EBU
OPERATING EUROVISION AND EURORADIO

BROADTHINKING 2014

SPEAKER BIOGRAPHIES

Simon Fell, EBU

Mr Fell has more than 35 years' experience in senior broadcasting technology roles, including at British broadcaster ITV, where he was Director of Future Technologies (2008-2009) and Controller of Emerging Technologies (2004-2006). From 1991-2004 Mr Fell worked for Carlton Television, the ITV franchise holder for the London region, where he held several executive roles linked to operations and emerging technologies.

From 15 August he is responsible for steering EBU Technology & Innovation in its mission of being an indispensable partner to EBU Members, driving media innovation and integration, setting standards and defining and sharing best practices in media production and delivery. His role is also involve driving business development for the EBU.

Presentation: Welcome to BroadThinking 2014

Bram Tullemans, EBU

Bram Tullemans is the project manager broadband technology and online services of the Technical department of the EBU. In this role he coordinates the EBU Expert Community Platforms & Services (ECP), the strategic programme Broadband Networks (BBN) and Television Platforms (TVP). Besides knowledge exchange between broadcasters and solution providers he works on standardisation issues related to new online broadcast services. At this moment his centre of interest consists of media services for connected tv's in combination with a second screen approach on personal devices.

With his specialisation in the field of internet, new media and interactivity Bram worked as senior policy advisor research and development at the Dutch public service broadcast organisation NPO. He developed strategies on a conceptual level and their practical implementations on topics like second screens, connected tv, network neutrality, open source, adaptive streaming, p2p, visual radio, device specific video distribution, etc.. Prior to his activities in the broadcast sector he managed a crossmedia department at the international publishing house IDG Communications. His main themes there were video production and online distribution, as well as interactive tv-games.

Presentation: Introduction

Dale Herigstad, SeeSpace

Now living in London, Dale Herigstad spent 30 years in Hollywood as a Creative Director for motion graphics in TV and film. His mission has been to apply the principles of rich media design to interactive experiences. He began designing interfaces for Television more than 20 years ago, and was a founder of Schematic, which grew and merged with other digital agencies to form the global agency POSSIBLE.

Dale has developed a unique spatial approach to designing navigation systems for various screen contexts. He was a part of the research team that conceptualised digital experiences in the film "Minority Report," and is now leading development in gestural navigation for screens at a distance. Screens have always defined unique spaces, and with advancements in stereo 3D projection and new AR, information can occupy these spaces. Spatial context is becoming increasingly important in screen design. Virtual space and place are new frontiers of design.

He has an MFA from California Institute of the Arts, where in 1981 he taught the first course in Motion Graphics to be offered to designers in the United States. He served on the founding advisory board of the digital content direction at the American Film Institute in Los Angeles, and also was an active participant in the development of advanced prototypes for Enhanced TV at the American Film Institute for many years. Dale has 4 Emmy awards.

More recently, Dale co-founded the company SeeSpace, which will deliver its first product, inAiR, later this year. InAiR places dynamic Web content in the space in front of the Television, perhaps the first Augmented Television experience.

Presentation: Future technologies for interfaces

Synopsis: Dale Herigstad, of SeeSpace, will present a current future-facing project called inAiR as an example of interface and technology that addresses multi-tasking and the direct connection between TV and Broadband in the Television viewing experience. Issues to be discussed and visualised include:

- *The concept of Augmented Television and off-screen graphics presentation*
- *The possibilities of spatial concepts and layering in screen design*
- *The implications of gesture and new inputs*
- *Re-thinking user control in the mixing of TV and Web*

Frode Hernes, Opera Software ASA

Frode Hernes is head of Product Management at Opera Software´s TV Business unit. He has more than 30 years of experience with office- and consumer software delivered to B2B customers. For the last five years, he has spearheaded products to the TV industry, with the successful introduction of the turn-key smart TV solution "Opera TV Store", and more recently, the Opera´s new embedded HTML5 engine based on Chromium and Blink.

Presentation: Web technologies for Interactive TV

Synopsis: The presentation will focus on trends and opportunities emerging now that all devices gets capable HTML5 engines. How HTML5 and HbbTV can be combined with technologies such as content protection, adaptive bitrate streaming, and others to let broadcasters connect directly with, and engage their audience.

Frans De Jong, EBU

Frans de Jong holds a Masters degree in Information Theory from Delft Technical University. He has worked in the media industry all his life, both in hands-on (video editor, broadcast engineer) and in development roles (system architect, technical consultant). Since 2003 Frans works at the EBU's technical unit as a Senior Engineer, focussing on production technology topics, such as HDTV, System Integration, Subtitling, Quality Control and Loudness.

Frans is fond of cable cars, which fortunately are in abundant supply in the country where he works and lives: Switzerland.

Presentation: Access services in online delivery

Sean O'Halpin BBC

Sean O'Halpin is the Lead Engineer in the BBC R&D Internet Research and Future Services section. He has over 20 years experience in programming, specialising in coordinating data processing systems, realtime communications and messaging systems.

At the BBC, he designed how iPlayer for Radio is scheduled, the data feeds and control systems for Visualising Radio and helped build the XMPP pubsub infrastructure. He has also worked on the DAB LiveText and Slideshow systems. Since joining BBC R&D, he has worked on various projects including media bookmarking, ingesting the Twitter Firehose, designing the RadioTAG protocol and a prototype of a programmable TV.

His main research interests are in information flow and control over realtime messaging systems from editorial and production to the home.

Presentation: Personalizing hybrid media devices

Synopsis: The Cross-Platform Authentication project is on track to deliver an open standard for authenticated device association based on OAuth 2.0. The BBC is currently implementing the standard as part of the BBC's Playlister online service, which enables users to create and manage their own music playlists. The EBU is coordinating public service and commercial broadcasters and device manufacturers from around Europe to deliver this project. The goal is to develop an open standard method for associating a user's connected media devices (e.g., connected TVs and radios) with an authenticated online account to enable broadcaster-provided personalised services on those devices.

At BroadThinking 2014, we will give an overview of the protocol and explain how it can be used as the basis for personalizing broadcast services on IP-connected devices and how it could be deployed to enable Single Sign On across many service providers.

Akihiro Tsuchiya, Streamhub

Aki Tsuchiya is a 13-year TV strategy veteran who has helped established broadcasters and disruptive technology firms alike advance their digital media businesses. Now he is building his own start-up to deliver on his fervent belief that more profitable media decision-making lies in better use of data.

Tsuchiya was a senior strategist at Viacom whose work on acquisitions, budgeting and programming informed the launch and development of MTV in Japan. A senior platform executive with Joost from its launch in 2006, Tsuchiya helped pioneer online TV delivery strategies of the kind now deployed by Hulu.

Far from believing, as many technologists do, that TV is dead, Tsuchiya believes technology and great content mean TV is undergoing a glorious transformation that is leading to new growth.

Presentation: Turning audience data into actionable insights

Synopsis: There's an increasing challenge in how media companies derive value from their audience data. First, we have the challenge around data collection in terms of non-standardised sources and volume, as we are now able to track non-sampled 100%

audience data from our digital services. Then we have the insight processing steps where we seek to find relevant trends against multiple benchmarks, as meaningful insights, both through human and machine learning processes. Lastly, we have the challenge around how we present this data in terms of visualisation methods to make the data relevant and easy to access / manage for the various stakeholders of an organisation for action (including externalisation of insight APIs to recommendations, UI).

Adolf Proidl, XroadMedia

Adolf Proidl embarked on his journey with digital video in the mid 90ies. Since then he was responsible for R&D, strategy & innovation and entrepreneurship of "first of its kind" video products and standard for iR3, Philips, and APRICO Solutions. His contributions went into digital video on tape (DV, D-VHS), optical (DVD, DVD+RW) and hard disk based video recorders, and into machine learning aimed at content discovery solutions. He lead the introduction of internet enhanced consumer electronic products, the first DVD recorders with electronic program guides, and controlled the research programs directed towards intelligent, connected video appliances, leading to his founding of the venture APRICO Solutions.

As co-founder and chief executive officer of XroadMedia Adolf is responsible for XroadMedia's vision, structure and innovation, making sure that content discovery empowers the consumer and business creation at the same time. Adolf holds 38 international patents, an M.S. degree in electronics and communication engineering and is a member of the IEEE for 22 years.

Presentation: Personalisation that makes a difference

Synopsis: Machine learning is a field of study whose origins date back to the late 1950ies. Therefore most of the basic concepts, algorithms, and generic approaches to the problem are today well understood and start-ups in that field emerge continuously. Still the multi-screen, multi-user environment flooded with content distracts too many from the core principles that need to be followed to create personalization that delivers on user expectations and business goals at the same time. This talk shows how consumer insights and domain knowledge allow operators, device manufacturers, and media companies to deliver personalized content discovery experiences that make a difference.

Ignacio Gomez, RTVE

Ignacio Gómez is Director of Strategy and Innovation for RTVE.es, the interactive unit of RTVE, Spain's Public Broadcaster. From this position he helps define the group's strategy regarding the multiplatform digital environment which includes mobile platforms, connected and hybrid TV, second screen, etc., and identifies potential partnerships that can strengthen RTVE's position within the interactive landscape. He began his career working in Finance, but soon felt the attraction of online media & journalism. He joined RTVE in 2007, where he's formerly worked as Deputy Content Director and Content Director creating and implementing entertainment multiplatform products and services both for all the TVE channels and for all of the six Radio Nacional de España (RNE) stations. He also coordinated the INVI Awards (jointly developed by RTVE and Red.es, the public office responsible for fostering the Information Society in Spain) that recognized audiovisual innovation on the Internet in Spain.

Presentation: Broadcaster view on connected screens

Synopsis: *RTVE's involvement with connected TVs started with the first applications for consoles back in 2008. From then onwards we've developed applications for Smart TVs and launched a few versions of our HbbTV platform ---the last one in the Summer of 2013, which so far has doubled our number of unique weekly users. In this presentation I'll share our view of the current connected TV landscape in Spain, the lessons we've learned along the way, the projects we have on our roadmap and the risks that we believe a highly fragmented scenario still pose for all national public and private broadcasters.*

Kevin Murray, Cisco

In 1997, Kevin Murray joined DMV which later became part of NDS and is now part of Cisco. He is a System Architect in Service Provider Video and is actively engaged in a range of research and standardisation areas related to the television experience. Over the years, Kevin's work has included contributing to the development of HD, new coding techniques, home networking technologies, advanced DVRs, IP delivery of TV, "over-the-top" content delivery, 3DTV and file formats. Kevin currently chairs the DVB ad-hoc technical group CSS: Companion Screens and Streams, as well as being involved in both video coding and IP delivery groups.

Presentation: Device synchronization using DVB

Synopsis:

Mark Londero, Sony

Mark Londero is the Technology Planning manager for Sony Home Entertainment Europe. He has worked for Sony TV group in Europe since 1982, spending 3 years in Japan and is now based in the European TV headquarters in the UK.

As Technology Planning manager he has overseen the development of the digital broadcast market to include HD, 3D and now Ultra HD solutions, as well as common interface, broadcast interactivity, and companion screen connectivity.

Presentation: CE vendor's view on connected devices

Synopsis: Sony provides some insight into the rapid growth of IP delivered video entertainment Using standard technologies to help accelerate public standards Personalisation & Recommendation – Privacy vs Benefit Premium IP Service Providers – Friend or Foe?


Dirk Griffioen, Unified Streaming

Dirk Griffioen is as CEO of Unified Streaming responsible for strategy, business relations and expansion. Dirk Griffioen has over 15 years of experience in software development and as co-founder of several startups Dirk has deep knowledge of streaming technologies.

Presentation: "Over The Top" Radio

Synopsis: When it comes to streaming radio, Broadcasters face the same challenge as with video: quality, scale, protection, many different devices and how to monetize. To address these questions two major European Broadcasters (BBC and RTL) initiated the move to audio only adaptive bitrate to stream their radio channels.

The presentation will discuss the various aspects of the setup, including encoding and MPEG-DASH, as well as the experiences encountered and future developments.
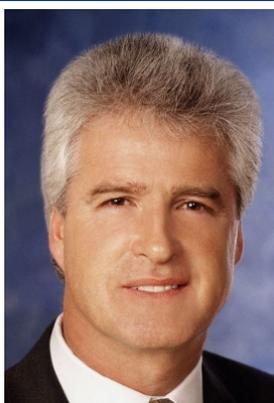
David Price, Ericsson

David Price plays a key role in driving the development of Ericsson's global TV business, helping service providers deliver next-generation, multi-screen TV services. David resides in both the US and the UK and served as President of the MPEG Industry Forum until 2012. Prior to Ericsson, David served as Vice President at Harmonic Inc. and is the author of the book "MPEG: Systems, Technologies and Operations" published in 2012. He was selected in 2003, 2004 and 2006 as one of the "Euro 50" by Cable & Satellite Europe magazine, which celebrates those who have demonstrated outstanding leadership and vision in their fields. He has an MBA from CIT and has an Honors Bachelor's degree in Cybernetics, Instrument Physics and Mathematics.

Presentation: Impact of HEVC on the distribution chain

Synopsis:

See above

Bram Tullemans, EBU

See above.

Presentation: Introducing the Reference Test Engine

Synopsis:

Marina Kalkanis, BBC

As head of the Core Services team at the BBC, Marina Kalkanis is responsible for the online media publishing workflow, tools and players. A senior technology manager within the corporation, Marina has been on the iPlayer team from the beginning and has looked after metadata publishing, analytics, clip publishing tools, media workflows and the web media player. Marina was technology leader for the BBC teams that delivered the London 2012 Olympic games online and more recently has insourced the full end to end online publishing workflow at the BBC.

Henry Webster, BBC

Experienced Product Manager and technical expert, specialising in audio and video products for web, mobile and interactive TV applications. Henry has been at the forefront of internet video and audio delivery since 2000 and has been led delivery for BBC News, Sport as well as the BBC's iPlayer services. Henry is responsible for the design, implementation and delivery of the video and audio systems, which drive the BBC's online video and audio portfolio. Past successes have included delivering a highly successful service for the BBC's digital Olympic propositions and being responsible for pan-BBC digital video solutions including encoding and delivery for BBC iPlayer. He is also responsible for

the development of the user facing player components.

Presentation: Using a hybrid cloud setup for encoding to distribution

Synopsis: The BBC have been delivering media online since 1997, but with the development of its iconic BBC iPlayer service and more recently its impressive digital coverage of the London Olympic Games, the Corporation's online output has been coming of age. The BBC have been making significant strides in facing the challenge of matching the online capability to the sort of resilience, reliability and quality which is the norm for broadcast TV and Radio. Alongside delivering the ground-breaking digital Olympics, the BBC has redesigned from first principles, the system that has provisioned BBC iPlayer through its nascent years. In September 2013, VideoFactory was born and is now responsible for the publication of 50,000 hours of TV content and nearly 100,000 clips per year across the BBC's digital products and on PC, mobile, tablet and TV. In this presentation, we will outline the challenges faced by the BBC in aligning the growing expectations for online media, with the reality of building systems to support them. We will detail how VideoFactory was designed to deliver the robustness typical of traditional broadcasting and embraced cloud computing to do so. We will highlight the issues met, detail the advantages of using the cloud and discuss where it didn't always live up to the hype. We will demonstrate how a risk-averse organisation addressed the security concerns of the cloud, and how we plan to rebuild the online distribution of the BBC's 80+ Radio Stations.

Marc-Elian Bégin, SixSq

Marc-Elian Bégin is co-founder of SixSq, based in Geneva, Switzerland, specialized in cloud computing, process automation and agile development. With over 20 years of experience in the software industry, he has worked with the Canadian and European Space Agencies, as well as CERN, on distributed software systems, grid and cloud computing projects. His current focus is on SlipStream, an open source multi-cloud PaaS solution. He is also heavily involved in the Helix Nebula - The Science Cloud - project, where he hold the position of co-chair of the Technology and Architecture Group. Marc-Elian regularly talks to local, national and international events, such as CloudStack Collaboration (Amsterdam 2013), Agile (Salt Lake City, 2011), XP (Madrid, 2011) conferences. He is also co-creator of the Geneva Clojure group.

Presentation: Advantages of SDN and OpenFlow

Egon Verharen, NPO

Egon Verharen is manager R&D at Nederlandse Publieke Omroep (Netherlands Public Broadcasting) overseeing projects on new broadcast- and distribution technologies and the development of new media services. He direct the audio- and video streaming platform for live and on demand services, including Uitzending Gemist, Netherlands' most popular catch-up TV service available on web, digital cable, IPTV and mobile. Egon co-led the introduction of HDTV broadcasting in the Netherlands. He advises the Board and the Director of Distribution, Technology and Broadcast on technical issues. Before joining the NPO Egon was innovation manager at the Dutch higher education and research network, and an assistant professor at Tilburg University. Egon received his MSC (computer science) at University of Twente and his PhD at Tilburg University. He is a member of the EBU Technical Committee since 2010.

Presentation: A broadcaster's perspective

Synopsis: In may 2012 NPO started using a new central HTTP adaptive streaming platform for live and on-demand streaming for its media services. In order to cope with the growing demand we set up our own CDN and started using others. This presentation highlights the successes and challenges of scaling adaptive streaming services to a multitude of platforms and devices and presents lessons learned on the use of CDNs and how to play the bandwidth and peering game.

Will Law, Akamai

Will Law is Chief Architect within Akamai's Media Division. He has been involved with streaming media on the web for the last fourteen years with a strong focus on client-side development and wrote many of the early connection frameworks that still drive much of the traffic flowing over Akamai today, including OVP, HDCore and OSMF. He has a current focus on MPEG DASH and HTTP delivery, UHD content, mobile media, connected devices and security. Law is a founding board member of the DASH Industry Forum, holds Masters degrees in Aerospace Engineering and an MBA and has worked previously for Adobe, VitalStream and a series of five engineering and media-related start-ups.

Presentation: New Media Distribution Technologies for CDNs

Synopsis: Content Delivery Networks need to explore new territory outside the traditional client-server unicast delivery model in order to meet the rampant growth in demand for over-the-top content.

Julien Coulon, Cedexis

Julien Coulon started in the Internet world in 1992 with France Telecom's Hosting Division. In 1996, he spent two years on a technology watch in their New York offices. Back in France, he headed the Internet and Minitel sector of World Cup "France 98", then successfully developed their Hosting activity. In 2000 he helped set up Langages Virtuels, a web conferencing start-up later bought by Genesys Conferencing. Julien joined Akamai International in 2002, to launch their E-commerce, Digital Media & Telecom activities in France. He remained Industry Director with Akamai until 2009, having assured the company's dominance in the French market. Mid 2009, he launched Cedexis "expert in multi-platforms strategy" with Marty Kagan. Cedexis is a neutral monitoring evaluator of Cloud/CDN/datacenter, is seen by real end users, synchronized with a decisional real-time load-balancing platform resulting in significant performance improvement, delivery and Cloud cost optimization and increased search engine rankings.

Presentation: Network measurements for load balancing

Synopsis:

Stefan Arbanowski, Fraunhofer FOKUS

Dr. Stefan Arbanowski is heading the Competence Centre Future Applications and Media (FAME) at Fraunhofer Institute for Open Communication Systems FOKUS in Berlin, Germany. Stefan Arbanowski received his Ph.D and M.Sc. in computer science from the Technical University Berlin (TUB), Germany. He gave lectures in broadband networks, mobile communications, service platform, and middleware technologies at TUB. Since 1995, he participated several national and international research projects related to service platforms, rich media, IPTV, mobile and personal communications. Currently, he is coordinating Fraunhofer FOKUS' Internet delivered media activities, bundling expertise in the areas of adaptive streaming, interactive applications, media handling, mobile telecommunications, and broadband-broadcast convergence.

Presentation: Implementing content protection in HTML5

Synopsis: HTTP adaptive streaming and a common DRM-interoperable encryption are key factors for Internet delivered video. The presentation covers how these requirements can be deployed in HTML5 using W3C EME and MSE. As an example implementation, the Fraunhofer FOKUS FAMIUM framework is presented. It is as an end-to-end prototype meant for early technology evaluation and interoperability testing. FAMIUM illustrates how these different technologies and standards work together.

Ian Trow, Harmonic

Ian has worldwide responsibility for emerging technology and strategy for Harmonic.

This currently includes:-

1.   High Efficiency Video Coding
2.   4K
3.   Targeted Advertising
4.   Software & Cloud Based Solutions

He has over 20 years of systems and design experience in High Definition and MPEG video products. Ian's previous roles to Harmonic were at Thomson (Director of Compression Technology) and Envivio (VP of Technology & Marketing).

Ian was at Tandberg Television for 9 years, as Engineering Group Manager working on MPEG-2 broadcast encoders, and later moving to become Segment and Product Manager with responsibility for satellite, terrestrial, and IP delivery of compressed material. Before Tandberg, he was a design engineer at Snell & Wilcox and Sony Broadcast.

Ian obtained a B.Sc in Electronic Engineering from the University of Sussex and is Cisco CCNP & CCDP qualified.

Presentation: Setup your encoding chain for content protection

Synopsis: Broadcasters and content aggregators are under increasing pressure to make content available over a wide variety of web based platforms utilising different DRM strategies. Encrypted Media Extensions (EME) interact with a wide variety of elements associated with content protection, decryption, packaging and license keys via an API to enable replay of content in a web environment. Operating in a web domain requires a completely different approach to content protection used in linear broadcast, the aim being to allow an App and encrypted file to be accessed across a wide range of browsers. The use of Common Encryption aims to offer for adaptive streaming what DVB Simulcrypt offers for head-ends, but how scalable is this approach given predictions of video accounting for 80% of web traffic and it is reasonable to expect a standardised approach to dominate?

John Piesing, TP Vision

Jon Piesing is the vice-chair of HbbTV. He played a major role facilitating the convergence of the original French and German initiatives which together become HbbTV. Jon has been a leading figure in the development of specifications for integration of TV and interactivity for more than ten years. This has included being the chairman of groups in DVB, the Open IPTV Forum and the UK DTG. Jon is now Director, Standardisation for TP Vision (who manufacture Philips TVs for Europe an d a number of other territories). He has previously held senior positions related to standardisation in several different units of Philips.

Presentation: HbbTV 2.0 is all about…..

Synopsis: *This presentation will give an overview of the work that has gone on in the HbbTV Association over the last year on the next version of the HbbTV specification - informally called 'HbbTV v2'.*

Thomas Stockhammer, Qualcomm

Thomas Stockhammer received the Dipl.-Ing. and Dr.-Ing. degrees from the Munich University of Technology, Munich, Germany. He is cofounder and CEO of Novel Mobile Radio (NoMoR) Research, a privately owned company providing consulting and software development services as well as products on emerging communication networks such as HSPA, MBMS, LTE, LTE-Advanced as well as on Mobile TV, IPTV, and Web TV-related matters. Since 2009 he is a Consultant for Technical Standards for Qualcomm. Specifically, he is the active and has leadership and rapporteur positions in 3GPP, MPEG, IETF and the DASH-Industry Forum in the area of multimedia communication, TV-distribution, content delivery protocols and adaptive streaming.

Presentation: Updates on DASH standards

Synopsis: *This talk will focus on typical issues when distributing broadcast content, including catch-up, on-demand and especially live content to a multitude of devices and receivers. Recent advances in standards, especially MPEG, DASH-IF, DVB, 3GPP and HbbTV have addressed specific deployment use cases from field experience. This includes the efficient use of infrastructures, robust operations, ad insertion, codec and media integration as well as reducing the latency. The talk will outline the motivation and background, will introduce the features and will especially also focus on the next steps to ensure broad interoperability for such services. In particular, it will also show the convergence towards a subset of relevant tools adopted in different organisations.*

Gilles Teniou, Orange Labs

Gilles Teniou received the Master's degree in Engineering Computer Vision, from the Education and Research department in Computer Science and Electrical Engineering, University of Rennes, France, in 2001. He joined Simecom, a consulting company in 2001 as a video coding developer. While working for different companies such as Thomson, Envivio, TDF and France Telecom, he participated in the first deployments of H.264/AVC-based HDTV services over DSL. He joined France Telecom Research & Development in 2006 as a video codec expert where he led activities related to scalable video coding. In 2008, he was appointed Head of video coding standardization activities for Orange Labs. As a DVB delegate he has been active in the definition of 3DTV specifications. Since 2011, Gilles has been the chairman of the Video Working Group in 3GPP SA4. Early in 2013, Gilles Teniou became Senior Standardization Manager on Content and TV services. He is in charge of managing the technical and operational standardization activities related to TV & Audiovisual Services including service architecture, technologies used for audiovisual streams (media formats and protocols) as well as the application environment used for TV. Gilles also leads a research project on future video formats, identifying the opportunities for the introduction of new video services.

Presentation: 3GPP User Services

Synopsis: *This presentation will provide an overview of the current activities to enable scalable, efficient and high-quality distribution of TV services over 3GPP networks. The delivery is based on DASH. Recently added components to further improve and enhance the service are, among others, broadcast delivery through eMBMS as well as High Efficiency Video Coding.*