CCSMT24
Synchronise audio to visuals and gaming materials

Overview

The standard is about synchronising various audio machines to correctly 'lock' and communicate with each other and synchronise audio to visuals (Video/TV/Film)

You need to know SMPTE, MTC, MIDI Clock Sync, SPP and MMC synchronisation methods to get all your devices communicating and synching together without fault. This standard may also apply to live performance work when using stage lighting or MIDI machines/STEMS/visuals on stage. You will create Foley effects and record, or source, sound effects to accompany specific instances on the screen. You must develop considerations to the nature of sound, silence, music, atmosphere and spot effects in appropriate combinations set against the developments on screen.

You will also demonstrate the requirement to re-record and overdub speech onto a film recorded on location. Issues of synchronisation will be covered in addition to the compatibility of sound recorded in a studio with visual representations in different acoustic environments. This standard utilises the multi-tasking skills expected of today's recording engineers, editing engineers, mastering engineers, mix engineers and programmers. This standard is about audio synchronisation via two routes

1. Synchronisation of audio materials and external MIDI devices with multi track tape machine and digital multi-track machine
2. Synchronisation of audio to visual film/video materials

It is envisaged that you will make use of a MIDI/audio DAW sequencing which has the ability to synchronise audio to imported film clips. You are required to reconstruct the sound for a short film/video soundtrack. You will also need access to a safety copy multi track that can be synced. Previous synched multi tracks with sync code details in place will suffice. You will also need to stripe a clean multi-track with SMPTE and drop in overdub down a sound device at a certain bar start point and end as instructed.

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Performance criteria

You must be able to:

P1   carry out connectivity for most common synchronisation needs

P2   change SMPTE offsets, delays and start end points

P3   demonstrate the relationship of tempo and time, pitch and speed

P4   use various synchronising hardware units

P5   stripe and encode 1 track on 24 track multi track tape recorder and synch DAW/MIDI sound modules at 25fps/or other used frame rates

P6   carry out multi-track tape machine synching to DAW/MIDI

P7   produce a stereo mix using a recalled multi-track tape synchronised to a DAW

P8   produce a stereo mix using digital multi-track device synchronised to a DAW

P9   synchronise MIDI modules and drum machines to a DAW and lock to performances to a multi-track recording (guitars or vocals)

P10   identify the requirements for sourcing audio for a short film/video clip

P11   plan and produce the audio a short visual (film/video) clip

P12   aurally evaluate sound elements within a short film/video clip

P13   aurally evaluate correct timings for spotting/EDL lists

P14   create spotting/EDL lists for a film/video clip

P15   record and transfer audio materials into single locations for further use

P16   synchronise film footage with multi-track recorders

P17   align audio materials with required times from spotting/EDL lists

P18   synchronise film footage with multi-track recorders

P19   lip-synch recorded speech to original images on screens

P20   synchronise digital desk and digital delay effects via MIDI

P21   bounce the final media visual and audio files in required formats

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Knowledge and understanding

You need to know and understand:

K1   the concepts of time code, particularly SMPTE, MTC, MIDI Sync and Word clock

K2   how to stripe a multi-track tape ready for synchronisation

K3   how to synchronise a sequencer to a multi-track tape recorder

K4   how to synchronise a sequencer to a multi-track digital recorder

K5   how to synchronise two MIDI devices such as a drum machine and a sequencer

K6   how to synchronise two digital MIDI devices together such as a digital mixer and digital effects process

K7   the audio requirements of short film clips

K8   methods for creating original Foley Effects

K9   on screen ambience/scenes/settings

K10   the importance of correct timings in spotting lists (EDL)

K11   the processes required to bring audio materials together to support on-screen action during short film clip

K12   the processes required to carry out dialogue replacement

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Originating organisation	Creative & Cultural Skills
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Relevant occupations	Recording Engineers; recording Producers; mix engineers; assistant engineers; programmers; editing engineers; film scorers; writers; OB/post engineers; tape ops; pre & post production;
Suite	Music Technology
Key words	MIDI Machine Control - MMC; Society of Motion Pictures and Television Engineers - SMPTE;, Midi Time Code - MTC, MIDI CLOCK - MC; WORD CLOCK; Song Position Pointer (SPP); EBU; (EDL); Foley effects; SXF; offset; tempo; pitch; vari-speed; ADR; drop ins; overdubs; dubbing; Lipsynch; music; sound; music technology;