

BROADBAND MEDIA DELIVERY

Broadcasters face on a daily basis the challenge of distributing large libraries of video to an online audience that uses a multitude of different devices and technologies. The EBU is investigating strategies to maximize the quality of experience with interoperable broadcast services in this fragmented environment.

BACKGROUND

Calculated per head of audience, online video delivery is the most expensive distribution method used by broadcasters. However, the number of people accessing live, catch-up and other video-related services online is growing tremendously fast. Latest figures suggest that, for public service broadcasters in Europe, an average of 3% of viewing happens over the internet, mainly catch-up services, but also small amount of live viewing. Such consumption happens across a range of connected devices, through over the top (OTT) delivery.



THE CHALLENGE FOR PUBLIC SERVICE MEDIA

EBU Members must try to reach a maximum number of media users, without compromising the quality of user experience. Up to now a number of different technologies have been needed to stream content to multiple platforms and devices, which has the effect of driving up the costs.

A key requirement therefore is to unify the delivery methods so as to avoid wasting money. Of equal importance for public service media organizations, however, is to deliver a good Quality of Experience (QoE). High audience engagement comes only with a high quality viewing experience.

For broadband delivery, there has been a shift from (public) peering alone towards using dedicated content delivery networks (CDNs). It's expected that broadcasters will more and more use multiple CDNs simultaneously to manage the content flows over the internet. This will provide alternative routes to deliver the content to the end user.

Another trend that is emerging is the use of cloud-based infrastructures and virtualization of services. Cloud providers are hosting CDN-like services, while on the other hand, CDN providers are likely to deliver cloud-based encoding to distribution services. Navigating these options is a particular challenge for EBU Members as they try to ensure they retain their independence and universality in the distribution domain.

WHAT IS THE EBU DOING?

The EBU Technical Committee oversees a strategic programme on Broadband Networks that provides a focus for Members to share their experiences regarding the online distribution of audiovisual content - and work to find improvements. A number of activities are coordinated by the group, which also liaises with external bodies such as the DASH Industry Forum, MPEG, HbbTV, etc.

The arrival of MPEG-DASH as a unifying streaming format has enabled broadcasters to use a single file format for encoding, to be distributed via standard web caches, and automatic optimization of the QoE. The EBU strives for open, efficient and interoperable broadcast services and strongly supports MPEG-DASH as a means to these goals – it is a contributing member of the DASH Industry Forum.

During the 2012 London Olympics the EBU initiated the first live public trial of DASH, presented by Belgian public broadcaster VRT, who offered their audience the chance to experience the Games on their personal devices via the groundbreaking format. The EBU has also contributed to the adoption of MPEG-DASH within the HbbTV standard.

Recognizing the growing importance of cloud architectures for broadcasters, the EBU has developed a proof-of-concept built with open source software and protocols. OSCIED - the Open Source Infrastructure for Encoding to Distribution - shows a possible path towards "broadcasting from the cloud". It enables virtualized services that are scalable automatically across private and public clouds. The proof-of-concept was presented on the EBU stand at IBC 2013, and the code is freely available (github.com/ebu/oscied).

Through its participation in the European FP7 project OCEAN, the EBU investigated interoperability of CDNs. The EBU BBN group will take this subject forward to provide further guidance to Members on CDNs and content delivery over the internet.

BroadThinking is the EBU's annual two-day event where "Broadcast meets Broadband". It brings together around 100 delegates from across the industry to discuss technology, trends, best practice and policy for broadband delivery and TV platforms (including second screen and app environments).

FIND OUT MORE

EBU Broadband Networks group

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