

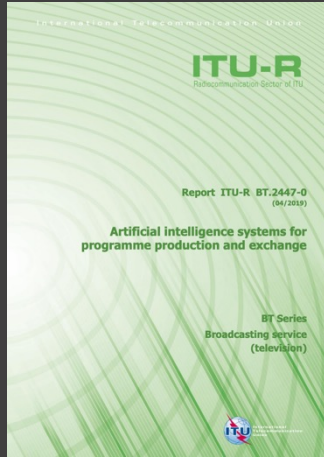


ADVANCED IMMERSIVE SENSORY MEDIA

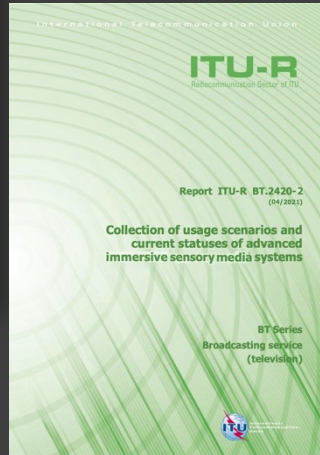
Andy Quested

**Chair ITU-R Working Party 6C
Co-Chair ITU Joint Sector Accessibility Group**

AIMS AND AI



ITU-R BT.2447



ITU-R BT.2420

Current Pilots & Trials...

- Immersive audio
- Haptic enhanced content
- Text to speech/Speech to text
- AI generated presenters
- Signing language & translation
- Automated speech & caption translation
- Automated text to audio-description
- AI aspect ratio & screen shape adaption
- Object Media
- ...



PERSONAL MEDIA

Hear - See - Interact - Understand

- Hear *Enhanced Dialogue, Captions+, Signing...*
- See *HDR, PSE, Contrast & Colour Enhanced, Described...*
- Interact *Voice, Gaze, Haptic...*
- Understand *Simplified Captions, Perception, Translation, Autism...*



OBJECT MEDIA

...it becomes much more efficient to deliver only the required objects to each user and omit those not needed. This also opens out the possibility of not only filtering the objects delivered to each viewer depending on their needs and preferences, but also to pre-combine or cloud-render a personalised experience comprising only the objects needed for that user...

UK Regulator OBM Report

RETHINKING MEDIA PRODUCTION



HEAR

Full Cinema Mix

TV Mix

Enhanced Dialogue

Dialogue⁺

Captions⁺

Signing

SEE

AR/VR Enhanced

HDR

PSE Mitigation

Enhanced Contrast

Enhanced Colour

Audio Description

INTERACT

Voice

Gaming device

Hybrid devices

Brail devices

My bespoke device

Zero Tactile interface

UNDERSTAND

Content as made

Stretched dialogue

“Simplified” captions

Hybrid content

AIMS PROCESSING

ESSENCE LAYER

Object/Accessible oriented narrative

OBJECTS LAYER

Vision, Sound, Data... Objects

OPTIONS LAYER

What can I change and by how much

CONTROL LAYER

Common User Profile – device and platform transferable data

METAHUMANS

An Evolution not a Revolution

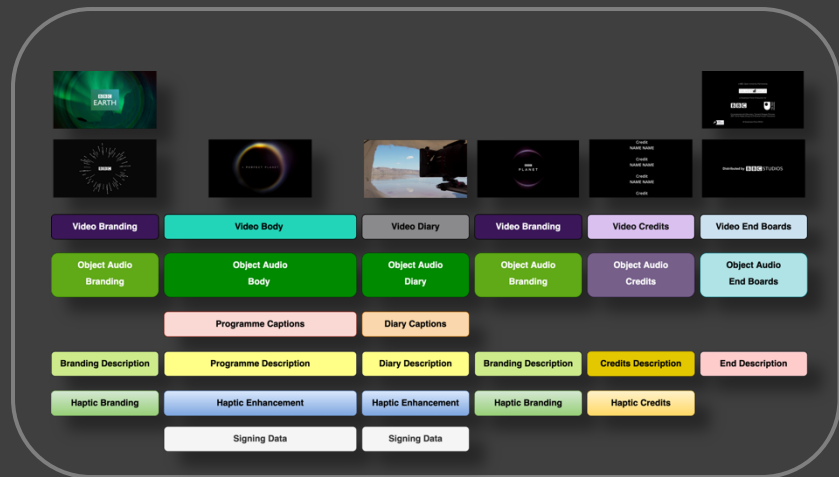
Current trials

- Remote signing capture
- AI/ML assisted presenters
- User choice of gender & ethnicity
- Enables high volume of live signed content
- Potential for sign language translation
- Games Engine & design driven

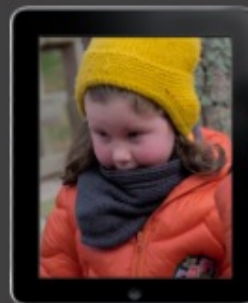
Trials of fully AI driven signing already happening



COMMON USER PROFILE



Common User Profile



My TV

My TV Video

My TV Audio

My TV Signing



My Immersive Device

My Immersive Video

My Immersive Audio

My Haptic Enhancement

Programme Captions

My Mobile

My Mobile Video

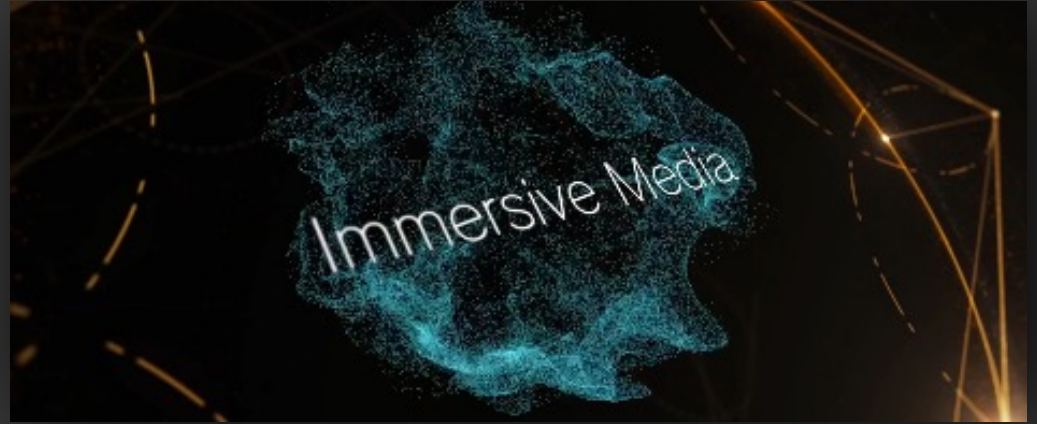
My Mobile Captions

My Mobile Audio

IMMERSION!

Immersive Experience

- Image resolution above 8K
- Total immersive experience
- Virtual Space Sharing
- Merging of gaming and TV



ACCESSIBLE? PERSONAL!

Maisy at the Hay Festival

<https://www.bbc.co.uk/programmes/p07cjq2t>

Goggles help blind girl to 'see' animals again

<https://www.bbc.co.uk/news/av/uk-england-hereford-worcester-48806835>



The fashion that lets you feel music

<https://www.youtube.com/watch?v=6xUAGuq2sBk>

<https://www.bbc.co.uk/news/av/technology-49840370>

THANK YOU