

## MULTI-CHANNEL AUDIO & MULTIPLE AUDIO PAIRS

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Mediaproxy logging systems are designed to support multiple audio channels per logged program – within hardware limits. Of more importance is how those channels are accessed and reviewed in both the mediaproxy environment and other playback scenarios.

### MULTIPLE STEREO AUDIO PAIRS

Mediaproxy solutions provide support for additional languages, M&E tracks along with utility audio channels as defined by each customer requirement. In all applications, these are allocated as two-channel stereo pairs embedded in the program streams as the ‘additional’ audio programs maintained in sync with the primary audio and video content.

These are stored and streamed as standard Windows Media files.

**CHANNEL NAMES:** Due to the possibility of the recording and playback environment being on different computers in different language locales, Windows Media requires that each audio pair – is identified from the ISO standard language-locale table provided by the operating system.

Thus even though audio pairs 1 & 2 may both be in English – one must be identified as some other language for end-to-end compatibility purposes a limitation of the language-locale parser in Windows Media.

These audio channel names will be displayed in ‘standard’ Windows Media Player when an audio track is being selected for listening. The language track which is best-match to the locale settings of the playback computer will be assigned automatically as the default playback track. This may lead to some confusion, so the playback user must be aware of this limitation.

However in an end-to-end mediaproxy solution, when those same media clips are reviewed with mediaproxy clients, a ‘friendly name’ may be associated with each audio pair on the LogServer – and will be displayed by mediaproxy clients when they are operating directly from a mediaproxy server.

### MULTI-CHANNEL AUDIO / SURROUND SOUND

Multi-channel audio may be captured as a surround source, multiple stereo pairs, or for most purposes a stereo mix-down from the source channels should be considered at the time of encoding.

There is a very compelling reason to consider this latter strategy:

Channel phase: To reliably capture and maintain the channel phase relationships in surround sound (essential for surround reproduction), the bandwidth allocated to the surround audio will be much higher than for simply recording three stereo pairs. Typically > 1Mb/s for audio only.

If the purpose of the logging is for proof of compliance – a mix-down captures all the channels in their relative amplitudes, and presents them in a way that can be played back on virtually any media capable computer, while consuming a fraction of the disk & network capacity to deliver a useable result. Multi-channel audio playback demands multi-channel sound cards in the client computers.

Surround-Sound, and multi-track discrete audio channels are both options that mediaproxy can support, but for practical purposes and ease of playback / distribution – should be considered only when a mix-down is unacceptable.

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