Sky Italia & Immersive Media Experience Age

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Sky Italia

Sky Italia, established on July 31st, 2003, has a 4.76-million-subscriber base. It is part of Sky plc, Europe's leading entertainment company with 26 million customers across five countries: Italy, Germany, Austria, the UK and Ireland.

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Immersive Experience

The scene from the future opposite is imaginary, have no doubt; but the basic concept behind it is real. Psychologists are helping in the development of media systems that can generate a sense of presence in a remote environment. When an observer is presented with a high-fidelity representation of the physical world, a compelling perception of 'being in' the depicted scene is often elicited.

It is this perception that is defined as presence: a sense of 'being there' in a displayed scene or environment (Barfield et al., 1995).

As presence increases, an observer becomes more aware of and engaged by the mediated environment, and less aware of the environment in which he or she is physically located (Freeman et al., 1999).

IMMERSIVE TV: TELEVISION OF THE FUTURE MAKES THE VIEWER PART OF THE CONTENT COMBINING SOCIAL CONNECTIVITY INTERACTIVITY & VIDEO QUALITY

Picture Quality

The Highest quality is now offered by UHD (Ultra High Definition), and HDR. Improving the level of detail, colour and depth of image in content delivery, alongside improvements in the level of interaction that is offered, is imperative for the advancement of the TV experience, as primarily, the standard must appeal to the consumer.

Sky launched UHD in UK and De during 2016,
while in Italy UHD will launch during 2017 with HDR.

Virtual Reality

Immersive concept now means Augmented & Virtual Reality (AR/VR). AR/VR Video technology & market is moving fast, we have seen so far some trials of Live and post produced video, as well as video mostly on YouTube, Facebook and Samsung Gear VR store, using state of the art technology in production, compression, distribution and play back on Head Mounter Devices. Meanwhile in order to grow the industry needs to define production and streaming formats that can address in a generic way all the already existing devices but also the many more to come, as well as provide a superior QoE and avoid the motion sickness pitfalls. Today the industry is fragmented either by the devices (Oculus, Gear VR, HTC Vive, PS VR,…) or by the horizontal ecosystems : Google day dream today probably Apple tomorrow.
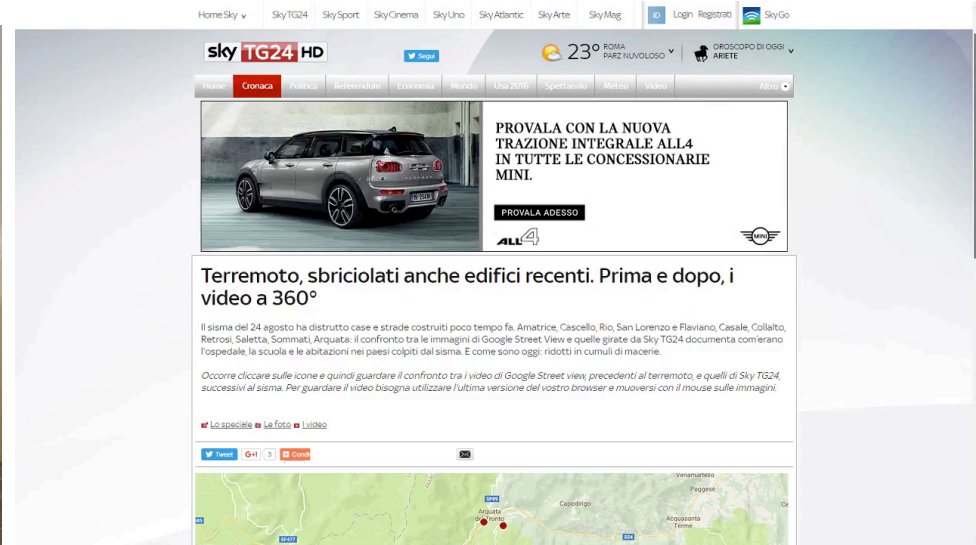
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Sky & VR

In October Sky Group launched Sky VR App, becoming the home of high-quality, immersive virtual reality.

Sky Italia & VR

While in Sky Italia we delivered live 360 Video for a more complete live immersive experience, news and arts.

To maximize the quality and audience we need to have a dedicated and custom production/ post-production and follow the fragmented delivery ecosystems (Oculus, Gear VR, HTC Vive, PS VR,…).

Augmented & Virtual Reality (AR/VR) is among those 33 CES technology categories, with 261 exhibitors - the largest showcase of AR/VR technology ever. A related category is Gaming, with 388 exhibitors

CES 2017

A few group VR/AR Association, VR Industry Forum ,… but not yet a standard?
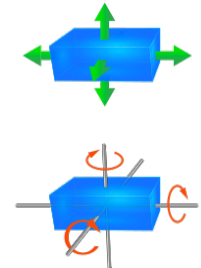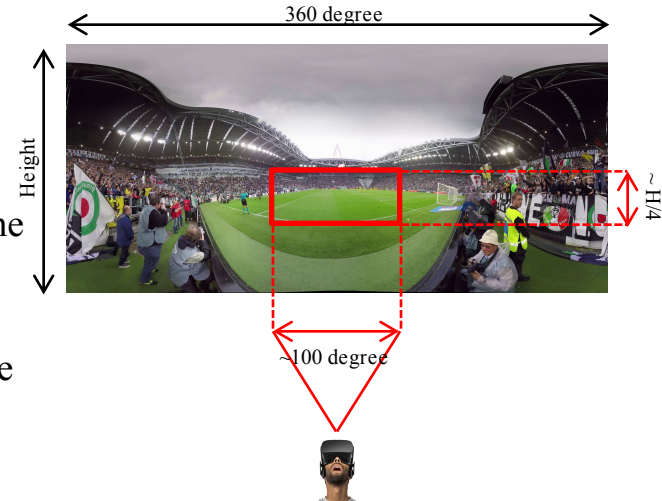
Our Experience

Video quality is the main pain point of VR:

- To allow the user a real immersive experience we need to deliver the best video quality possible

- Current VR solutions allow to deliver and play contents with a maximum resolution of 4k (3840x2160). It is not enough, ~1/12 of video is viewed by the user. Delivering a 4k video, the field of view's resolution is around 1280x540

- HMDs display: display pixel density directly affects the quality perceived by the user. At the moment the best HMD resolution is 2k but the user is still able to see each pixel

- Framerate: to deliver a real immersive experience we need >90 fps

Activities on common video dimensions is not enough:

- 6DOF (Six Degree Of Freedom) – the ability to move within an experience is also crucial to "immersion", which probably leads to a requirement for;

- Volumetric Video – adding true depth/parallax to video so a user can move freely.

- Audio: spatial audio as a key factor too.

Massage to MPEG

The video consumption is part of the human life anytime and anywhere, multiple device and form. Content will be part of the life, and life will be part of content. We have to follow the customer need, in a customer centric word.

Standardization need in advance to understand it and help the ecosystem to grow without a multiplication of resources….

A new dynamic, scalable coding & delivery format could be an answer? …

… or we have start to consider the rise of the Games Engine – there's a strong possibility that video won't be the dominant delivery method of these future immersive, interactive experiences; what's the MPEG view on this, how does MPEG ensure video stays relevant in this scenario?

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