

# ESKIAV3 (SQA Unit Code - F9AK 04)

## Audio and Video Software



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### Overview

This is the ability to use a software application designed to record and edit audio and video sequences.

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### Performance criteria

#### Use hardware and software to capture audio or video sequences

*You must be able to:*

- P1. Select and use an appropriate combination of **input device** and audio or video software to optimise the recording of information
- P2. Select and use an appropriate combination of audio or video hardware and software to **originate and develop** new content for sequences
- P3. **Store and retrieve** sequences using appropriate file formats and compression, in line with local guidelines and conventions where available

#### Use audio or video software tools and techniques to edit sequences

*You must be able to:*

- P4. Plan how to mark-up and edit **sequences**
- P5. Select and use appropriate audio or video software tools to **mark-up** and **edit** sequences to achieve required effects
- P6. Organise and **combine information** for sequences in line with any copyright constraints, including across different software
- P7. Identify and respond to quality issues and **problems with audio or video** sequences

#### Play and present audio or video sequences

*You must be able to:*

- P8. Select and use an appropriate combination of audio or video playback software and **display device** to suit the file format
- P9. Present sequences effectively by exploiting the features and settings of the playback software and display device**

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### Knowledge and understanding

*You need to know and understand:*

#### Use hardware and software to capture audio or video sequences

- K1. Determine the audio or video content needed for sequences, and when to originate it
- K2. Discuss and explain any [compatibility issues](#) between combinations of input device to and audio or video software
- K3. Analyse and explain the impact [file size](#) and [file format](#) will have, including when to use [information coding and compression](#)

*You need to know and understand:*

#### Use audio or video software tools and techniques to edit sequences

- K4. Discuss and determine what footage to add, keep and remove
- K5. Provide guidance on how [copyright constraints](#) affect use of other's and own information
- K6. Evaluate sequences and discuss any [quality issues and problems](#)

*You need to know and understand:*

#### Play and present audio or video sequences

- K7. Discuss and explain the [features and constraints](#) of playback software and display devices

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### Additional Information

#### Scope/range

An advanced user can select and use a range of advanced of audio or video software tools and techniques to record and edit complex or non-routine audio or video sequences.

Audio and video software tools and techniques will be defined as 'advanced' because:

1. the software tools and functions used will be complex, and at times require new learning, which will involve having the idea that there may be a tool or function to do something (eg improve efficiency or create an effect), exploring technical support, self-teaching and applying;
2. the inputting, manipulating and outputting techniques will be complex, and will involve research, identification and application; and
3. the user will take full responsibility for inputting, manipulating and outputting the information.

**Examples of context:** recording a series of interviews and specially scripted links using a digital Dictaphone then editing to create a short podcast; storyboarding and shooting a short promotional film sequence on location, then editing it to fit into a multimedia business presentation.

#### Examples of Content

*The examples given are indicative of the learning content at each level and are not intended to form a prescriptive list for the purpose of assessment*

#### Use hardware and software to capture audio or video sequences

**Audio and video compatibility issues:** between built-in codec used by input device, available editing software, file formats, operating systems, plug-ins

**Input devices:** Webcam, video camera, microphone, Dictaphone, mobile phone; difference between analogue and digital; low and high resolution; ;  
**Input techniques:** Copy and paste, screen grabs/shots, file download (eg connect USB lead, drag and drop)

**Originate and develop:** Process: Plan (eg storyboard, script, compose), prepare (eg information, equipment), develop, test, refine;  
Types of content: audio (eg music, sound effects, voiceovers), visual (eg drama, dance, animation)

**File size:** Small, medium, large, link between size and quality (eg small – low resolution; large – high resolution)

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**File format:** Proprietary formats supported by software used (eg QuickTime, RealPlayer, iTunes)

Container formats: Audio (eg WAV, XMF, AIFF); Audio/video (eg 3GP, AVI, MP4, OGG, MOV)

Popularity, overhead, support for advanced functionality and content, support of streaming media

**Information coding and compression:** Codec, compression, difference between lossy and lossless compression, factors affecting video quality

**Store and retrieve:** Save, save as, find, open, close

### **Use audio or video software tools and techniques to edit sequences**

**Sequence:** short (eg 2 mins), b&w, medium length (eg 10 mins, 30 mins), colour

**Marking-up and editing tools:** Preset by software, key frames, sequences; Cut, copy, paste, sequence

**Combine information:** Combine images with sound (eg dub or overlay sound track onto film sequence; integrate a audio or video sequence with another application):

Techniques: Copy and paste, insert, screen grabs/shots,

File download (eg connect USB lead, drag and drop), file transfer protocol (FTP)

Forms of information: moving images, sound; pre-recorded, live, web-streaming

**Copyright constraints:** Effect of copyright law (eg on music downloads or use of other people's images), acknowledgment of sources, avoiding plagiarism, provisions of the Data Protection Act

**Quality issues:** contrast, volume, visual (eg brightness, colour balance, monochrome), sound (eg treble, bass, balance), remove unwanted objects, noise reduction

**Audio and video sequence problems:** high or low contrast, volume, visual (eg jerkiness, dropping frames, break-up, freezes, blurriness, pixilation), sound (eg clicks, disjoints, noise)

### **Play and present audio or video sequences**

**Features and constraints:** Software supported, memory, processing speed, screen resolution, data bandwidth, transmission speeds

**Display device:** PC, laptop, video camera, Dictaphone, mobile phone, handheld audio or video device (eg mp3 player, iPod)

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[Adjust playback and display settings:](#) Start, stop, fast forward, rewind, pause, volume, contrast, brightness, thumbnail, quarter screen, full screen, screen resolution, colour balance, sound quality

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**Developed by** e-skills UK

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**Version number** Version 4

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**Date approved** 31 March 2009

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**Indicative review date** September 2012

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**Validity** Current

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**Status** Original

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**Originating organisation** e-skills UK SSC

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**Original URN** ESKIAV3

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**Relevant occupations** Application Support; ICT for users; Information and Communication Technology

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**Suite** IT Users 6.2

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**Key words** IT User, ICT, Information Technology, ITQ, Productivity