

# Brave New World – Experiences in Next Generation Audio Broadcasting

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## ABSTRACT

The Internet has had a huge impact on the way we live our lives and the level of impact on the broadcast industry is no different. Our audiences now fully expect access to content on demand. They may browse the web while watching programmes. Smartphones and tablets are more and more often the go-to devices for all online activities.

In the last decade broadcasters have made countless changes to accommodate this new environment. The introduction and success of BBC iPlayer is just one example. As the Internet continues to influence all aspects of society, its importance to the future of the BBC is paramount. BBC R&D's vision for the future of broadcasting, content is produced and broadcast over Internet Protocol (IP). Using IP to create and deliver content, we envisage a world where we can offer media experiences that are very different to those of today. These experiences will enable increasingly immersive experiences that are more:

- **Personal** – know and understand the requirements of individuals and change the experience accordingly.
- **Adaptive** – recognise the device being used and adapt to give the best experience in real time, regardless of the manufacturer.
- **Dynamic and responsive** – respond to the needs of the audience in terms of length, depth of interest, location, preferences, lifestyle and age.
- **Interactive** - the audience can select specific areas of content to focus on and in some instances create and upload their own associated content.

BBC R&D has already started to deliver this vision and the standards, capabilities and tools to enable it. Much of this work builds on the characteristics of IP that allow us to treat programmes as a set of “objects” of content. These new representations can adapt to individual audience members' requirements using the browser as a key media consumption instrument. We refer to this work as object-based broadcasting.

This talk will focus on the audio dimension. It will illustrate the vision of object-based audio in broadcasting and highlight the importance of client side audio processing to enable new audience experiences.



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