

HOW THE TV 3.0 WILL IMPACT THE USER EXPERIENCE AND THE MEDIA SUPPLY CHAIN?

The next generation of Digital Terrestrial TV in Brazil (under development through the TV 3.0 Project of the SBTVD Forum) will bring a series of new technological features. We will discuss how these features will impact the user experience and the broadcasters' audiovisual production and distribution chains.

Moderator: Luiz Fausto de Souza Brito , Chair – Technical Module, SBTVD Forum

SPEAKERS:

- **TV 3.0 APPLICATION CODING: NEW USER EXPERIENCES AND BUSINESS OPPORTUNITIES**

Débora Christina Muchaluat-Saade - Full Professor - Universidade Federal Fluminense (UFF); Member of the TV 3.0 Application Coding Technical Group – SBTVD Forum

This talk presents the application coding layer proposal for the TV 3.0 Project. We discuss new facilities for application development, including application-oriented TV, advanced user interfaces, immersive TV with sensory effects and VR/AR/XR content. New use cases and business opportunities are also highlighted.

- **TV 3.0: CAPTIONS AND AUDIO AND VIDEO CODING**

Carlos Cosme - MediaTech Lab – Globo

An overview of the captions layer and audio and video coding layer of the future TV 3.0 in Brazil.

- **TV 3.0 PHYSICAL AND TRANSPORT LAYER: NEW FEATURES AND APPLICATIONS**

Cristiano Akamine - Researcher at the Digital TV Laboratory at Universidade Presbiteriana Mackenzie

Frequency Reuse-1, MIMO 2x2, Channel Bonding, Reception with negative C/N in Rayleigh channel, Targeted Advertising, and Internet/CB Enhancement Layer are some new features present in the TV 3.0 Physical and Transport Layer. This presentation aims to explain and exemplify these concepts that will be present in TV 3.0.


Luiz Fausto de Souza Brito, Chair – Technical Module, SBTVD Forum

Professional Master's Degree in Applied Computing (UECE – 2015), Executive MBA on IT (UFRJ – 2011), extension course in Networks and Video over IP (UFRJ – 2009), Bachelor's Degree in Electrical Engineering with emphasis in Electronics (UFRJ/USU – 2005). Currently working as Technology & Regulatory Specialist for Globo, SBTVD Forum Technical Module Coordinator, chairman of SWG 6B-2 (Multimedia) of ITU-R WP 6B (Broadcast service assembly and access), member of the Delegation of Brazil in ITU-R (SG 6 – Broadcasting Service) and CITEL (PCC.II – Radiocommunications).


Débora Christina Muchaluat-Saade - Full Professor - Universidade Federal Fluminense (UFF); Member of the TV 3.0 Application Coding Technical Group – SBTVD Forum)

Débora Christina Muchaluat-Saade holds a degree in Computer Engineering (1992), a Master's in Informatics (1996) and a PhD in Informatics from the Pontifical Catholic University of Rio de Janeiro (2003). She is a full professor at the Institute of Computing of the Fluminense Federal University (UFF). She has a DT level 1D productivity scholarship from CNPq and Scientist of Our State (CNE) from FAPERJ. She was Young Scientist of Our State (JCNE) from 2009-2011 by FAPERJ. She was vice-coordinator of the Graduate Program in Computing at UFF, evaluated with grade 6 by CAPES, from 2017 to 2021, and was also coordinator of the Technology in Computer Systems Undergraduate Course at UFF from 2014 to 2019. She founded the MídiaCom Lab at UFF in 2003 focusing on research in computer networks and multimedia (www.midiacom.uff.br) and since then she has been one of the lab deans. She is a member of the Technical Module of the SBTVD Forum. Her areas of interest are multimedia, mulsemmedia, computer networks, wireless networks, smart grids, Internet of Things, interactive digital TV and digital health. She has participated in the development of the NCL – Nested Context Language – adopted as the ABNT NBR 15606-2 standard in the GINGA middleware of the Brazilian Digital TV System and as an international recommendation by ITU-T H.761 for IPTV services.


Carlos Cosme - MediaTech Lab - Globo

Carlos Cosme holds a degree in Electrical Engineering from Universidade Estácio de Sá (2007), a postgraduate degree in Control and Automation Engineering from Universidade Gama Filho (2011) and a specialization in Computer Networks from PUC Rio (2013). He has been with Globo since 1998, where he worked in the areas of operation, support and currently works at the MediaTech Lab – Globo's research and innovation area. He is a member of the Technical Module of the Brazilian Terrestrial Digital TV System Forum (SBTVD), where he coordinates the Audio, Captions and Video for TV 3.0 working groups.


Cristiano Akamine - Researcher at the Digital TV Laboratory at Universidade Presbiteriana Mackenzie

Received the B.Sc. degree from Mackenzie Presbyterian University, Sao Paulo, Brazil, in 1999, and the M.Sc. and Ph.D. degrees from the State University of Campinas, Sao Paulo, in 2004 and 2011, respectively, all in electrical engineering. He is a Professor of Embedded Systems, Software Defined Radio, and Advanced Communication Systems, Mackenzie Presbyterian University. Since 1998, he has been a Researcher with the Digital TV Research Laboratory, Mackenzie Presbyterian University, where he had the opportunity to work with several digital TV systems. His research interests are in SoC for broadcast TV and software defined radio.