

Specification of Competency Standards
for the Information & Communications Technology Industry
Unit of Competency

Functional Area - Operations Management

Title	Utilise compression techniques and CODEC for digital media production
Code	108009L3
Description	This unit of competency applies to all Digital Media Technology (DMT) practitioners who utilise compression techniques and CODEC for digital media production. Digital media files can be large which affects distribution, storage and production; compression seems an obvious solution. Viewing and working with compressed digital media files will need CODEC. Hence, selecting a compression method will need to take into consideration of CODEC factors.
Level	3
Credit	3
Competency	<p>Performance Requirements</p> <p>1. Knowledge for utilising compression techniques and CODEC for digital media production</p> <ul style="list-style-type: none"> • Understand the principles of digital media compression strategies such as: <ul style="list-style-type: none"> ○ Redundancy reduction ○ Irrelevancy reduction • Good knowledge of lossy and lossless compression techniques • Understand the pros and cons of using standard and proprietary compression techniques • Possess detailed knowledge of digital media compression technology • Possess basic knowledge of CODEC modulation techniques <p>2. Utilise compression techniques and CODEC for digital media production</p> <ul style="list-style-type: none"> • Comprehend the digital media production requirements • Determine the objective of utilising compression technology for digital media production, including: <ul style="list-style-type: none"> ○ Storage requirements – reduce media files size to save storage space ○ Delivery requirements – reduced sized will affect delivery speed and require smaller network bandwidth ○ Processing requirements – some compressed file can be encoded in such a way that it is easier and faster to process its contents than those of a similar-sized file that has not been compressed • Evaluate possible standard and proprietary compression techniques available for media content. For example: <ul style="list-style-type: none"> ○ Image : JPEG, PNG, GIF, TIFF ○ Audio : MP3, FLAC ○ Video : AVI, MPEG, WMV ○ Streaming: QuickTime, ProRes, WebM, H.264, VP9, and H.265 • Identify suitable CODEC to be used use in the media compression taking into account the required output quality. For example: art video will need colour explicit encoding and sport video may probably would not. • Select the most appropriate compression technique for digital media file • Use appropriate systems or devices to apply tests on few files with different setting and adjustments to determine the best result <p>3. Exhibit professionalism</p> <ul style="list-style-type: none"> • Apply industry best compression technology to ensure digital media content production complied with the organisation standards

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Assessment Criteria	The integrated outcome requirements of this UoC are the abilities to: <ul style="list-style-type: none">• fully grasp the compression requirements needed for the digital media content• identify all available CODECs (open or proprietary) for the digital media content• identify correctly one or more CODEC that fulfill the requirement and fit the purpose of the digital media content
Remark	