EBU

OPERATING EUROVISION AND EURORADIO

MEDIA TECHNOLOGY PULSE SUMMARY

MARCH / 2017

MEDIA TECHNOLOGY PULSE / SUMMARY

THE MOST CRITICAL TECHNOLOGY ISSUES FOR EBU MEMBERS

A full version of the Media Technology Pulse is also available.
It provides more details about the challenges.

EUROPEAN BROADCASTING UNION

The European Broadcasting Union (EBU) is the world's foremost alliance of public service media (PSM). Our mission is to make PSM indispensable.

We have 73 Members in 56 countries in Europe, and an additional 33 Associates in Asia, Africa and the Americas.

Our Members operate nearly 2,000 television and radio channels, together with numerous online platforms, broadcasting in more than 120 different languages. They reach audiences of more than one billion people around the world.

We have offices in Brussels, Rome, Dubai, Moscow, New York, Washington DC, Singapore, and Beijing. Our headquarters are in Geneva, Switzerland.

Discover more about the EBU on www.ebu.ch

THE NEW UHDTV TELEVISION EXPERIENCE WITH ADDED 'SPARKLE' (HIGH DYNAMIC RANGE AKA HDR)

THE NEXT STEP FOR TELEVISION?

- The benefit of higher image and sound quality in general is that viewers will watch TV programmes for longer – there is increased 'audience time'. Some Pay-TV and OTT providers will offer UHD with HDR services in 2017, so they may have a competitive advantage.
- Remember: viewers will need new flat panel displays with 4K UHD and HDR!
- Technical standards have been agreed, but full operational practices and production guidelines have yet to emerge.
- Creating a library of high-value productions in UHDTV with Higher Dynamic Range may be a wise investment.
- The Technical Committee takes a lead in UHDTV, and arranges workshops to understand the operational impact.

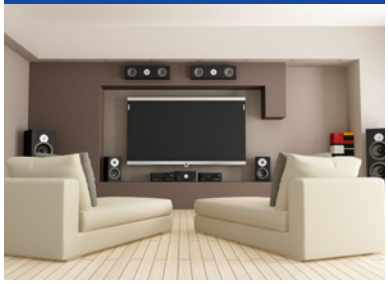
VIRTUAL REALITY (AND MAYBE ITS COUSINS AUGMENTED REALITY AND MIXED REALITY)

THE MEDIA OF THE FUTURE OR JUST HYPE?

- VR using head mounted displays (HMD) is a 'personal' experience. In general, VR may retain your existing viewers, or gain new ones, probably by providing complementary VR elements to normal programmes.
- There are (alas) many different technical standards, and two general categories of HMDs. One uses mobile phones in a container. The other is more complex and uses an attached high-end computer or games machine.
- The coming years may bring standardization of the first kind above, but this will take time.
- Two other types of system, Augmented Reality and Mixed Reality, may offer a more developed immersive experience, but much remains to be developed and standards are yet to emerge.
- The Technical Committee is gathering information on public service applications for VR. There are other internal EBU activities in VR.

NEXT-GENERATION AUDIO (AKA NGA) EXPERIENCE

THE AUDIO OF THE FUTURE, OR JUST TOO MANY LOUDSPEAKERS FOR THE LOUNGE?



- This follows a modest trend in the cinema world, but now for the home. Next-generation audio (NGA) provides an immersive sound experience for large screen UHDTVs. Sounds will appear to move in the space around you. The programme-maker can create an environment with sounds coming from any number of directions.
- NGA also allows the listener/viewer the choice of many different sound channels, such as commentaries or other languages and access services. These can provide added value to listeners/viewers and allow the listener to personalize the experience.
- The technical standards are now agreed, but there are few receivers available that can use NGA. There are two implementations of NGA, and broadcasters will have to make a choice.
- The Technical Committee is following the developments, and will investigate the opportunities more closely in the future.

BIG DATA FOR BROADCASTERS

SHOULD WE MAKE USE OF INFORMATION FROM THE USERS OF INTERNET DELIVERY?

@ DW/PJ/Le Monde

- The benefit is that by silently gathering information from users about their on-line habits with our content, we can make programmes and programme planning more effective.
- With recommendation engines (like the ones used by major broadband media platforms) we can analyse what interests our users most, and make programme suggestions.
- Big Data is essentially a market research tool that can be used with internet delivered services, with software to analyse vast amounts of data to produce information on trends.
- There is no technical group on the use of Big Data, but the EBU has an interdisciplinary initiative. The EBU Technical Committee has a project on recommendation engines.

COMPANION SCREENS

A GREAT IDEA, SO WHY IS IT TAKING SO LONG TO TAKE OFF?

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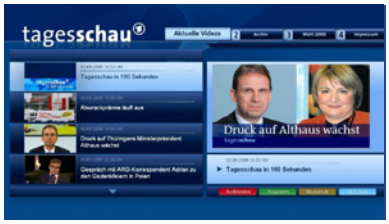
- The benefit is that the viewer uses their tablet or smart phone for a companion service at the same time as watching the TV screen, and so becomes more involved in the programme.
- There are technical standards available, but enthusiasm for developing compelling services has been limited to a few experiments. For companion screen technologies to succeed, simple and effective applications need to be developed that will capture the public imagination
- The Technical Committee has taken part in the preparation of the standards.

OVER-THE-TOP AND HYBRID BROADCASTING

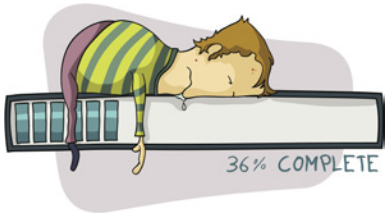
HOW POPULAR WILL THIS TV ADD-ON BECOME?



- The benefit is that most new TV sets today in Europe can connect to a home Wifi and, in this way, offer extra services, such as video-on-demand, Catch-up TV or radio, and information about the TV or radio programme. In some countries, UHDTV programmes have been provided over HbbTV.
- There are technical standards, and the new version (HbbTV2.0) will offer further new features, for example adding the ability to offer streamed online advertising.
- The Technical Committee has cooperated with the HbbTV project.

IMPROVING THE TECHNICAL QUALITY OF TELEVISION DELIVERED VIA INTERNET

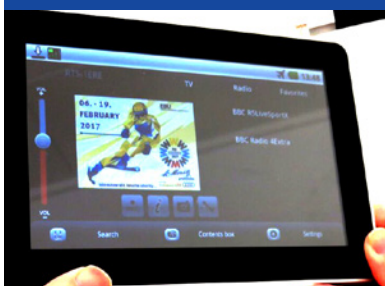
A SOLVABLE ISSUE, BUT IS THE COST OF GREATER INTERNET 'COVERAGE' WORTH THE COST OF PROVIDING IT?



- The benefit can be more convenient and flexible services for viewers, with such services as Catch-Up TV.
- Delivering television via internet calls for a different infrastructure to broadcasting, and an ultimately more expensive approach to distribution.
- The EBU Technology & Innovation Department is developing a scheme that should reduce costs of internet distribution.

SMART RADIO

A KEY TO THE GROWTH OF RADIO, OR AN UNNECESSARY EXTRA DELIVERY MEANS?



- If digital radio capability is included in Tablets and Smart Phones, the benefit will be the wider use of radio.
- The ability to use applications on the Smart Phone will modernize radio applications and benefit the user through savings in data bandwidth consumed.
- The use of internet radio is also growing, and where internet bandwidth is available, will prove to be popular. For this reason, the EBU favours a hybrid radio approach that makes the best of both worlds.
- The digital and analogue radio standards already exist and no new technical work is needed.
- The EBU has been actively lobbying radio set makers to include digital radio reception capability in Smart Phones.

IP PRODUCTION INFRASTRUCTURES. THE INEVITABLE MODERNIZATION OF PRODUCTION TECHNOLOGY

WHEN SHOULD IT BE DONE?

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- The benefits will include the greater ability to adapt quickly to the needs of different types of programmes, staff locations, and delivery means, although it is unlikely to save on capital expenditure in the early years. 'Workflow' changes are required. Easier remote production is one of the key benefits.
- We are on the threshold of standards for 'IP programme production', and some commercial equipment is appearing.
- Members have available the 'roadmap' for networked media, which has been jointly developed by the EBU and other associations.
- The EBU has worked with Members (e.g. VRT, SWR) on prototype IP studios (Proof of Concepts) and is helping to prepare guidelines for using IP in production.

THE CLOUD

MORE EFFICIENCY FOR SOME – OR A COMPLICATION FOR PRODUCTION AND DISTRIBUTION?

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- The benefits of using 'other people's' IT resources, rather than your own, is the efficiency and cost savings achieved, because the resources are being used all of the time, rather than some of the time.
- Cloud services are widely available in Europe, but how to use them requires an informed understanding of the business and technology aspects.
- The EBU has been testing the development of an IMF 'content vault' based on Cloud services.
- There is no specific EBU Technical Committee group work on 'the Cloud', however there is knowledge and experience sharing in our project on future network systems.

GREATER 'SECURITY' MEASURES

DO YOU NEED TO PROTECT YOUR STATION 'IT' AND YOUR HOME DELIVERY SYSTEMS FROM HACKERS?

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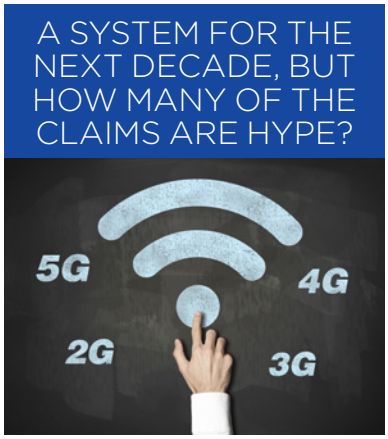
- The benefits of greater security measures for your station are less risk of 'mission critical' functions going down.
- The benefit of greater security for your delivery networks means less risk of disruption to viewers' services via the software they have in their receivers.
- It is not only a technical issue, but often also needs a change in working practices and training of staff.
- Active monitoring and the ability to act on cyber-security threats is an essential good practice.
- There is an active group of the EBU Technical Committee preparing guidelines.

THE 5G MOBILE BROADBAND DELIVERY SYSTEM



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- The benefit of 5G mobile broadband in delivery capacity and cost will be enormous, if what the network gurus say is to be believed.
- 5G may also offer 'low latency' radio links that could offer benefits for production back-haul.
- But 5G will require significant investment in transmitter infrastructure to achieve the small 'cell' coverage being discussed.
- It has been announced that the specifications will be ready for services in 2020 or earlier.
- The EBU Technology & Innovation Department is collaborating with others on the future relationship between broadcast needs and the use of 5G.

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