

# VR-IF Production Guidelines

## CES2018 Master Class

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# VISION



- The Production Guidelines Task Force (PGTF) will create guidelines covering all aspects of the production ecosystem, that will ensure high quality, comfortable consumer VR experiences by detailing best practices for content creation, and an outline of the necessary and associated technical standards.

# SCOPE



- The PGTF will call on the forum members to consider all elements of the production ecosystem in producing guidelines that cover acquisition hardware, user experience, content creation, accessibility, audio and delivery specifications, in order to ensure high quality consumer VR experiences.
- Where possible the PGTF will draw on the knowledge of the forum members with expertise in these areas, and will take into account all relevant research and standards, understanding that the guidelines may require amendment as technology in these areas evolves.

# Conventions and Terminologies



- With new technologies and creative needs comes a new lexicon and abbreviations
- From Haptic to Zenith, Hot Spots to Stitch Lines – all need a common understanding
- Some new Acronyms have also emerged and need documenting such as MCTS (Motion Constrained Tile Set)....

# The Production Guidelines



- The User Experience
  - The Level of Immersion
  - Interactivity within the scene
  - Using Audio to enhance the production
  - Should all deliver a comfortable and enticing experience

# Practical Production considerations



- The Field of View
  - From the Human Eye to the Headset – visual cues in vision are important
- Content Position
  - Making sure production elements are all within the FoV or cues to move beyond
- Camera Motion
  - Steady as she goes... Some camera motion works, but much can be uncomfortable.
- Sharp images
  - Image capture rates and motion fidelity
- Orientation
  - Just like real life we like constants – like a level horizon and not a swaying camera

# Practical Production considerations



- Perceived height
- Proximity of Objects
- The duration of the content
- The use of 3D to enhance the experience
  - Use the lessons learnt from the days of 3D TV
- Health and Safety
  - An area being investigated seriously, but many advisories are in place

# Practical Production considerations



- Post Production
  - Cut with care



# Practical Production considerations



- Audio
  - New considerations for creating audio for VR – the sound needs to follow the gaze... in all directions
- Audio Channels may not be the best way
- Object Audio and Metadata
  - Allows for better manipulation with the content
- Scene Based Audio
  - First and Higher Order Ambisonics are a defined method of creating the soundfield
- It is possible to use a combination of the above to suite needs

# Practical Production considerations



- Audio
  - Microphone positioning
  - Microphone arrays
  - Audio metadata
  - Audio / video referencing
  - The destination device for listening
  - ... And much more

# The Master Format



- A defined format required for programme creation and interchange
  - The attributes of the final composite image that is delivered for distribution
    - Image Shape
    - Resolution
    - Framerate
    - File format
    - Color space
    - Audio Layout
    - Metadata
- All needed to be understood to allow us to share our VR creations