IBC2022

ACCELERATOR MEDIA INNOVATION PROGRAMME

6DOF AUDIO-LED NARRATIVE AND MUSIC EXPERIENCES IN THE METAVERSE

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TERMINOLOGY

6DOF :

six degrees of freedom; freedom of movement of a body in three-dimensional space.

The Metaverse:

Connected virtual 3D spaces that bridge digital and physical worlds

BACKGROUND

Builds upon:

IBC 2021 ‘Immersive Audio & Sound Imagery’

Compared delivery of ‘flat’, fixed-head binaural and dynamic 6DOF content.

IBC 2022:

Taking dynamic 6DOF audio content into physical spaces, creating digital twins and transmedia broadcast content.

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6DOF AUDIO-LED NARRATIVE AND MUSIC EXPERIENCES IN THE METAVERSE

CHAMPIONS

Paramount

BBC R&D

KING'S College LONDON

PARTICIPANTS

MAGICBEANS

TuneURL

ESTABLISHING QUESTIONS

1. What value can 6DOF audio-led content bring to audiences?

2. Can non-linear and immersive audio production be incorporated into established broadcast chains?

3. What interactivity and immersion might be possible using established broadcast chains?

4. To what extent can current and future standards cover these new audio use-cases?

OBJECTIVES

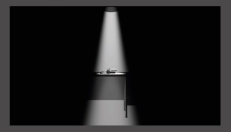
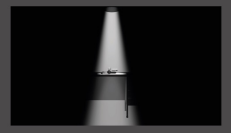
1. Build a 6DOF free-roam experience from standard broadcast media

2. Create an LBE and digital twin

3. Explore transmedia outputs – including audio interactivity through established channels

4. Explore the use of current and future standards

PROJECT STRUCTURE

SOURCE MATERIALS	POST PRODUCTION	6DOF OUTPUTS	TRANSMEDIA OUTPUTS	STANDARDS & COMPLIANCE
Music Narrative	unity Digital Twin 	LBE Digital Twin 	LINEAR BROADCAST OUTPUTS Standard stereo Binaural stereo Spherical video versions SEMI-LINEAR BROADCAST OUTPUTS TuneURL Audio QR code Audio Hyperlink NON-LINEAR BROADCAST OUTPUTS Webcam stabilised 6DOF VR & AR 3D Web and native app versions	BBC R&D ADM AUDIO DEFINTION MODEL

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THE RESULTS

- Location based experience and Digital Twin
- Audio triggered interactivity study
- ADM discussions

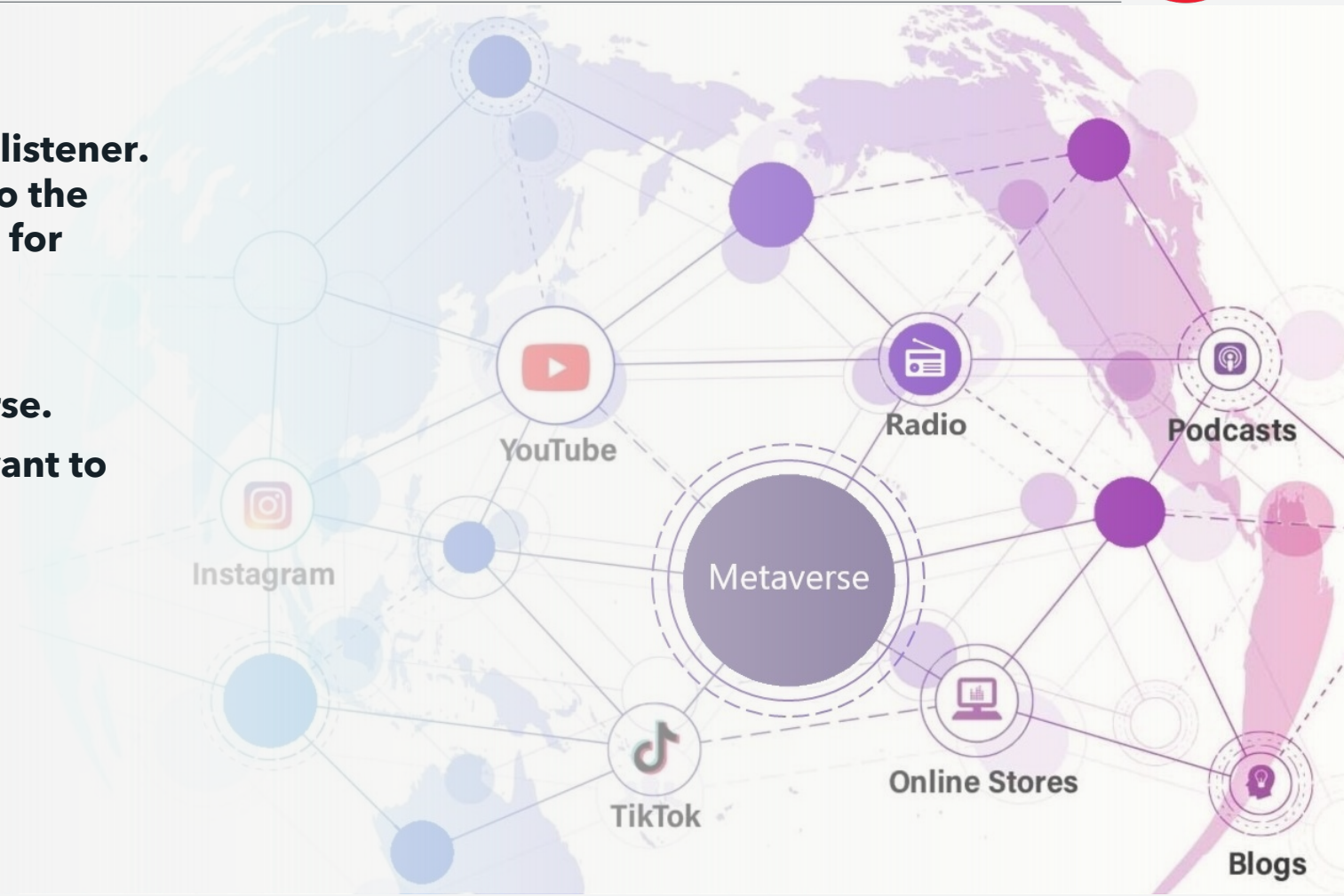
CHALLENGE & OBJECTIVES – Interactive Audio

Audio has one direction from the host to the listener. There is no option for the audience to react to the content they heard and no engagement data for content creators.

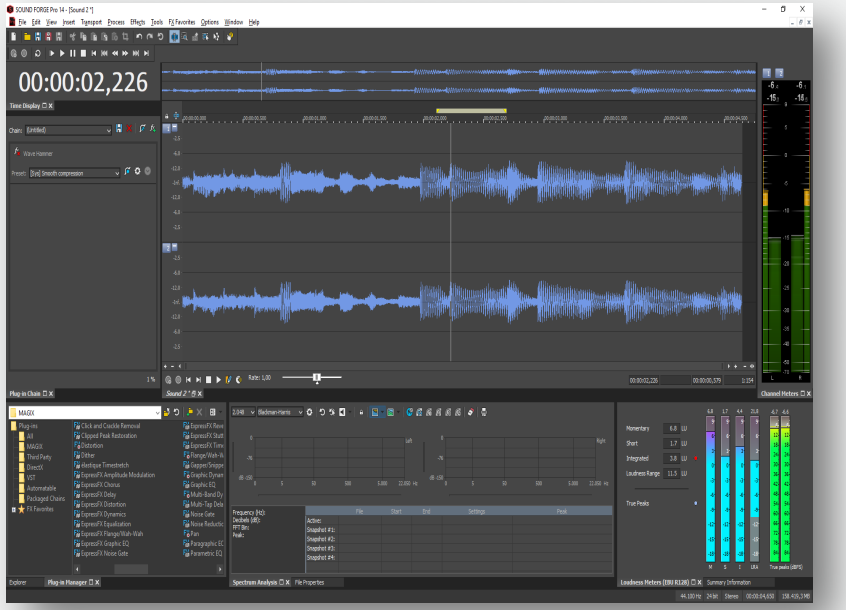
Our goal is to include audio into the metaverse.

Everything that is possible on the web, we want to make available for audio.

- ✓**Audio QR code**
- ✓**Audio hyperlinks**
- ✓**Real-time Emoji reactions**
- ✓**A/B testing**

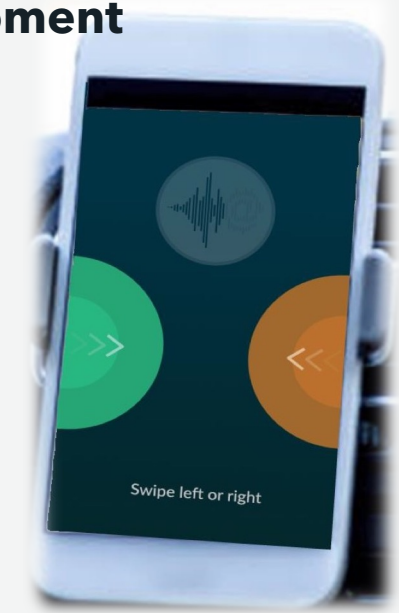


AUDIO TRIGGER: the ultimate in the moment engagement method



Content Production inserts an Audio Trigger for Promotions, Ads, Phone-in, Link to more information.

Audience Responds; simple and in the moment



Engagement Data is automatically collected; impressions, engagement score, attribution, the economic value of content, and clickthrough rate.

Interactive Audio – podcast POC

Create a Podcast based on audio of the Mae Muller concert in Malta provided to us by Paramount.

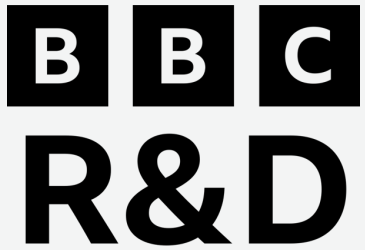
LEARNINGS

- Audio can be a strong driver of engagement and immersion
- Psychoacoustic effects matter
- Hardware matters for spatial content (headphone variation)
- Low friction is necessary for onboarding and engagement
- Open standards will be key to driving universal adoption

WHAT'S NEXT?

- Look at relationship of spatial parameters between LBE and Digital Twin
- Closer look at details of ADM support and prepare suggestions for future development
- Incorporation of new research results from KCL's acoustic simulation
- Further audience testing and refinement

THANKS TO EVERYONE INVOLVED



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THANK YOU

6DOF AUDIO ACCELERATOR TEAM

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