Silver - Unit 14 - Audio Software

Relevant LINKS

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Handbook home page **[2]**

Overview

This is the ability to use a software application designed for the creation, editing and production of audio. This unit is about the skills and knowledge required by an IT User to use a range of basic audio editing and recording tools and techniques to produce appropriate, straightforward or routine sound files. Any aspect that is unfamiliar will require support and advice from others.
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the software tools and functions will be predetermined or commonly used; and
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- the software tools and functions will be predetermined or commonly used; and
- the techniques needed for audio manipulation and outputting will be straightforward or routine.

Example of context: Using editing tools to remove noise and improve the quality of a podcast recorded on a Smartphone.

Activities supporting the assessment of this award

Assessor's guide to interpreting the criteria

General Information

QCF general description for Level 1 qualifications

- Achievement at QCF level 1 (EQF Level 2) reflects the ability to use relevant knowledge, skills and procedures to complete routine tasks. It includes responsibility for completing tasks and procedures subject to direction or guidance.

- Use knowledge of facts, procedures and ideas to complete well-defined, routine tasks. Be aware of information relevant to
the area of study or work.

- Complete well-defined routine tasks. Use relevant skills and procedures. Select and use

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relevant information. Identify whether actions have been effective.

- Take responsibility for completing tasks and procedures subject to direction or guidance as needed.

Requirements

- Standards must be confirmed by a trained Silver Level Assessor or higher.
- Assessors must at a minimum record assessment judgements as entries in the on-line mark book on the INGOTs.org Markbook Site.
- Routine evidence of work used for judging assessment outcomes in the candidates' records of their day to day work will be available from their e-portfolios and on-line work. Assessors should ensure that relevant web pages are available to their account manager on request by supply of the URL.
- When the candidate provides evidence of matching all the criteria to the specification subject to the guidance below, the assessor can request the award using the link on the certification site. The Account Manager will request a random sample of evidence from candidates' work that verifies the assessor's judgement.
- When the Account Manager is satisfied that the evidence is sufficient to safely make an award, the candidate's success will be confirmed and the unit certificate will be printable from the web site.
- This unit should take an average level 1 learner 30 hours of work to complete.

Assessment Method

Assessors can score each of the criteria L, S, H. N indicates no evidence and is the default starting position. L indicates some capability but secure capability has not yet been achieved and some help is still required. S indicates that the candidate can match the criterion to its required specification. H indicates performance that goes beyond the expected in at least some aspects. Candidates are required to achieve at least S on all the criteria to achieve the unit.

Expansion of the assessment criteria

1. The candidate will use audio hardware and software to capture sequences.

1.1 I can identify the input device and associated software to use

Candidates should be able to identify a microphone, pickup or line source as an input device and the need for software to convert the sound signals to digital sound files.
Evidence: from tests and tasks set that require candidates to identify these tools.

Additional information and guidance
Sound waves are analogue compressions and rarefaction in the air. A microphone is required to

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convert the signal into an analogue electrical signal and then an analogue to digital convertor samples this signal converting it to digital data. The quality of the audio will depend on the quality of the microphone and the resolution and sample rate of the analogue to digital conversion process. Once in digital format sounds can be directly transferred between systems without any loss in quality. In the case of a line input, an analogue electrical signal comes from a line source and will need to be converted to digital format in much the same way as with the microphone. Some systems are end to end digital so it is only getting the sound signal in at the microphone and out at the speaker where conversion takes place between analogue and digital. At silver level they just need to identify recording devices and software.

1.2 I can use input devices and built-in audio software to record information to meet needs.

Candidates should use a digital audio system to record information for a purpose.

Evidence: Results of a digital audio project.

Additional information and guidance
Typical set up would be a smartphone and recording software to record a podcast identifying input devices and associated software in order to provide evidence for criterion 1,1. Recording a commentary for a video or recording a podcast on a subject they are learning.

1.3 I can identify the file format used by the input device.

Candidates should be able to check the file format from its file extension or its name.

Evidence: Assessors checking, contents of candidate documentation of projects.

Additional information and guidance
In this case the "input device" includes the whole recording system. The candidate should be familiar with .wav .mp3 and vorbis in addition to any proprietary formats specific to the application. This is because these three formats are commonly used for transferring files between different systems.

1.4 I can store and retrieve sequences using pre-set file formats, in line with local guidelines and conventions where available.

Candidates should demonstrate that they can open/save pre-recorded files or tracks.

Evidence: Assessor observations, student completed projects.

Additional information
In keeping with level 1 descriptions, some practice will be needed to establish a routine supported by instructions. Assessors should be confident that candidates can repeat the procedures routinely in similar circumstances.

2. The candidate will use audio software tools to combine and edit sequences.

2.1 I can identify the audio editing software to use for the file format.

Candidates should associate the software with the file format for the application they are using.

Evidence: Assessor observations, candidate project documentation and successful projects.

Additional information and guidance
Candidates should appreciate that particular formats are associates with particular applications. For example the audacity open source audio editor uses aup format but it can export to mp3, vorbis or

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wav files. Usually the application specific format is optimised for fast operation but since it might not be possible to exchange files with other software, export in other formats is necessary.

2.2 I can cut and paste short sequences to meet needs.

Candidates should demonstrate competence in editing tracks by cut and paste for the purpose of their project.
Evidence: Candidates finished projects and documentation of projects, assessor observations.

Additional information and guidance
Essentially cutting will be used to trim samples, removal of pauses or stammers in speech and similar issues. Paste will be used to link sequences together. This can be single or multi-track but getting candidates used to using multiple tracks is a good idea.

2.3 I can combine information of different forms or from different sources, in line with any copyright constraints.

candidates should demonstrate that they can combine different samples.

Evidence: Candidates' finished projects and documentation of projects, assessor observations.
Additional information and guidance
An example might be to put a music track to a video. Music tracks can be taken from the Wikimedia Commons as it is licensed under Creative Commons for sharing. A commentary can be put over the top of the background music by direct recording. This is combining audio from two different sources. In line with Level 1 general description structured support and instructions can be given to make the procedure routine with practice.

2.4 I can identify copyright constraints on using others' information.

candidates should understand the need to check copyright on any audio samples that they do not originate themselves.

Evidence: Candidates' work is free from copyright violation. Documentation acknowledges copyright.
Additional information and guidance
Candidate's should be introduced to three fundamental types of license (Note there is no such thing as copyright free in that all originators of original work own the copyright, They then license it and the license might be completely free use. One exception is to put the work in the public domain). A restrictive license where no-one can use the work without paying a royalty, a liberal license where the work can be used by others usually as long as the source is acknowledged, a copyleft license where the work can be use and modified as long as the results are distributed with the same conditions. At silver level candidates will need guidance except in the simplest cases as copyright can be extremely complicated.

3. The candidate will play and present audio sequences.

3.1 I can Identify appropriate playback software to use for the sequence

Candidate's should be able to name the software they are using to play back their projects.

Evidence: Candidates' project documentation, assessor checking.

Additional information and guidance

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For the purpose of this unit it is likely that the software application used will cover recording editing and playback. An obvious example is the popular open source application Audacity [3] but there are also an increasing range of on-line tools.

3.2 I can identify the display device to use for the sequence.

The display device could be a general purpose computer or a dedicated hardware technology such as an mp3 player.

Evidence: Candidates documentation of projects, assessor observations.

Additional information and guidance
Candidates should be aware of a range of devices that can play digital audio files beyond the editing system they use to create the the sequence. Portability is often a key factor. It is worth mentioning midi here because sequencing is often associated with midi even though this is a more specialised musical activity whereas the audio unit is more about audio in general. Midi uses pre-sampled recordings of instruments and is therefore associated with compositions from these pre-recorded sounds rather that direct live recording of music. Midi can be used for playback assessment but on its own it will not fulfill all the assessment criteria for recording.

3.3 I can select and use appropriate combination of software and display device to playback audio sequences.

Candidates should be able to select and use systems that support successful outcomes with awareness of cost and convenience.

Evidence: Candidates final project products and project documentation. Assessor observations.

Additional information and guidance

Candidates should be aware of cost-benefit when selecting their tools. Most straight-forward work can be achieved with high quality using free tools like Audacity and a low specification general purpose computer including smartphones, tablets and Netbooks. If a professional recording system is available there is nothing to prevent it being used but it is probably overkill for anything that does not need to be of professional broadcast quality. Mobile technologies are much more important now and so portable music players are likely to be key targets for many candidates.

3.4 I can adjust playback and display settings so that sequences are presented to meet needs.

The candidate should be able to adjust attributes such as sample play rate and volume appropriately.

Evidence: From candidates' project documentation and assessor observations.

Additional information and guidance
The quality of the playback should be of appropriate quality for the purpose. Candidates should be aware of the factors that affect this. Sample rate and playback rate, noise in the recording (and how to remove it), amplification, (clipping etc), stereo/mono.

Moderation/verification

The assessor should keep a record of assessment judgements made for each candidate and make notes of any significant issues for any candidate. They must be prepared to enter into dialogue with their Account Manager and provide their assessment records to the Account Manager through the on-line mark book. They should be prepared to provide evidence as a basis for their judgements through reference to candidate e-portfolios. Before authorising certification, the Account Manager

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must be satisfied that the assessors judgements are sound.

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[1] http://theingots.org/community/ITQ_UNIT_development
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