MPAV

Glossary of AV Terms

Introduction

With over a decade of prior audio-visual experience, MPAV Ltd was set up in 2019 to provide our clients with a high-quality service, ensuring clarity throughout the process and delivering a product that meets or exceeds their expectations. We are also dedicated to providing a safe and inclusive work environment for our engineers, ensuring that they have the support that they need to succeed.

MPAV Ltd provides a wide variety of systems for their clients across many sectors. We have provided video conferencing rooms, audio systems, presentation equipment, digital signage, rack building, production suites and interactive displays to our clients in corporate, hospitality, education and IT sectors. Over the years, we have partnered with other like minded businesses who can support us when requirements are beyond our initial scope. These include fibre services, IT security and networking, furniture and many more. We firmly believe that, by providing a trusted network of support, we can deliver our projects to their maximum and build a strong relationship with our customers.

MPAV Ltd also recognise our duty to the environment and our engineers. Wherever possible, we recycle and reuse as much as possible, giving used equipment to charities and disposing of waste responsibly. For our engineers, we provide not only a strong basis from which they can deliver your project and appropriate training to stay at their best, but also confidential support for mental health and give them a support network to help them when they need it most.

Within this document you will find a glossary of AV terms intended to support you in understanding the technical jargon.

If you feel we have missed any or need further clarification, please feel free to ask.

Glossary of AV Terms

A

Acoustics - Refers to the science of sound. Often when we talk about acoustics in AV, we are talking about how a physical environment reacts to the sound created in the space. It is also the reason why a pigeons 'coo' won't echo.

AEC - Automatic Echo Cancellation. The act of audio being amplified, picked up by a microphone and then NOT being sent back into the room or the far end. Many audio products used for video conferencing will have an AEC system built-in.

Amp - Short for amplifier. Often referred to in audio terms, it simply converts and increases or amplifies a signal. An audio amplifier will convert the audio signal from a device and increase the sound via speakers.

ANSI - American National Standards Institute. An organisation that oversees the development of standards within technology. Often used as a measurement (in lumens or lm) for projector brightness.

Aspect Ratio - The ratio of the width of a screen to the height of a screen. A typical display is 16:9, meaning that for every 16 units wide the screen is, it is 9 units high. Replace units with cms, mm, inches or any of the American units of measurement and the ratio remains the same.

AV (Audio Visual) - The industry that provides communication through audio and video devices.

B

Bandwidth - The measurement of information carrying capacity.

Beam Forming - Typically used in ceiling microphones, this is a technique that allows microphones to be directed and pick up audio from a specific position. This helps to lower the signal to noise ratio, allowing the person speaking to be heard more clearly.

BYOD (Bring Your Own Device) - This describes systems that requires a user's personal device to fully function. In the case of video conferencing, it will require a user to plug their laptop in to start and run video calls. Without this device, the room simply has a camera and audio system in with no way to make calls.

C

Codec- Short hand for Compress/Decompress. This is a system that allows a signal to be compressed, sent to another system and decompressed without loss of information. This is often used in video conferencing for the device where your platform is installed. You will typically use your log in on a codec to allow it to access your chosen platform.

Commission - This is the act of ensuring that a system is installed correctly and that the user experienced is delivered as intended. This can range from the installation engineers ensuring the equipment is installed as specified or, for larger projects, a separate person performing specific tests and completing paperwork for sign off. Commissioning is often carried out prior to hand over.

CTS - Certified Technology Specialist. This is a qualification provided by AVIXA and shows that a holder has completed a competency exam with demonstrable audio visual knowledge.

CTS-D - Certified Technology Specialist Design. This is a qualification provided by AVIXA and shows that a holder has completed a competency exam specialising in the design of audio-visual systems

CTS- I - Certified Technology Specialist Installation. This is a qualification provided by AVIXA and shows that a holder has completed a competency exam specialising in the installation of audio visual systems.

D

DA - Distribution Amplifier. This is a device that both splits a signal and amplifies each distributed signal.

DAC - Digital to Analog Converter. Processes a signal form a digital signal to an analog signal. This is commonly found in audio processing where you may find a Dante audio signal being converted into an analog signal to allow a standard amplifier to be used.

Decibel - The measurement of sound pressure (not volume). A typical meeting room will have an ambient level around 45-55dBL (similar to the sound of rain). Anything above 65dBL may cause issues with audio during video calls.

Digital Zoom - This refers to a product that provides the viewer with a larger image by increasing a part of the original image. If a viewer receives a 1920 x 1080 image, any zooming will reduce the pixel size and, therefore, the quality of the image is reduced.

DOA (Dead On Arrival) - This means that the equipment does not power up for a particular reason and is deemed 'dead'. This is different to faulty because the unit will not power at all if it is DOA. Dead On Arrival testing simply means that the equipment has been tested to see if it switches on and powers up, not that it is fully functioning.

DSP - Digital Signal Processor. A device used to process a signal digitally. This often requires an amount of programming to dictate how the signal is processed, rather than being able to press buttons on the front of a device.

E

Engineering- In AV terms, this is the team or department that deals with the physical installation of products into a physical environment.

Extender - This is a way of making the data transmit further than the capacity of the typical connector type. For instance, a USB cable often will transmit up to 5m. When using an extender, it will convert the USB connection into a data connector and allow the signal to be send much further. Often requires a transmitter and receiver.

Extra Large Room- This is a large space that has no upper limit, nor specific structure. It could be an auditorium, a training space or a room with several presenting positions.

F

Field - Often used as 'in the field' or a 'field engineer'. It refers to a physical space where end-users will engage with equipment and control the system.

G

GUI- Graphic User Interface. This is a simplified screen that users will interact with to send commands to systems. It may be specifically designed for a project or a template from a specific manufacturer and means that users don't need to program commands each time to interact with a product.

H

Handover - This is the stage where the installation ends and the end user can utilise the equipment. It can be a brief encounter or paired with several days of training and documentation.

Hard Codec - Short for hardware codec. This is specifically designed hardware for use during video conferencing calls. The device is designed for the purpose of video calls only and is an all-contained system for video calls.

HDMI (High Definition Multimedia Interface) - This is a standard connection for HD video cabling using in most video systems.

Hi Z (High Impedance) - This refers to the difficulty in sending a signal along a circuit, typically on an amplifier. Hi Z settings tend to be used for 100v line systems as it will allow a small amount of current (our signal) to be sent a longer distance.

Huddle Space- This is a small meeting space, often big enough to have one or two users in at any one time.

I

In-ceiling - This refers to products that are installed inside the physical structure of a ceiling. It may be speakers that are installed into a ceiling tile or a microphone that simply drops into a ceiling grid.

Interface - Allows two systems to communicate with each other whether it be tech to tech or user to tech.

J

Jabra - A Danish brand specializing in audio equipment and, more recently, videoconference systems.

K

Kramer Electronics – Experts in cabling and signal technology, they are often used as HDMI cablesfor user devices due to their patented K-lock system.

L

LAN - Local Area Network. A collection of devices wired together, often through a switch, to allow them to communicate within a physical space.

Large Room- This is a meeting space big enough to have around 16-18 users. Depending on manufacturers, the system will track participants up to 8m away.

Lo Z (Low Impedance) - This refers to the difficulty in sending a signal along a circuit, typically on an amplifier. Lo Z settings tends to be used for sound systems and foreground audio where a large amount of signal only needs to be transmitted a shorter distance.

Lumen - The measure of light output. In AV, this tends to refer to both a projector brightness output and the brightness of a room.

M

Matrix Switch - A device that allows the switching of multiple sources to multiple outputs at the same time. A matrix switch will allow users to send individual inputs to individual outputs, allowing multiple screens to displays different information.

Medium Room - This is a meeting space big enough to have 8-10 users. Depending on manufacturers, the system will track participants up to 6m away.

Mic - Short for microphone. A device used to pick up sound, often speech, and allow it to be amplified or processed.

MPAV – Short for Michael Peter Audio Visual, the first and middle name of the founder of the company. Providers of high quality audio-visual solutions in commercial and corporate environments.

MTR (Microsoft Teams Room) - Generally used to describe what platform a video conferencing system uses, it can also refer to a physical space that utilises Microsoft Teams and is dedicated to video calls.

MTRoA - Microsoft Teams Room on Android. This means that the video conferencing codec is on an Android based device, most often used on all-in-one video bars. One advantage is being able to use a touchscreen controller that is connected through your network, rather than directly via a cable through walls and floors.

MTRoW - Microsoft Teams Room on Windows. This means that the video conferencing codec is on a Windows based device, most often a NUC or small form factor PC.

N

NTSC – National Television System Commission. The standard for video transmission in America/US.

O

Off Site/Off Prem - Off Premises. This refers to functions that happen away from the business physical address. It may occur at a supplier's warehouse or refer to a cloud hosting data centre.

On Site/On Prem - This refers to functions that happen within the business physical address.

On- Ceiling - This refers to items that are installed on a ceiling, rather than into a ceiling. An example would be where a wireless access point is fitted to the ceiling, rather than flush with the ceiling.

100v Line system - This is a type of audio system that allows a large number of speakers to be installed across a large area and multiple zones. Typically found as a background or paging system in commercial environments.

Optical Zoom - The refers to a product that physically moves the lens to provide a close up of an object with a constant resolution. When the Camera zooms onto an object, the picture quality is kept the same.

P

Phantom Power - Typically used in microphones, 48v of power is sent from the DSP to the microphone to help drive the circuitry within the microphone and produce a better reproduction of the sound.

Pixel - A single unit or picture element that makes up an image. When talking about HD (high definition) images, we measure the image as being 1920 pixels wide by 1080 pixels high.

Platform - Often used when discussing the software provider for a particular system. In the case of a VC platform, this may be Microsoft Teams or Zoom. In the case on control systems, this tends to be the manufacturer of the system which may be Kramer, Crestron or QSC.

PoE - Power Over Ethernet. This allows devices to be powered via a PoE network switch, simply using the data cable to both power and send data to devices. This provides up to 15w of power.

PoE + - Power Over Ethernet Plus. This allows devices to be powered via a PoE network switch, simply using the data cable to both power and send data to devices. This provides up to 25w of power.

PoE ++ - Power Over Ethernet Plus Plus. This allows devices to be powered via a PoE network switch, simply using the data cable to both power and send data to devices. This provides between 51-71w of power depending on whether it is Type 3 or Type 4.

Port - Generic term for the connection on a device. This simply means that there is a female (or receiving) connection on the device.

Prestage - The act of updating the firmware and software of equipment, testing to ensure it works correctly. This helps to eliminate delays in projects by making sure the equipment is in the best order for on-site delivery and discovering if equipment is faulty prior to installation.

Processor - A device that manipulates a signal. For example, an audio processor will allow you to add effects, route the signal or compress a signal.

Program - Carried out by qualified programmers, this is the step where software systems are set up. It may be a simple tweak to a system or a full-on build of a control system

PTZ (Pan Tilt Zoom) - This refers to a camera where the head and lens will physically move. Examples of this are the Logitech Rally camera and the Aver Cam520 Pro.

Q

QSC - QSC is an American manufacturer of audio products including power amplifiers, loudspeakers, digital mixers and digital signal processors including the Q-Sys networked audio, video and control platform. QSC products are used in professional settings.

Q-Sys- Networked audio, video and control system often used in meeting rooms.

R

Rack - This is often inside a comms room and refers to a space where non-user serviceable equipment is stored both for safety and to stop end-users playing with settings.

Rack Unit (RU) - The measurement of devices within a rack. Typical devices are marked as being 1U, 2U, 3U etc with 1U being around 45mm high

Receiver - Used as a pair with a transmitter, this simply receives data. Often this is a device that will convert an extended signal back from the transmitter. Is also often used in microphone terms for a wireless microphone where the audio is received and sent into a DSP.

Resolution - The number of pixels used to build up an image in any given space.

RJ45 (Registered Jack 45) - This is the standard interface for most digital voice and data connections in a commercial environment.

RMA (Return Merchandise Authorisation) - If a piece of equipment is faulty and needs to be returned to a distributor or manufacturer, an RMA is raised by the receiving end. This is to log the equipment as faulty and requires either replacement or for someone qualified to inspect the product.

S

SafeContractor (Alcumus) – Ensuring that businesses place a heavy emphasis on completing projects in a safe manner. MPAV Ltd are SafeContractor accredited.

Serviceable - The act of installing equipment in such a manner that allows troubleshoot and problem resolution to occur quickly. It may be that cabling is clear or that PCs can be removed from behind a screen without needing to remove the screen.

Small Room - This is a meeting space that is usually big enough to have 2-4 users. Depending on manufacturers, the system will track participants up to 4m away.

Soft Codec - Short for Software Codec. This is your video conferencing software and will often be referred to when using BYOD. The soft codec simply means the application you open to run your video call from.

Standards- A list of criteria that systems would be installed to. This helps with consistency across installations and, therefore, consistency in both user experiences and engineering.

Switch - Often used when discussing networking, this allows multiple devices to communicate with each other over a wired network.

Switcher - A device that allows the switching of multiple sources to a number of outputs. Typically a switcher will only output one source at a time, meaning that all displays connected will show the same information.

T

Taps (On speakers) - This allows you to adjust the wattage of a 100v or 70v speaker. Typically, the higher the wattage, the louder the speaker.

Tier 1 support- This is your first line of support. They will often run basic troubleshooting with you but will generally have to escalate to tier 2 if the simple steps don't resolve the issue.

Tier 2 support- If Tier 1 can't fix it, Tier 2 will be the next line. These are engineers who are very experienced and may be the first people out on site to fix issues.

Tier 3 support- The most experienced engineers providing expert support. Often not contactable directly, these are the people who may have been part of the RnD team, developing products and services. If Tier 3 support are involved, it is generally because it is an extremely important case or something has happened that has never been seen before.

This is a space that has seen popularity grow since COVID. It refers to a space where a relaxed meeting can take place and mixes both in-room audience and remote users together. This will often be used by CEOs or managing directors to present information to the whole company at the same time. Also known as 'All Hands'.

Town Hall - This is a space that has seen popularity grow since COVID. It refers to a space where a relaxed meeting can take place and mixes both in-room audience and remote users together. This will often be used by CEOs or managing directors to present information to the whole company at the same time. Also known as 'All Hands'.

Transmitter - Used as a pair with a receiver, this simply transmits data. Often this is a device that will convert and allow a signal to be extended. Is also often used in microphone terms for a wireless microphone where the audio spoken is then sent wirelessly to a microphone receiver.

U

Unicol - The UK leading mount designer and manufacturer of TV and Projector mounting solutions.

V

VC (Video Conferencing)- A method of communicating through video, often used in conjunction with a platform such as Microsoft Teams or Zoom.

VESA - Video Electronic Standards Association. This is a standard for attaching displays to mounting hardware and dictates the size of square that the mounting holes create. For instance, VESA 400 means that bolt holes are mounted 400 mm apart in both directions. VESA 600 x 400 means that mounting holes are installed 600mm width apart by 400mm distance in height.

VLAN - Virtual Local Area Network. A collection of devices wired together, often through a switch, but isolated from each other. This can be used to segregate data traffic within a large network.

Voice Lift

Voice Reinforcement

W

Wireless – Devices that communicate without the requirement for cabling. Are usually distance limited and can be affected by products already in use.

X

XLR - Usually made up of 3 or 5 pins, this connection is often used in audio and provides a secure connection.

Y

Yealink – Specialist brand in video conferencing, voice communications and collaboration solutions.

Z

Zoom Room - Generally used to describe what platform a video conferencing system uses, it can also refer to a physical space that utilises Zoom and is dedicated to video calls

Glossary Of AV Terms

MPAV Ltd

Unit 41 Space Business Centre

Smeaton Close

Aylesbury

HP19 8FJ

info@mpav.co.uk

01296 593818

www.mpav.co.uk