manufacturers and retailers.

YouView is currently the UK's fastest growing TV platform, largely as result of the range of content it offers, the fact that it is free at the point of use (unless a consumer decides to pay for additional services), its ease of use and set up and the fact that the two ISP shareholders are subsidising the cost of equipment.

YouView has had a major beneficial impact on the UK digital TV market providing the core free to air DTT audience with an easy upgrade path from Freeview. We have preserved the principles of PSB prominence in linear television and extended them into on demand services meaning that PSB content is readily and easily discoverable for consumers. This has been achieved by considerable investment in the design of the interface and also by investment in common metadata standards which allow for aggregated search and browse across the full catalogue of content available on YouView.

Our BBC Trust commitments enshrine the importance of accessibility as part of our core proposition and this coupled with the public policy objectives of our shareholders (both PSBs and ISPs) means we have invested more in this area comparative to other integrated platforms. We believe that a purely commercial player in this market would not invest to the same extent that YouView has, and continues to invest, in these areas. We are well on the way to achieving market leading accessibility provisions and have also enabled market leading parental controls meaning that YouView is a safe environment for families.

YouView is delighted to have the chance to respond to Ofcom's consultation and in the following pages has set out its approach to making YouView a leading accessible platform as well as setting out its answers to the questions posed by Ofcom in its consultation.

Since launch YouView has improved the accessibility of the platform, which was recognised on 12th September 2014 through the CSI[1] Magazine's industry awards where YouView was awarded Best Contribution to TV Accessibility. To achieve this YouView has worked closely with a number of organisations specialising in accessibility such as the RNIB and Scope. The relationships we have fostered with these organisations, and the principle of "accessibility first" we have engendered in all aspects of the YouView product development, have enshrined a culture of accessibility awareness which will continue to influence YouView as the product evolves over time.

We are happy to elaborate on any points contained within this submission.

---

[1] Cable & Satellite International Magazine

1. YouView Accessibility Development Strategy

1.1 Context

At launch YouView delivered to its consumers a range of accessibility services and features:

- **Access Services**: Support subtitles for broadcast, VOD and other off-schedule content; Audio Description for broadcast, VOD and other off-schedule content; On Demand area for available signed content; Remote Control buttons for Subtitles and Audio Description, as well as sign-posting in user interface.
- **Accessibility Features:** Screen typeface (FS ME font) to ensure the most legible UI possible (type face was developed with BBC and mencap); Basic zoom functionality

Post-launch, YouView, in collaboration with the BBC, wanted to deliver a set of product improvements to achieve its aim of becoming a leading accessibility platform in the UK.

To understand user needs, set product requirements and to validate its approach and designs, YouView engaged with key industry organisations, including RNIB, British Dyslexia Association, British Telecommunications plc (BT), BBC and Scope. Engagement with these organisations included:

- reviewing requirements and interaction designs with the RNIB, both via email and face-to-face meetings;

- access to expert consultants from the RNIB to conduct reviews and advise on design changes and improvements;

- demonstrations of products the RNIB endorse, with discussion (e.g. Goodmans set top box);

- reviews of requirements and products (e.g. Text to Speech capability) with experts at BBC, BT and RNIB;

- workshop with Scope regarding how keyboards, games controllers and on-screen remote could most usefully work for a user with motor dysfunction;

- trialling of YouView's keyboard and on-screen remote with users and expert technologists at Scope's Beaumont College, the learning centre for people with a broad range of physical and learning disabilities; and

- identification of third parties that might be interested in using YouView APIs to develop applications for accessibility use.

1.2 Accessibility product strategy

YouView's post-launch accessibility strategy aimed to deliver enhancements that would deliver immediate user benefit to a range of groups with accessibility needs. Working in collaboration with the BBC, the following deliverables were included.

User Benefit	Deliverable
Improve zoom to allow a visually impaired users to browse the UI whilst still in a zoomed state	*Additional functionality to enable interaction with UI when in zoom*
Ability to change the colour scheme of the YouView UI for users with colour perception issues or who are visually impaired	*Setting for alternative high visibility colour scheme*
Ability to remove moving images when the UI is invoked to allow users with ADHD to more easily navigate YouView	*Setting to turn off moving images (keep audio) when UI invoked*
An accessible YouView companion application for smartphones for blind and visually impaired users: • **High visibility interface** • **Enable user to complete high-value end-to-end journeys without need for standard remote control** • **Text-to-speech enabled via app integrating with mobile platform screen-reader functionality e.g. VoiceOver for iOS**	*Accessible YouView App: Delivering 'discover-to-play' audible user journeys*
Support ability for an intermediate device displaying an 'onscreen keyboard or RCU' to work with Switch devices to control YouView box: • **This is likely to be through the publication of an API or specification to emulate RCU key presses**	*Enable third party device to emulate YouView RCU key presses, supporting an onscreen keyboard / RCU for use with Switch device*
Support for the most commonly used USB-devices that are able to navigate the YouView UI e.g. keyboards, for users with moderate motor skills impairment: • **RCU controls can be mapped onto keyboard to remove need for RCU**	*Enable a USB keyboard to work with YouView device*

YouView completed its development of these deliverables for set-top boxes in Q4 2013, and the functionality was made available to manufacturers. YouView develops and manages the YouView mobile application in-house.

1.3 Product & design principles for accessibility

YouView adopted the following principles to shape this product strategy:

• **provide solutions for a wide range of accessibility needs:**
   - address the accessibility needs of different groups from the visually and audibly impaired through to those with cognitive and motor skills impairment;

- **design these solutions through on-going collaboration with experts at the relevant organisations:**
  - blind and visually impaired (RNIB);
  - deaf and hearing impaired (RNID);
  - physically disabled (Scope);
  - motor skills impaired (and cognitive disability) (Scope); and
  - learning, cognitive and developmental disorders (e.g. the British Dyslexic Association);

- **adopt a companion screen focused approach, delivering access for a wider group of accessibility needs in a shorter timeframe:**
  - most cost and time efficient approach;
  - utilise existing development on mobile platforms to deliver better accessibility for blind, partially sighted and users with motor skills impairment;
  - develop around devices, or software, that users may already be using in home e.g. Grid2 software on PC's for use with Switch devices; and
  - YouView will lead delivery, as opposed to supporting a third party, to ensure a high quality end-to-end journeys; and

- **update and enhance the existing YouView device UI as appropriate to make as accessible as possible, while incorporating accessibility as a design principle for all future development:**
  - e.g. ensure the UI can be made as legible as possible, review error messages that block journeys and so on.

  - Any additions must continue to use the FS ME font to ensure the most legible UI possible.

1.4 YouView accessibility features compared with other platforms

Overall, the various features that YouView has now invested in incorporating are at least comparable to and in some cases exceed such functionality of other TV platforms in the UK.

Ofcom has set out in Section 3 of its consultation an assessment of YouView's EPG accessibility features, comparative to its competition, and also of YouView's Mobile Application.

YouView's own comparative assessment against its accessibility product strategy is set out below[2].

---

[2] Assessment based on comparative benchmarking in early 2014 and not withstanding further accessibility development on other platforms that may be released after this time.

Features	YouView	Sky	Virgin Media	Freesat
• Subtitles and AD	✓	✓	✓	✓
• Alternative colour scheme	✓	✗	Partial ✓ but only on V+ - being phased out with TiVo	✗
• Text to speech	✓ 2nd screen app	✓ Sky Talker	✓ 2nd screen app	✗
• Accessible Companion app	✓	Partial ✓ NB: lacks optimised TTS integration	✓	✗
• Accessible font	✓	✗	✗	✗
• Zoom	✓	✗	✗	✗
• Alternate UI to increase legibility	✓	✗	✗	Partial ✓
• On-screen keyboard for use with switch or a mobile application with TTS keyboard	✓	✗	✓ but not compatible with Switch - requires RCU	✗

1.5 User testing

YouView worked with the RNIB and Scope to carry out some user testing in relation to the product strategy deliverables in October 2013. Visually impaired triallists for the RNIB conducted reviews of the box itself, with the inclusion of the alternative high contrast user interface, and also for the YouView Text to Speech app. The reviews were positive, and also included helpful feedback where further improvements could be made, many of which were included in the final software upgrade of 2013.

> *"Generally speaking this box has many great features many of which can be found on other subscription boxes. In terms of accessibility, it has the potential to be a cut above the rest if the zoom feature was fixed particularly and a few minor changes to the positioning of content as stated above. Having said that, I think the high contrast option is worth its weight in gold and will be upgrading my current BT Vision + box to this."*
>
> *Reviewer with Aniridia, October 2013*

Scope has also tested the effectiveness of the Grid 2 software implementation for YouView. This allows those with motor skills disabilities to control the YouView box via a different access devices. Working with students at Beaumont College, Scope tested the effectiveness of YouView's Grid2 implementation with 4 different access methods –

touchscreens, switch devices, a head mouse and a joystick. When asked if they could see themselves using the YouView grid at home, responses included:

> *"Yes, I can do it independently, I don't have to shout anyone to come and help me",*

> *"Yes because it would make me more independent",*

> *"Yes it's easier than a remote".*

Although we do not collect statistics concerning uptake of new features released, we are encouraged by the above comments. We believe that these examples suggest that uptake among groups with disabilities is likely to be high with strong levels of satisfaction.

1.6 Future Accessibility Roadmap

1.6.1 Integrated Text to Speech

YouView is engaging with device manufacturers to explore the challenges associated with the capability to mix a local audio source, which could also mix in locally generated speech audio. However, to enable this there would be work to be done on YouView's side in terms of technical work to be delivered, commercial rationale and product / user experience, as follows:

- **From a technical perspective:**

  - time / investment to identify the possible solutions for speech synthesis on the device and to determine the their suitability for YouView, which includes:

    - the memory and processing power required with an eye on the first generation of memory starved devices;

    - the output audio format in relation to the local mix capability being developed (as above);

    - how we might surface this capability to the YouView UI and then to Content Provider applications, which are not part of the YouView UI, but would need to also be integrated with Text to speech to deliver a consistent and unbroken user journey e.g. locating an On Demand episode of Eastenders in YouView search, loading it and then watching and controlling it from within the BBC iPlayer application); and

    - the quality/suitability of the speech itself.

  - time / investment to develop or integrate a solution once identified, which includes:

    - full product, interaction and visual design of the integration across the entire user interface, ideally including costs to all on demand content providers to also commit to integrating / developing the same solution, to ensure a full and consistent user experience

- ▪ user testing

- ▪ solution dependent technical development

- ▪ full testing and integration

- **From a business / commercial perspective:**

  - ‑ the size of the opportunity (ROI) of investing in TTS, to be agreed by all 7 shareholders;

  - ‑ the opportunity cost of committing this into delivery (cost versus uptake) for YouView and its OEMs;

  - ‑ whether any other YouView roadmap features are impacted in terms of deliverability by adding an on-device capability;

  - ‑ Once a solution had been identified, further commercial issues would need to be resolved relating to who would pay licencing fees, per device royalty (if any) etc.

- **From a product perspective:**

  - ‑ the benefit over TTS via second-screen;

  - ‑ the benefit if only the YouView UI (and not Content Provider apps) was TTS enabled;

  - ‑ the level of change required to the UI or navigational paradigms to exploit the speech synthesis capability across the YouView UI (how level of work / re-design required, and when this could be done in conjunction to the rest of the roadmap).

1.6.2 Audio Feedback

YouView has been working with manufacturers to enable Audio Feedback across YouView devices to the specification as set by the Help Scheme e.g. an audio signal is released to confirm key presses on the remote control unit. This is currently being delivered to the Huawei device base and the Humax base will follow.

1.6.3 Second Screen

YouView plans to continue to develop its mobile application to incorporate remote control functionality and beyond, all of which will be accessible and voice enabled.

1.6.3 Consumer and Industry Feedback

YouView is open to feedback on ways to further refine our accessibility features for the benefit of our users. We maintain a forum where users are encouraged to make comments on the functionality of our platform. We also have good on-going relationships with key industry organisations and we welcome feedback from these organisations.

2. YouView response to Ofcom's consultation questions for TV service providers

Q5. 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?

While YouView is not listed above we provide the TV product for BT and Talk Talk TV customers. As set out in section 1.6.1 above there are technical, commercial and product design related obstacles to YouView developing integrated text to speech within its user interface.

Q6. 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?

We agree that providing a full speech-enabled receiver would take longer and be more costly to develop, and that there are many alternative solutions that are quicker and easier to develop.

We believe that delivering a range of accessibility features at the software level that can be used in combination, as YouView has done (see Section 1.4), when used alongside a text-to-speech enabled second screen device, delivers more of the benefits of a full speech-enabled receiver in a shorter time frame and with less cost.

Q7. Do respondents consider that it would 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?

YouView provides its mobile application for free and has enabled it for both sighted, as well as visually impaired viewers. As development continues as set out in section 1.6.2, it will continue to do so.

Accessibility developments and upgrades, as per those referred to in section 1.4 above, are also provided across the entire YouView base at no extra cost, as these changes are made at software level, and therefore all boxes take the upgrade. Whether specific devices with additional hardware or peripherals were charged at extra cost would be a decision for the

distributor of the device (ISP or OEM in the case of retail boxes) as YouView does not set the retail price of its devices.

Q8. 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?

As set out in section 1.6.1, there are significant opportunity costs to implementing speaking EPGs. These costs would fall on YouView as well as the manufacturers it works with. To be able to credibly propose the incorporation of such functionality would therefore require a sound business case setting out the likely return on investment in terms of device uptake numbers.

Q9. 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?

Please refer to section 1.6.1.

Q10. 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)?

.We would expect the nature of accessible solutions to evolve with the overall technology landscape, which suggests a migration towards cloud based resources. We are not currently evaluating any specific cloud based services for accessibility purposes alone.