Terminology A–Z

In this document you will find terminology used in storytelling, sound, streaming, virtual reality and augmented reality. It is by no means complete but will give you an insight into some of the terminology used in these different areas.

A

Advanced Audio Coding (AAC) is the standard audio codec used for online video and live streaming. It's compatible with every device on the market today.

Acoustics The science of sound. It can also refer to the effect a given environment has on sound.

Acoustic material The acoustical properties of a material. Usually a material designed to absorb sound.

Active presence (or hand presence) An immersive state that is reached as a consequence of using a handheld device within a VR experience.

Adaptive player refers to a video player that dynamically adjusts the quality of content being streamed based on the internet connection speed of the viewer.

Adaptive streaming is a setting option within some encoding software interfaces. Makes it possible to stream video to the end user at the optimal viewable quality. The feature provides the highest video quality for each specific user.

Add-on lighting is a precise lighting to illuminate details, especially faces to capture expressions and emotions.

Agency the capacity for a person to do something and/or influence an artificial environment.

AI – Artificial intelligence is a definition that is changing over time. In general defined as a system that mimics human intelligence to perform tasks and that can improve themselves based on the information they collect.

All-in-one (AIO) headsets are those that pack everything needed for VR into the headset itself.

Ambience is the sound character and atmosphere of a place.

Ambient lighting is a general indirect lighting for the shot to reduce shadows on people's faces and create a uniform light level throughout the space.

Ambient sound is background sounds which are present in a scene or location.

Ambisonic 3D sound, technique for capturing, synthesizing and reproducing a sound environment (spatialization). The listener is immersed in this virtual environment through a number of loudspeakers, varying from three to several dozen.

Anechoic very low or no reverberation, free from echoes.

AR – Augmented Reality is a technology that superimposes a digital element (2D or 3D visuals, video, sound, sensory stimuli) for a user in the real world.

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Assistive Reality is a subsection of AR where information is displayed digitally, most often using AR glasses/headsets. This allows a person to view a screen within his or her immediate field of vision, hands free. Information is not overlaid with real-world views.

Audio visual sync is the synchronization of the live audio signal with the live video data. If the synchronization is off, the viewers will hear the audio ahead of the video, or vice versa.

Auditory area The sensory area lying between the threshold of hearing and the threshold of feeling or pain.

Authorial intent is how much the author predetermines the possible narrative, or the system, in the ability to creatively adapt to the user.

Avatar A virtual representation of the user within the virtual world

B

B-roll is secondary footage to supplement or alternate with the main shoot. It is used in order to create a more engaging and professional-looking stream.

Background noise Noise from all sources unrelated to a particular sound that is the object of interest.

Bandwidth The total frequency range of any system. Usually specified as something like: 20-20,000Hz plus or minus 3 dB.

Bass The lower range of audible frequencies.

Beaming The phenomenon of sound being emitted within a comparatively small solid angle. This characteristic becomes more acute as the frequency increases.

Beats Periodic fluctuations that are heard when sounds of slightly different frequencies are superimposed.

Binaural a situation involving listening with two ears.

Binaural audio is capturing audio using two microphones to simulate sound coming from a specified location.

Boom is an extension arm used to suspend a microphone over sound or persons being recorded with the objective to keep production gear out of the camera's view.

Boomy is a listening term, refers to an excessive bass response that has peaks in it.

Break a physical gap in the assembly or construction, which acts to decouple sound vibrations from traveling through a structure.

Bright Listening term. Usually refers to too much upper frequency energy.

Brainstorming Talking openly in a group to produce an idea or a problem solution.

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Buffering is the time lag between collecting video data and delivering it. A lead cause of buffering is low internet speed.

Butterfly effect system is a storytelling structure for handling a complex narrative and in which the user can influence the way a narrative plays out.

C

Call To Action (CTA) strategic messaging to urge viewers to take a specific action.

Camera man is a person who is responsible for the shots, in collaboration with the DoP; controls the camera, its position and adjustment for each shot.

Capture card is an input device that transports video from the capture device to the streaming platform, encoder, or streaming software.

Capture device is a tool for capturing elements of a stream, including various types of cameras and microphones.

Cave Automatic Virtual Environment (CAVE) is an automatic virtual environment that uses projections on the walls and ceiling of a room to create the illusion of a real space. A viewer can move around anywhere inside the cave, giving them the illusion of immersion.

Chroma key (or green screening) is a technology that makes it possible to incorporate a virtual background into a live video using a green screen.

Clap is a small panel where the number or name of the scene is written as well as the number of the take. It produces a sound that is used in post-production and helps to synchronize sound and image.

Clipping refers to a type of distortion that occurs when an amplifier is driven into an overload condition.

Codec is a program or a device for encoding or decoding a digital piece of information, both audio or video, for easy transmission over the internet. The most common video codec is H.264, and the most common audio codecs are AAC and MP3.

Coherence is a listening term that refers to how well integrated the sound of the system is.

Collision detection is when virtual objects have intersected, sometimes triggering haptic or visual feedback for the user.

Coloration is a term used to indicate audible alterations to sound d ue to its environment. Coloration can be a result of standing waves or room resonances.

Compression is the process of reducing the total number of bits needed to represent an image or video sequence.

Content Delivery Network (CDN) refers to a geographically distributed group of servers that work together to provide fast delivery of Internet content.

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Contrapuntal sound, a sound that contrasts strongly with the image that you see on screen.

Critical distance is the distance from a sound source at which direct sound and reverberant sound are at the same level.

D

dB decibels, are often used to describe sound level, electrical signal strength and digital signals.

Degrees of Freedom (DoF), referred to rotational freedom. It is a term for the movement around an axis or along an axis. Different VR headsets allow for different degrees of freedom and movement. We live in a 3D world and interact with 6 degrees of freedom/movement.

- 3 DoF – indicates how a headset or other device is tracked in three types of directional rotations: rolling (where the head pivots side to side), pitching (where the head looks up and down), and yawing (when the head looks left or right).

- 6 DoF – a 6 DoF headset allows an individual to rotate the head as well as move around in space. The three added movements are elevating (where a person moves up or down), strafing (where a person moves left or right), and surging (when a person moves forward or backward, like walking).

Dialogue is the sound produced by the characters.

Direct Sound is sound that has traveled directly to the listener without reflecting.

Directional audio creates fields of sound using an array of small speakers to control the direction of audio output.

Director of photography (DoP) is responsible for the shots and the camera. Technical leader for camera and lights.

Distortion anything that alters the musical signal.

Doppler effect the increase (or decrease) in the frequency of sound, light, or other waves as the source and observer move towards (or away from) each other.

Dynamic range is the range between the loudest and the softest sounds that are in a piece of music.

E

Early reflections are reflected sounds that arrive relatively soon at a listener's location.

Effect light use of light effects for a specific action, added to the general lighting atmosphere.

Embedding is the process of placing a video player on a website of your choice.

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Embodied cognition is the theory that cognition is not limited to your brain, but distributed across your entire body.

Embodied presence is acknowledging the existence of your body within a virtual reality VR experience.

Emotional design is drilling deep into how you want people to feel. Viewers are influenced by their interactions with the environment at three levels – instinctive feeling, behavior and memory. It is important to cater to the emotional response at all three levels to provide a great user experience.

Emotional presence is a state that evokes an emotional response in the user – feelings of empathy, fright, joy, wonder, within a virtual reality experience.

Encoders are devices used to convert the video format of the source video into a compatible format that is playable on all devices.

Encoding is the most significant part of live streaming. It takes your stream and converts it into a file that can be streamed across the internet.

Experience design is thinking about solving a problem, promts a certain emotional response or trigger a specific behaviour. Experience design always focuses on the user.

Experiencer (also user or player) person that is taking part in a VR experience.

Eye tracking, facial capture in which the eye movements are recorded.

F

Feedback when an audio signal is being fed back to itself.

Field of View (FoV) is the view that is visible to a user when turning his/her head from a fixed position.

Flat the term is used to describe an even frequency response in which no frequency is accentuated.

Fourth wall refers to an imaginary "wall" in front of the stage, separating the audience from the actors. Breaking the fourth wall is when actors on stage or in film speak directly to the camera.

Frame rate (FPS) is the speed at which the consecutive images are shown to create video. The more frames per second the video has the smoother it feels for a viewer. Most digital video uses 25-30 fps. Fast-action videos need a higher frame rate, 60 fps.

G

Gain increase in level. The function of a volume control.

Gaze the direction the viewer is looking in.

Gaze-activated content when content e.g. the sound, the way a performer within a scene acts, the narrative, is directly impacted by the users's gaze.

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Geo-blocking restricts access to content depending on location, usually established through an IP address.

Grok, grokked, grokking to understand thoroughly and intuitively, communicate sympathetically.

Gesture – communication via the body, for example hands or head, that when tracked by a motion sensing camera attached to a computer, can be interpreted as movement and mirrored in a virtual world.

Ghost (story) is a virtual reality experience where the user is an observer of the narrative and not capable of interacting with the world or characters.

H

Haptic technology is a technology that can create an experience of touch by applying forces, vibrations, or motions to the user.

Head tracking, method used by a headset to project the correct image by tracking a user's head movements.

High Definition (HD) resolution refers to an image not less than 720p but more likely 1080p in height.

Hotspot is an interactive spot within the artificial experience that reveals more content.

I

Immersion is a psychological sense of feeling present in a virtual environment.

Inciting incident in storytelling that is something that takes the audience into the experience.

Interactive narrative is a digital interactive experience in which users create or influence a storyline through their actions.

J

Judder the shaking or stuttering experienced inside of a VR headset.

K

Kinesthetic dissonance the sensory disconnect experienced when touch or motion feedback from a virtual environment is delayed or absent.

L

Late reflections are reflected sounds that arrive relatively late at a listener's location.

Latency is the delay between when a signal is sent and when it is received at its destination. Reducing delay allows for a more responsive experience.

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Lighting equipment are all the tools used to improve the quality of video by providing adequate lighting. Ranging from simple ring lights to studio kits.

Listening model – the author/creator is telling a story and inviting the viewer into the world that is created, while interested in the viewers thoughts and listening to the viewers.

Live streaming technology is how videos are streamed over the internet live, in real-time, as they are being recorded with the advantage of possible audience interactivity.

Location sound (or direct sound), sound recorded during production.

Locomotion refers to the movement in the virtual world and in the real-world while in the virtual world. Locomotion mechanics has three primary categories; perambulation, teleportation and transportation.

Lossless compression video/audio compression format that maintains every bit of original data from the sources, full quality.

Lossy compression removes some of the information from the source in order to process and stream your video.

M

MP4 is a digital multimedia container format most commonly used to store video and audio

Monoscopic VR one image is directed to both eyes, exactly like a normal image or video. Cheaper to produce, more versatile and better resolution than stereoscopic VR.

Moodboard a collection of images, objects and words that are used to express the chosen style, it helps develop the creative idea.

Motion parallax is a type of depth perception cue in which objects that are closer appear to move faster than objects that are farther away.

Motion sickness (also called cyber sickness, virtual sickness or simulator sickness) is a discomfort that occurs during short or prolonged exposure to a virtual environment. The most common symptoms are headache, nausea, vomiting, paleness, sweating, fatigue, drowsiness, disorientation and listlessness.

MR – Mixed reality merges the real and virtual world, physical and digital objects coexist and interact in real time.

Muddy a listening term. A sound that is poorly defined, sloppy or vague.

N

Narration 360° The distinctiveness of narration in 360° lies in the fact that the viewer can look wherever they wish. They must be oriented and encouraged to take the desired path for the narrative to make sense and move seamlessly.

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Narrative design looks at both the visual and the verbal to create well-paced stories that draw the viewer in and captivate them on their journey through the story.

Non-compliant user is a user who doesn't interact with a responsive narrative.

Non-player characters (NPCs) are computer-controlled characters.

O

Occlusion hiding an object from view by positioning other objects in the viewers line of sight.

Offscreen what is outside the view of the camera.

Online Video Platform (OVP) a tool for uploading, streaming, and managing online video.

P

Paywall requires a viewer to pay before they are able to watch the video content.

Peripheral device help enhance a virtual reality experience by enabling greater immersion within the virtual world for example gloves or controllers.

Place illusion (PI) the feeling of existing in a place.

Plausibility illusion (Psi) accepting that the depicted scenario is actually happening.

Point of view (PoV) from a camera perspective.

Positional audio, audio triggered by the position of the headset. The sound can be manipulated to make it seem like it is coming from different directions – in front of the user, behind, above, and from the left or right.

Presence (also called telepresence) when the user has a feeling of being in and of the virtual world, ignoring physical world distractions.

Q

Quantum storytelling is a new, non-linear way of telling a story. In this type of storytelling it's the middle that is important. In it there are multiple possibilities that can unfold.

R

Real-Time Messaging Protocol (RTMP) the most common streaming protocol. For streaming video content to popular streaming destinations such as Facebook, YouTube, Instagram, and Twitch, using a stream key and URL.

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Refresh rate is the frequency in which the electronic display is refreshed. The display feels smoother with higher refresh rates.

Resonance the sympathetic vibration of an object (or air column) at a specific frequency when it is excited into motion by a sound wave of similar frequency in the immediate vicinity.

Response-as-if-real (RAIR) when a user experiences and responds to a virtual reality as if it were real.

Responsive narrative see Interactive narrative

Reverberation is the persistence of sound in an enclosure after a sound source has been stopped.

Room-scale VR gives users the ability to move around freely through immersive experiences.

S

Script supervisor keeps track of props, lighting, blocking, and costumes to ensure script compliance. They also take notes of every scene and camera angle which is important information for post-production.

Signposts are cues in the environment that are placed there to help the user to interpret the virtual environment.

Silence is the lack of audible sound or the presence of very low intensity sound, can be used for dramatic effect or to give the user a breather after climactic scenes.

Simulcasting (or multistreaming) refers to the simultaneous broadcasting of a single live video on multiple platforms.

Social presence when a user chooses to actively engage with others in a VR experience.

Sound localization determining the location of a sound's origin, or the suggestion of an object's location based on the manipulation of auditory cues.

Sound spatialization is the representation of a sound within three-dimensional space.

Soundtrack the audio part of a video recording, all the different layers of sound voice, background music, sound effects etc.

SR – Simulated Reality an umbrella term for VR, AR, and MR that is favored by Apple.

Stereoscopic VR uses two images, one for each eye. Gives a more unique and memorable experience by providing depth perception, higher realism and immersiveness.

Stitching a process of combining multiple images together to create a 360° spherical image for VR.

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Story generator a digital agent that monitors the virtual world

Storyboard is a document that is used to plan all of the shots that will make up the film, both at the technical level (framing, camera movements, special effects) and the artistic level (built sets, virtual sets). Its layout, with thumbnails, each represents a shot, sometimes described in several drawings. The proposed order is that of the final edit of the film.

Streaming – delivering and receiving media, audio and video, via the Internet. Live streaming is streaming media that is received and viewed in real-time.

Streaming key is a password/alphanumeric key you need in order to stream your video to a particular RTMP ingest server.

Streaming setup refers to the live streaming process itself, as well as to the camera, cables, capture device, encoding software/hardware, Internet connection, etc. that is being used.

Streaming video/media (or live content) is a piece of media that is watched in real time within a web browser rather than downloaded into a file on a hard drive.

Switcher is a technology that allows broadcasters to seamlessly switch between sources midstream.

Synchronization making sure that the sound and the image line up perfectly.

T

Technician also called machinist, is responsible for the camera mounting systems and movements. In live performances they are also responsible for set changes and prop movements.

Telepresence see Presence.

V

Video monetization is generating revenue on online video content through sponsored ads, pay-per-view ticketing, or subscriptions.

Video On Demand (VOD) is a piece of content that can be watched by a user at any time instead of a specified moment.

Video player is a piece of software that allows viewers to watch a video.

Video security tools to protect your video streams from unwanted viewers, hackers, and pirates.

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VR – **Virtual reality**, interacting with or immersing the user in a virtual environment. Virtual reality artificially reproduces a sensory experience, which can include sight, touch, hearing and smell (visual, sound or haptic). There are different types of virtual reality simulations:

- Non-immersive VR: Where one interacts with a virtual environment, most often through a computer, and control a character or activity in a space, however the virtual environment isn't interacting directly with the user

- Semi-immersive: The user is partly immersed in a virtual environment which can give a sense of being in another reality.

- Full immersive: The user gets a feeling of being physically present in the virtual world.

VR 180 is a video shot at a 180 degree field of view. The action limits itself to the hemisphere in sight of the viewer – front and slightly to the left and right.

VR 360 is a video format that is a full sphere, 360 degrees, panorama where the viewer is free to look around in every direction.

W

WebVR an emerging technology for presenting virtual reality content in traditional web browsing interfaces.

White-label streaming is streaming with no branding from the video streaming platform, it only includes your own branding.

X

XR – **Extended Reality** is an umbrella term for all extended reality technologies; Augmented Reality (AR) Virtual Reality (VR), Mixed Reality (MR).

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