

## 12th SMPTE EMERGING TECHNOLOGIES SEMINAR

Thursday 15th April 2021 - 15:00~18:00

Forum Europeo Digitale - Digital Edition

The Italian Section of SMPTE, Society of Motion Picture and Television Engineers, is pleased to announce its twelfth Seminar dedicated to the Emerging Technologies.

Following the success of the previous Seminars, SMPTE has deemed it appropriate to follow up on this consolidated initiative to fulfill its statutory mission which concerns the issue and dissemination of international technical standards governing the technologies of the moving image.

This event is kindly hosted in the context of the European Digital Forum, which this year will be presented as online digital edition, will take place on April 15, 2021 starting at 15:00 and ending by 18:00 with the participation of international qualified experts.

### WORKSHOP PURPOSE

The last twenty years have seen the achievement of a goal that television had set itself since its inception: to equal and exceed with video images the quality of the cinematic image on film which, in the first decades of the last century, had established itself as great media innovation in a rapidly evolving communication context.

This ambition clearly emerged in 1980, when Dr. Takashi Fujio, director of the Research Laboratories of NHK (the Japanese public broadcaster) proposed an analog television standard for an "electronic film" named Hi-Vision: it was the first High Definition system that promised to improve the video image by focusing on increasing its spatial resolution (determined by the number of raster lines and the bandwidth of the video signal itself). Further research on the image quality perception had clarified that it could also depend on other parameters, such as the temporal resolution of the image (i.e. the repetition frequency of the images), the luminous resolution of the pixel (i.e. its brightness range), and the chromatic resolution of the pixel (i.e. its chromatic range). In other words, it would have been appropriate to focus not only on an increase in the number of pixels but on improved pixels, in order to better represent the vision on video screens.

On the trail of these considerations, evaluating the different role that these parameters play on the data flow of the video signal (the bit-rate), in recent years 4K ultra high definition (UHD) digital systems have been proposed (around 4000 pixel / line) and 8K (around 8000 pixels / line) which implement, in addition to a significant increase of the spatial resolution (greater number of pixels), also improvements to the parameters above mentioned, adopting respectively HFR (High Frame Rate), HDR technologies (High Dynamic Range) and WCG (Wide Color Gamut).

Another goal which has been gradually achieved in recent times is the progressive integration between television and IT technologies, which have been developed up to now on different communication networks: television networks and Internet networks. Therefore we are witnessing a slow but progressive migration of the video signal structure, now serial and isochronous, such as the SDI (Serial Digital Interface) used by broadcasters for studio production, towards a "packetized" structure, compliant with Internet IP protocols, adopted by the IT world, capable of providing an increasingly demanding user with a different approach, that offers wide scenarios open to scalability and new services.

All this will be discussed by the Seminar speakers, coming both from the radio and television industry, from technological research and from the manufacturing industry of systems and equipment, for a broad panorama of "Emerging Technologies".

### ATTEND TO THE SEMINAR

Participation to this digital event is free upon registration, by completing the form published at <http://www.smpite.it/registration> which contain instructions how to connect to this digital event.

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### AGENDA

- 15:00 Welcome and SMPTE introduction
- 15:10 **Guido Meardi, V-Nova**  
MPEG LCEVC & SMPTE VC-6, the new standard
- 15:25 **Thierry Fautier, Harmonic**  
Video Standard Evolution
- 15:40 **Giovanni Ballocca, Sisvel**  
AV1 e VP9 new codecs
- 15:55 **Antonio Corrado, MainStreaming**  
**Luca Moglia, Akamai Italy**  
Content Over IP "what is happening to the OTT distribution services"
- 16:25 **Antonio Arcidiacono, EBU**  
5G Broadcasting
- 16:40 **RAI point of view: Gino Alberico**  
Latest progress of Media Technologies
- 17:00 **Mediaset point of view: Marco Pellegrinato**  
Standard role in the Technology innovation process
- 17:20 **Sky Italia point of view: Mirko Mastropietro**  
Big datas in the Video world
- 17:40 Conclusions
- 18:00 Seminar close

*SMPTE Italian Section sincerely thanks COMUNICARE DIGITALE  
for the kind hospitality in the context of the 18th FORUM EUROPEO DIGITALE*

