

National Occupational Standards for Post Production

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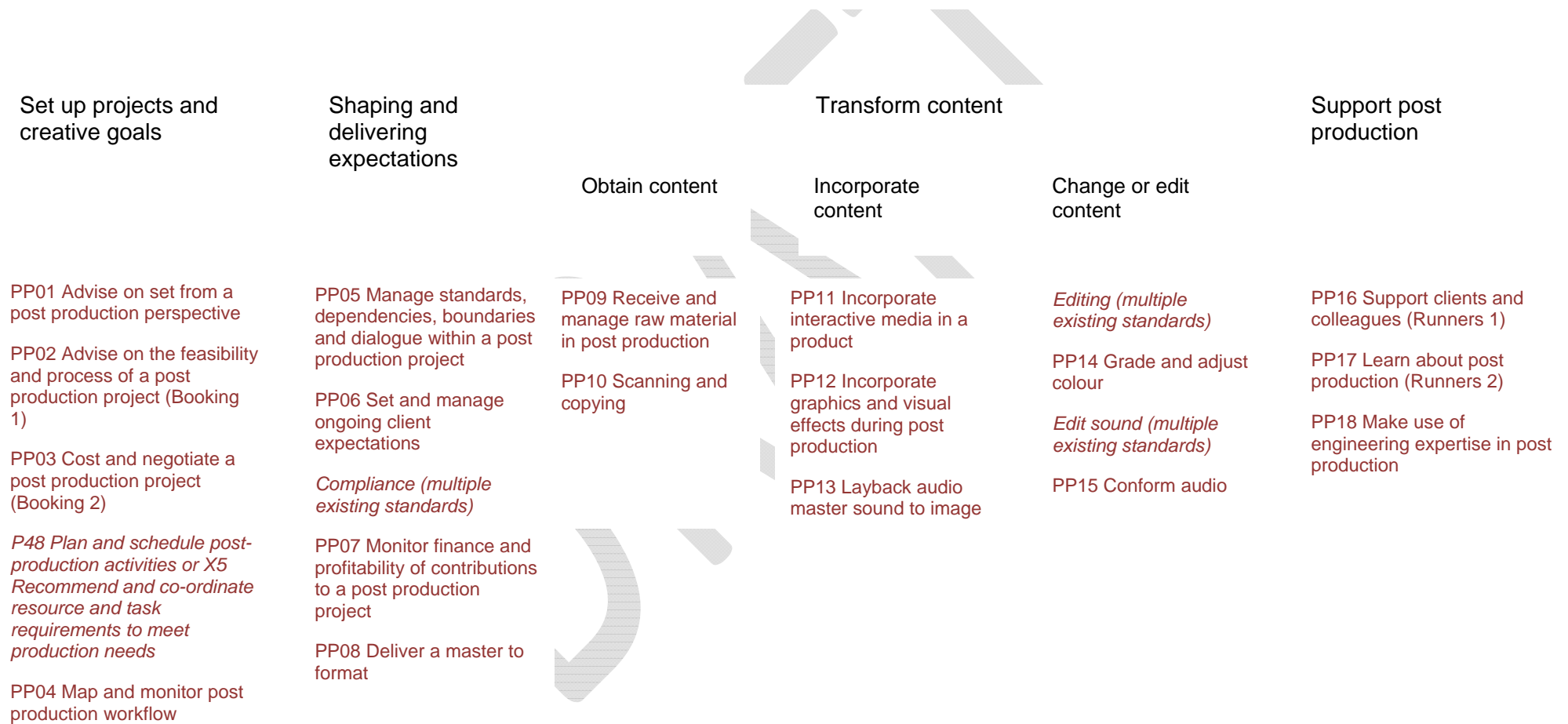
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FUNCTIONAL MAP

Scene to screen:
helping to realise the creative vision when transforming raw
content into multiple distributable formats



SET UP PROJECTS AND GOALS

PP01 Advise on set from a post production perspective

Overview	Knowledge & Understanding	Performance Statements
<p>This Standard is about anticipating the contribution that post production will be able to make, technically and creatively, to a project. It includes helping to avoid unnecessary difficulties in post production created when filming or sound recording.</p>	<p>What you need to know</p> <ul style="list-style-type: none"> a) How to find out from a project sponsor what they expect of a project b) Interaction between technical standards in filming and sound recording and the standards required in post production c) The creative potential of post production to help the project sponsor achieve the result they want 	<p>What you must be able to do</p> <ul style="list-style-type: none"> 1) Find out the intentions of the project sponsor 2) Evaluate the feasibility and cost of what the project sponsor expects or needs from post-production 3) Identify potential technical problems that it would be hard or expensive to deal with during post production 4) Identify creative solutions to which post production can contribute 5) Make suggestions for production changes that will allow post production functions to enhance the creative qualities of the product 6) Propose changes that can make the overall project more technically or commercially viable

PP02 Advise a potential client on a post production project (Booking 1)

Overview	Knowledge & Understanding	Performance Statements
<p>This Standard is about helping a potential client achieve a realistic understanding of what can be achieved for their project within time, budget and technical feasibility. It entails explaining to them what is possible honestly and without criticising their request.</p>	<p>What you need to know</p> <ul style="list-style-type: none"> a) Technical capabilities of the facility and the people available b) How long different processes and workflows take and their costs c) Workflow planning and choice d) Problems and risks associated with different kinds of project e) The creative contribution that the people available can make to a project f) Who to consult for further information or guidance on different types of project and technical requirements g) How to find out a potential client's real needs beyond what they say they want h) How to present answers to questions and proposals in a way that a potential client will understand 	<p>What you must be able to do</p> <ul style="list-style-type: none"> 1) Check your understanding of the request, enquiry or possible project in detail 2) Identify what the client needs to know to progress the project, including matters of cost, time and technical requirements 3) Help the client understand the implications and constraints of what they would like to do 4) Find out what is possible in terms of technical feasibility, cost and timing consistent with what the client wants to achieve 5) Identify obstacles to the client achieving the outcome they want 6) Find solutions that meet the client's real needs and with features and benefits that will be attractive to them 7) Provide information to the client that is valid, complete and relevant 8) Enable the client to understand the possibilities and constraints in a way that they are likely to see as helpful

PP03 Cost a post production project and negotiate with a client (Booking 2)

Overview	Knowledge & Understanding	Performance Statements
<p>This Standard is about obtaining a booking that is feasible and likely to be beneficial to the post production house in terms of profitability and profile. The manner of negotiation is a combination of firmness and diplomacy.</p>	<p>What you need to know</p> <ul style="list-style-type: none"> a) Strategy for costing projects including the creative input b) Conventions and rates for costing specific elements of work c) Technical capabilities of the facility and the people available d) How long different processes and workflows take and their costs e) Workflow planning and choice f) Problems and risks associated with different kinds of project g) The creative contribution that the people available can make to a project h) Who to consult for further information or guidance on different types of project and technical requirements i) How to find out a potential client's real needs beyond what they say they want j) How to present answers to questions and proposals in a way that a potential client will understand k) Techniques of negotiation 	<p>What you must be able to do</p> <ul style="list-style-type: none"> 9) Find out what is possible in terms of technical feasibility, cost, timing and resources consistent with what the client wants to achieve 10) Identify the benefits for the business to be obtained from the project consistent with company strategy in terms of profitability, company profile (reputation) and developing or maintaining the relationship with the client 11) Find solutions that meet the client's real needs and with features and benefits that will be attractive to them 12) Propose costs and a schedule for the project that are: <ul style="list-style-type: none"> a. in line with the benefits to be obtained for the business and what the client needs to achieve b. technically feasible c. capable of being delivered by the resources available 13) Give clients enough time to discuss your proposals and their implications fully 14) Agree with clients the work to be done and the price of the work 15) Agree with the client a booking for the project that is capable of delivering the result they need and bring acceptable benefits to the business 16) Respond to the client's needs and negotiating position with valid information, respect for their aspirations and an intention to resolve any differences 17) Complete contract administration

P48 Plan and schedule post-production activities

Overview	Knowledge & Understanding	Performance Statements
<p>This Standard involves planning, budgeting and reporting on the progress of the post-production schedule. It is about liaising closely with the relevant people, and knowing when to refer upwards in case of difficulties, or when the schedule is in danger of slipping.</p> <p>It involves ensuring that the post-production phase runs smoothly, delegating key activities as appropriate.</p> <p>This Standard is suitable for a post-production supervisor or similar role.</p>	<p>What you need to know</p> <ul style="list-style-type: none"> a) the critical path of the post-production process b) how to calculate the cost of post production facilities and crew in respect of previously calculated budget parameters c) how to budget the delivery items properly d) any pre-existing relationships between producer or director and the prospective post production crew e) the uses of, and the need for, various items required and produced by the post production department f) film laboratory methods and practices g) the processes in the production of titles and special effects h) the processes of music recording i) the procedures of creating digital elements on film j) the final delivery elements and formats required k) key details of contracts and agreements l) when and when not to refer upwards 	<p>What you must be able to do</p> <ol style="list-style-type: none"> 1. plan and agree the post-production schedule, identifying the main activities to be completed 2. select, negotiate and agree post-production services and crew, including editors, equipment, soundtrack laying, and dubbing 3. convey the requirements of the original creative brief and script to those involved in the post-production process 4. specify clear outcomes and criteria for editing 5. ensure that the editing process follows stipulated requirements by monitoring the output regularly 6. review the post production sections of the budget, and where necessary adjust accordingly 7. monitor financial costs and, working with the production accountant, prepare estimates for costs reports 8. monitor progress with the correct level of involvement, but without antagonising the creative crew 9. refer upwards when progress is likely to compromise the schedule 10. maintain a network of contacts to use when faced with a problem 11. liaise and discuss with all levels of crew, suppliers, creative talent and executives

X5 Recommend and co-ordinate resource and task requirements to meet production needs

Overview	Knowledge & Understanding	Performance Statements
<p>This Standard measures your ability to assess, recommend and co-ordinate resource and task requirements to meet production needs.</p> <p>It involves finding out about the production schedule, estimating the resources you need for the production, and presenting your estimates to decision makers. It is about producing budget proposals, negotiating and agreeing budgets, and producing schedules and estimates of time required for your work.</p> <p>It involves allocating work to your team, organising the monitoring of the way resources are used, and using the results of the monitoring process in order to control resources.</p>	<p>What you need to know</p> <ul style="list-style-type: none"> a) how to identify specialist requirements, and to present suitable alternatives where necessary b) the creative and budgetary demands of the production c) what presentation formats are required d) the deadlines for making recommendations e) who the decision makers are f) how to summarise, record and store agreements g) how to maintain the commercial confidentiality of agreements. h) sources of advice, including sources for advice about contract law i) contractual and legal implications of agreements j) how to identify, select and apply methods to schedule work efficiently (such as PERT, Network Planning) k) how to communicate the schedule and the allocation of roles and responsibilities l) sources of information about tasks, people, resources, timescales m) reporting systems and procedures n) how to accurately monitor the production against budget o) how to collate, organise and interpret data, including financial data p) how to use information technology and software in scheduling, to monitor progress and to make 	<p>What you must be able to do</p> <ol style="list-style-type: none"> 1. obtain information about the production schedule from available sources 2. make realistic estimates and correct calculations of what you require 3. show how your proposals meet the different needs that affect your work 4. develop, justify and present your estimates, proposals and recommendations on time 5. give decision makers adequate opportunities to ask questions and seek clarification. 6. accurately identify and recommend any specialist requirements to decision makers and explain how you will meet them 7. explain clearly any problems and difficulties in obtaining what you need and how you propose to overcome them 8. produce clear budget proposals which reflect accurately the resource requirements identified for the production; 9. present budget proposals clearly to decision makers within agreed timescales 10. agree the arrangements for managing the budget before work commences 11. make accurate records of what you have agreed, and make information about what you have agreed available to those who have a right to it 12. when agreement cannot be reached, summarise the reasons accurately and offer options for resuming negotiations, or for withdrawing from the production

	<p>evaluations</p> <p>q) sources of information about progress against budget</p> <p>r) types of data needed for evaluation</p> <p>s) systems and procedures for keeping evaluations up-to-date</p>	<p>13. produce schedules which clearly identify the task requirements</p> <p>14. make realistic estimates of the time needed for tasks within the schedule in order to meet the production requirements</p> <p>15. allocate work in a way which gets the best fit between the skills and needs of individuals and the requirements of the production</p> <p>16. when changes are made in schedules, clearly inform those affected and give them sufficient time to adapt their work to the change</p> <p>17. agree and implement reliable monitoring arrangements</p> <p>18. identify progress against budget</p> <p>19. give accurate and up-to-date information about progress against the budget to those who need it</p> <p>20. accurately and promptly assess and report progress in meeting the requirements of the production</p> <p>21. make realistic suggestions for improving the use of resources</p>
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PP04 Map and monitor post production workflow

Overview	Knowledge & Understanding	Performance Statements
<p>This Standard is about planning to ensure that the workflow eventually followed is capable of delivering the product on time, to standards and to budget. It should also allow scope for the creativity that post production contributes to a project.</p>	<p>What you need to know</p> <ul style="list-style-type: none"> a) Common hardware and software workflows b) Function and performance of equipment and software in terms of time and capability c) Formats used at all stages of workflow and the dependency of one stage on another d) Format and workflow requirements of different types of media/assets coming into edit e) Interfaces between stages f) Storage capabilities and needs for a project g) How to monitor and maintain storage levels h) Effective ways of communicating with a mixed and changing team 	<p>What you must be able to do</p> <ul style="list-style-type: none"> 1) Specify a workflow that can: <ul style="list-style-type: none"> a. Handle the format(s) of material that the client will produce b. Enable the operations of post production to take place at the right time and the right stage in work sequence c. Produce file types consistent with the operations required and the various post production outputs needed d. Provide security for files and other material at all stages 2) Specify a workflow that is consistent with the agreement with the client and allows them to check progress and make decisions 3) Define project goals, objectives, milestone and deliverables consistent with budget 4) Define how information on the progress of tasks will be obtained 5) Define how assets will be transferred 6) Communicate the workflow and schedule to each person who will contribute and ensure that they are clear as to their role and the technical requirements 7) Keep track of work/schedule progress and identify threats to timing, cost and technical standards 8) Make changes to the workflow/schedule that minimise additional costs and delays and remedy changes in standards or quality

SHAPING AND DELIVERING EXPECTATIONS

PP05 Manage standards, dependencies, boundaries and dialogue within a post production project

Overview	Knowledge & Understanding	Performance Statements
<p>This Standard is about relating the quality of the stages of the workflow to the standards and format required or expected of the final product. It involves clear communication and encouraging people to be aware of what depends on their work so that they do not see it in isolation.</p>	<p>What you need to know</p> <ul style="list-style-type: none"> a) Principles of quality assurance b) Technical requirements of specific post production projects based on their required output/product c) Relationship between formats and quality d) Workflow and schedule for specific projects e) Dependencies within and between current and imminent projects f) Who needs to talk to whom about workflow and interaction between different stages of a project g) Who can usefully talk to whom about current problems and risks to be mitigated h) How to communicate to individuals the requirements of a project and the part they play in meeting those 	<p>What you must be able to do</p> <ul style="list-style-type: none"> 1) Identify the technical standards and formats required for the output of a project 2) Identify what interim standards and formats the project output is dependent on and communicate interim requirements to the people and systems concerned 3) Identify risks to maintaining standards and formats and how to mitigate them 4) Identify exceptions and changes to requirements and communicate them to the people and systems concerned 5) Where personnel change on a project, ensure that new personnel are briefed on their tasks and standards and formats required 6) Help individuals understand their role and the roles and tasks of others that depend on them 7) Help individuals identify the impact of their work in the workflow and who they should inform or consult with on technical, cost or schedule issues 8) Where there are conflicts in standards in the workflow or input material is not as expected, find a solution that is technically feasible and acceptable to the client 9) Review work in progress and redefine standards and formats when necessary to enable the required output

PP06 Set and manage ongoing client expectations

Overview	Knowledge & Understanding	Performance Statements
<p>This Standard is about maintaining a relationship with the client in which they feel confident about the post production process and realistic about what it can achieve within constraints of time and budget</p>	<p>What you need to know</p> <ul style="list-style-type: none"> a) Workflow and schedule for the project b) Problems and risks associated with the project c) How to mitigate risks d) How to find out a potential client's real needs beyond what they say they want e) How to calculate the impact of a client's additional requests f) How to explain to a client what is feasible and what is not g) How to explain the impact of problems and risks h) How to involve the client in joint problem solving i) How to present answers to questions and proposals in a way that a potential client will understand 	<p>What you must be able to do</p> <ul style="list-style-type: none"> 1) Develop a relationship with the client that encourages them to ask questions 2) Agree with the client what can be expected of the project 3) Determine the client's level of understanding of the post production process and its tasks 4) Help the client understand the impact and cost of changes at different stages of work 5) Help the client understand the workflow and schedule and its dependence on their decisions and information they are expected to provide 6) When changes or extras are requested, propose solutions on which you and the client can agree cost and quality 7) Help the client identify their real needs from requests that they make 8) Base your decisions and communication to the client on the needs of their project and the expertise you can offer on post production

PP07 Monitor finance and profitability of contributions to a post production project

Overview	Knowledge & Understanding	Performance Statements
<p>This Standard is about maintaining profitability through keeping to schedule and being deliberate and calculating in making changes, solving problems and responding to clients' requests for extras</p>	<p>What you need to know</p> <ul style="list-style-type: none"> a) Performance and time demands of different stages of the workflow for a project b) Abilities and ways of working of the different contributors to a project c) Technical requirements and limitations of the project and the facilities d) Risks within the project and its workflow e) How to mitigate risks f) Ways of improving quality and speed of delivery g) How to discuss with clients the problems they have h) How to weigh costs and benefits of unplanned changes to a project 	<p>What you must be able to do</p> <ul style="list-style-type: none"> 1) Plan your work to meet cost and time requirements for your part in the workflow 2) Clarify uncertainty over what is expected 3) Identify the cost and time implications of problems in a task and how you will remedy them through changes in schedule or the product 4) Maintain your schedule unless there is an agreed exception 5) Consult with colleagues about the impact of any problems in your work on their cost and time requirements 6) Where clients or colleagues require changes or extras, identify the impact on schedule and budget 7) Where you identify ways to improve the product, identify the cost and time implications and consult with colleagues on whether to make that change 8) Identify whether additional costs can be charged for or will be absorbed 9) Identify the balance between loss of profit and maintaining the relationship with a client or reputation 10) Make decisions that increase cost or time taken or affect the product on a basis that is agreed with colleagues

PP08 Deliver a master to format

Overview	Knowledge & Understanding	Performance Statements
<p>This Standard is about ensuring that versions of the finished master are duplicated and made available and supplied on tape, film, disc or file in the formats required.</p>	<p>What you need to know</p> <ul style="list-style-type: none"> a) Requirements of project sponsors and those people and organisations that will receive masters b) Formats used in masters c) Technical standards applicable to different formats d) Procedures for converting formats e) Operation of copying equipment f) Documentation that should accompany delivered masters g) Storage and logging conventions 	<p>What you must be able to do</p> <ul style="list-style-type: none"> 1) Identify the expectations of the project sponsor and the requirements of end users 2) Ensure that finished masters are duplicated, logged and available in all formats that the project sponsor requires and end users will need 3) Where masters are not available in the required formats liaise with colleagues who can resolve the problem 4) Ensure that copying into additional formats retains the required quality of the product 5) Supply copies on tape, film, disc or file to each person or organisation as they require 6) Ensure masters are safely stored and logged 7) Check that the material you supply is complete and functioning 8) Include necessary and expected documentation 9) Check with those to whom you provide copies that their requirements are met

TRANSFORM CONTENT
OBTAIN CONTENT

PP09 Receive and manage material in post production

Overview	Knowledge & Understanding	Performance Statements
<p>This Standard is about ensuring that raw material to be used in post production is securely stored, logged and made available.</p>	<p>What you need to know</p> <ul style="list-style-type: none"> a) Common formats for input materials and assets b) What information is likely to be needed about material received c) How to check technical quality of materials d) Methods of safe storing and logging for different types of material e) Ways in which material can be damaged and how to avoid it f) Naming conventions g) How to ensure that material is secure and uncompromised h) Common problems that arise with material and with specific clients i) Who to inform about receipt and about problems j) Industry conventions for describing problems 	<p>What you must be able to do</p> <ul style="list-style-type: none"> 1) Identify what raw materials are needed or expected from which sources 2) Identify whether materials received are as specified or required 3) Report delays and problems in receiving or obtaining raw materials 4) Note and report information given about the technical quality of the raw materials 5) Acknowledge receipt of materials 6) Check and resolve any uncertainties about what material has been received 7) Name and label the material and its container accurately and unambiguously 8) Input data on the material, content and format in a manner and format that can be used in the editing system 9) Store or locate materials safely and securely so that they are known and available to those who will use them

PP10 Produce electronic copies of material for post production (Scan and copy)

Overview	Knowledge & Understanding	Performance Statements
<p>This Standard is about scanning film material or copying raw material ready for a variety of editing processes such as offline editing. The electronic material resulting should be ready for the next stage of the workflow, logged and its security ensured.</p>	<p>What you need to know</p> <ul style="list-style-type: none"> a) What to expect of input material and accompanying documentation b) How to protect materials c) Common and required formats and standards d) Scanning and copying equipment, its suitability for the task and procedures for use e) How to estimate and optimise time and resources needed for a task f) How to anticipate and mitigate problems and risks g) Types of fault that may occur and how to resolve them h) Scanning and copying equipment and software and its secure operation i) Naming conventions j) Methods and documentation for logging and labelling 	<p>What you must be able to do</p> <ul style="list-style-type: none"> 1) Identify the required format, quality and future use for material to be electronically scanned or copied 2) Use equipment and techniques capable of converting the raw material to the desired format and quality 3) Identify any problems in scanned or copied material that are likely to be significant for the client or future workflow 4) Discuss the implications of problems and how to resolve them 5) Where necessary compensate for colour variations in the material 6) Annotate data files for the planned workflow 7) Save the data files in the required format using secure protocols for integration into the workflow 8) Use recognised naming conventions 9) Identify the version control convention to be used 10) Log clear and accurate data on the content of the output 11) Ensure backups are stored securely 12) Ensure the security of the originating material

INCORPORATE CONTENT

PP11 Incorporate interactive media in a product

Overview	Knowledge & Understanding	Performance Statements
<p>This Standard is about incorporating in a product an end-user interface and the pathway that enables the end-user to navigate content, making use of the interactive material that has been developed by a specialist.</p>	<p>What you need to know</p> <ul style="list-style-type: none"> a) Intended functionality of the project b) Techniques for combining and synchronising files c) Methods of testing functionality d) Technical standards and formats for working and delivery e) Standards of documentation to support end-users 	<p>What you must be able to do</p> <ul style="list-style-type: none"> 1) Ensure that the material can be incorporated within time and budget 2) Incorporate interactive material within a coherent, agreed product architecture 3) Propose changes that may be needed in order to improve technical or commercial viability 4) Ensure that end user features match the expectations and requirements of the project sponsor 5) Ensure that the material incorporated covers the required user journeys 6) Liaise with colleagues to ensure that documentation accurately describes how end-user features operate 7) Ensure the incorporated material is compatible with the intended distribution media and viewing platform(s)

PP12 Incorporate graphics and visual effects during post production

Overview	Knowledge & Understanding	Performance Statements
<p>This Standard is about combining graphics and VFX with live footage in the way envisaged by the project sponsor and the graphics and VFX designers, and in a way that is consistent with the quality and format requirements of the product.</p>	<p>What you need to know</p> <ul style="list-style-type: none"> a) The look and feel intended by the project sponsor b) Technical and format requirements for the master that is to be produced c) File formats for graphics and VFX and their compatibility with live action formats d) The place of graphics and VFX in post production workflow e) Operation of equipment for incorporating graphics and VFX 	<p>What you must be able to do</p> <ul style="list-style-type: none"> 8) Ensure that the material can be incorporated within time and budget 9) Ensure the material you incorporate matches the project sponsor's requirements for any live-action footage it is intended to fit into 10) Propose changes that may be needed in order to make the idea more technically or commercially viable 11) Create the impact, tone and mood that the project sponsor wished to achieve 12) Match the technical attributes of incorporated material to the live action footage 13) Ensure the incorporated material is compatible with the intended distribution media and viewing platform(s)

PP13 Layback audio master sound to image

Overview	Knowledge & Understanding	Performance Statements
<p>This Standard is about creating a finished master with a mixed sound track and edited video after colour correction combined without generational degradation of the audio.</p>	<p>What you need to know</p> <ul style="list-style-type: none"> a) Sound requirements of different types of project b) How to operate layback equipment c) Different types of workflow and their impact on the layback process d) Technical and format requirements 	<p>What you must be able to do</p> <ul style="list-style-type: none"> 1) Check the overall technical and format requirements for the project 2) Identify the audio master conformed to match the edited video 3) Check that all required prior workflow has been completed 4) Identify the standards and format required for the finished master 5) Check that sound quality and mix is retained as optimal in the audio master without generational effect 6) Combine video and audio material in a single synchronised file 7) Ensure that worked is logged and handed over in acceptable formats

CHANGE OR EDIT CONTENT

PP14 Grade and adjust colour

Overview	Knowledge & Understanding	Performance Statements
<p>This Standard is about helping the film maker achieve the look they envisage through ensuring the authenticity and balance of the material or creating or enhancing a particular stylized look.</p>	<p>What you need to know</p> <ul style="list-style-type: none"> a) The effect of colour on an audience's perception of a scene or event b) How to enhance perception through adjusting colour c) How to find out from a film maker the effect they are trying to achieve d) How to offer creative solutions to a film maker e) The ways in which different recoding media and cameras affect colour f) Format and labeling requirements for different workflows g) Capabilities of different hardware and software facilities h) Techniques of using different hardware and software facilities 	<p>What you must be able to do</p> <ul style="list-style-type: none"> 1) Agree the look, feel and mood to be achieved 2) Identify specific creative goals for scenes and shots or stylised presentation 3) Propose and trial ways of achieving creative goals 4) Compensate for variations in the material 5) Achieve scene to scene and shot to shot matching 6) Ensure colour continuity for actors, objects and locations 7) Repair any dirt, scratch or other visual problems 8) Achieve image sharpness and grain to fit the required look and feel 9) Optimise the incorporation of special effects 10) Enhance the look, feel or style of scenes or shots 11) Produce a colour corrected master in the required data format

S14 Mix recorded sound

Overview	Knowledge & Understanding	Performance Statements
<p>This Standard is about mixing sound during post-production, also referred to as “re-recording mixing”.</p> <p>It involves the assessing, selecting, balancing and treatment of sound that has been organised on tracks, to achieve the level, tonal quality, audio image and intelligibility required.</p> <p>It involves responding to the suggestions of the director, producer, sound editor(s), editor and composer, explaining and putting forward the creative and technical possibilities in terms that they can understand.</p> <p>It involves creating a balance between the prepared sound and music tracks according to the creative team’s artistic vision and according to the production’s technical and financial requirements.</p>	<p>What you need to know</p> <ul style="list-style-type: none"> a) production requirements, technical and financial b) principles of sound editing, how to edit sound using popular software programmes c) requirements for dynamic range d) criteria for evaluating the sound mix as it is created e) the context in which the mix will be played, and how to take this into account when creating the mix f) the different kinds of sound treatment and equalisation, and how to achieve them g) the characteristics of tonal quality and perspective, and how to achieve them h) the relevant acoustic principles and how to apply them i) characteristics, uses and requirements of mono, stereo and surround formats, and how to achieve them j) the features and operating characteristics of commonly used mixing, ancillary and encoding equipment k) how to recognise defects in the monitoring system l) the director’s (or other decision maker’s) creative and aesthetic requirements m) how to discuss and respond to the decision maker’s creative and technical requests n) the principles of “storytelling” as they apply to all forms and genres o) the conventions of different genres and styles of film and programme-making p) the principles and styles of music and different musical ensembles (orchestra, string quartet, rock group, jazz 	<p>What you must be able to do</p> <ol style="list-style-type: none"> 1. assess each characteristic of the sound tracks accurately 2. adjust the individual sound tracks so that they have the desired intelligibility, position and image in terms of the required sound 3. position and balance sound to achieve the desired creative and aesthetic effect according to the director’s (or other decision maker’s) vision 4. achieve appropriate transitions between sounds and music 5. control the level of the composite signal within technical limits and within the desired dynamic range 6. manipulate sound tracks to achieve the appropriate level, balance, tonal quality, perspective and dynamic range 7. create the sound mix within time, budget and other production constraints 8. create a mix which is appropriate to the context in which it will be heard 9. accurately identify and promptly correct any problems in creating the mix 10. respond to and interpret suggestions and requests from decision makers 11. suggest options which satisfy both artistic requests and the operational requirements of the production 12. ensure that components of the mix are organised in a suitable way for later use 13. ensure that any paperwork is accurate, legible and conforms with conventions that will be understood by other mixers, sound technicians or studios

	<p>quartet, soloist, etc.)</p> <p>q) how to explain technical issues clearly to non-technical people</p>	<p>14. explain technical issues clearly to enable a non-technical person to understand their significance</p> <p>15. interpret requests and suggestions in terms of the specific genre or style of sound mix</p>
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S15 Work with supplementary sound material

Overview	Knowledge & Understanding	Performance Statements
<p>This Standard is about finding out what supplementary material is required, obtaining or creating it, and playing it to meet the production requirements.</p> <p>It involves judging what is needed to meet the artistic requirements and identifying, selecting and acquiring appropriate material. This includes assessing the suitability of material, particularly in terms of length, content, quality and creative effect.</p> <p>This Standard also involves making sure that copyright clearances have been obtained, and accurately documenting and labelling the material you use.</p>	<p>What you need to know</p> <ul style="list-style-type: none"> a) the client or production requirements, including any script requirements b) the technical and artistic requirements, including any technical specification c) the timescales, deadlines and other operational constraints of the production d) what copyright laws and conventions apply and how to get releases or licences e) how to manipulate and extend sound f) how to calculate timing g) special sound effects devices and how to use them creatively h) the principles of A-B, M-S and binaural stereo i) compatibility issues between mono, stereo, multi-channel and surround sound j) what cues mean, how to recognise them, and how to respond to them correctly k) how to use artistic and pragmatic judgement to assess content, length, quality and creative effect l) what library systems are available and how to use them m) how to reproduce and handle old formats and media n) the formats required for documentation, and how to complete documentation clearly and accurately 	<p>What you must be able to do</p> <p>Obtain Material</p> <ol style="list-style-type: none"> 1. agree with your supervisor, client or production the material to be used and the criteria for selecting it 2. accurately identify sources of appropriate material 3. select material that meets production requirements, including the intention of the script, and is of a sufficient duration for the required sound 4. make judgements about the material which you can justify in terms of the artistic requirements and operational constraints of the production 5. comply with copyright laws and conventions and pass on any relevant information about the material to the appropriate person 6. create original material when the requirements cannot be met using material from other sources 7. ensure material is in a format and medium suitable for the required sound and equipment being used, converting between formats or media where necessary 8. obtain or create the required material within the agreed timescale <p>Play Material</p> <ol style="list-style-type: none"> 9. handle material carefully and safely 10. time played-in material to meet the requirements for pre-roll or run-up time of the equipment 11. reproduce the material to meet agreed technical specifications and production requirements

	<p>o) how to identify and explain options when requirements cannot be met</p> <p>p) how to summarise, confirm, record and communicate requirements</p>	<p>12. play the material at an appropriate level</p> <p>13. remotely control play-in devices where necessary</p> <p>14. respond promptly and correctly to cues where given</p> <p>15. clearly explain the options and offer realistic alternatives to the person who needs the material</p> <p>Work Effectively</p> <p>16. keep an accurate record of the material you use and its sources</p> <p>17. produce accurate, legible documentation and labelling, in the required format</p> <p>18. return loan material by the agreed deadline and in a condition acceptable to the lender</p>
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S19 Document and store media

Overview	Knowledge & Understanding	Performance Statements
<p>This Standard is about keeping accurate logs, labelling media, and storing media securely and safely.</p> <p>It involves accurately logging takes, indicating their acceptability, and clearly describing any problems with recorded material. It is about labelling media accurately and clearly, making sure that the material and its carrier have the same labels, and ensuring there is sufficient detail to use by others involved in the production.</p> <p>It is about storing media in appropriate conditions which will optimise the life of the materials, and storing recordings safely and securely. It involves storing back-up recordings separately from masters, and replacing archive material if required to do so. It involves using asset management and version control software for archiving.</p>	<p>What you need to know</p> <ul style="list-style-type: none"> a) standard labelling systems, electronic or paper, and which one is required for the media b) what types of media and associated materials are to be stored c) what information to include d) any relevant or required metadata standards e) when it is necessary to log session details such as microphone position and desk settings f) what information is required on the labels, the technical parameters and synchronisation information to be included on the documentation, and the recording format as it should be noted in the log g) when details of the individuals and companies involved are likely to be required h) the need to keep accurate logs in sufficient detail for use by others involved in the production i) how to log problems or other useful information clearly, accurately and succinctly j) why media and container should carry identical information k) how to co-ordinate labelling between media and related material l) appropriate types of backup and storage and the implications of using different formats 	<p>What you must be able to do</p> <p>Maintain Logs and Labels</p> <ol style="list-style-type: none"> 1. keep an accurate, concise, legible and up-to-date log in the required format 2. keep a log which accurately and succinctly shows complete details of the set-up and selected takes, and indicates their quality and acceptability and any problems with the recorded material 3. show, the correct title of the production, the date when the material was created, and any other relevant details on accurate and up-to-date labels 4. label the recorded medium clearly and confirm that the medium and its container carry identical marks <p>Store Recorded Sound</p> <ol style="list-style-type: none"> 5. store material so that it is available for retrieval by those who need it 6. store back-up recordings and related materials separately from masters 7. protect recordings from accidental erasure and deterioration where possible 8. safeguard materials for future use where it is commercially important 9. store recordings, back up recordings, and related materials securely and safely, and in a way most likely to preserve their shelf life

	<ul style="list-style-type: none"> m) the commercial need to safeguard recordings and materials n) the anticipated deterioration times of the media being used, as specified by the manufacturer, and how to replace archive material when necessary o) the storage life and optimum storage conditions of the media, and the effect of adverse conditions on it 	
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S20 Edit sound

Overview	Knowledge & Understanding	Performance Statements
<p>This Standard is about editing sound material to meet production requirements.</p> <p>It involves assessing the material to decide what sort of edit should be used and dealing with difficulties in making the required edit. It is about selecting appropriate edit points, making technically accurate edits, assessing finished edits, and completing them by the deadlines you have been given. You may sometimes be working to tight deadlines and under pressure.</p>	<p>What you need to know</p> <ul style="list-style-type: none"> a) the post production requirements of the client or production b) the material to be edited, what the editing requirements are, and what types of edit are possible c) where to acquire source materials d) the timescale and budget for the edit e) the documentation and format requirements f) any synchronisation requirements and their implications in the production process g) the implications for editing where sound supports picture h) the edit point selection criteria, and how they are used to identify the edit point i) the criteria for assessing the technical and artistic effectiveness of the edit j) degrees of editing difficulty, and how to recognise and resolve them k) the criteria for assessing the technical and artistic effectiveness of the edit l) which editing techniques are appropriate to specific media m) the implications of destructive and non-destructive editing 	<p>What you must be able to do</p> <p>Prepare for Editing</p> <ol style="list-style-type: none"> 1. ascertain the technical, creative and commercial requirements in relation to editing 2. assess the material accurately to determine the type of edit to be made 3. explain the implications to original material of recording with data reduced compression techniques 4. explain clearly to decision makers any difficulties in completing the proposed edit, and suggest suitable solutions <p>Make Edits</p> <ol style="list-style-type: none"> 5. organise tracks and materials in an appropriate manner 6. select edit points which offer the greatest potential for meeting the client or production requirements, creating the required transition 7. select suitable edit points that achieve the required duration, rhythm, pace, information and background; and which, if applicable, will support the pictures 8. choose an editing style that is appropriate to the material 9. retain any required synchronisation in the edit 10. select and mark edit points accurately and clearly 11. use a type of edit which is appropriate to requirements 12. make edits which are technically accurate, clean and artistically effective 13. confirm that the edits made meet client or production

	<ul style="list-style-type: none"> n) the principles of ADR o) typical types of audible defects in analogue and digital technologies p) common data reduction formats and techniques q) the implications of using and dealing with data-reduced compression techniques r) the implications for the edit of using multi-track, mono, stereo, or multi-channel s) basic musical form and nomenclature including, note, beat, bar, and phrase t) how to manage and back up audio and data u) how to conform with edit data lists and source media v) how to preserve metadata w) how to identify trims and unlabelled source materials, and how to store them securely x) the importance of safe working with display screens, and the relevant regulations 	<p>requirements</p> <ul style="list-style-type: none"> 14. complete editing within the deadlines and within budget 15. mark any trims and unlabelled source material clearly, and store them so that they can be recovered if required 16. confirm that non-volatile storage of edit data is kept up to date 17. confirm that the necessary back-up is maintained, to preserve the integrity of audio and data 18. confirm that original material is protected 19. produce accurate and legible paperwork and labelling in the format required
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PP15 Conform audio in post production

Overview	Knowledge & Understanding	Performance Statements
<p>This Standard is about arranging and matching sound elements to edited video material, using automatic or manual processes, repeatedly if necessary.</p>	<p>What you need to know</p> <ul style="list-style-type: none"> a) Equipment and software available and their functional capabilities b) Techniques for using equipment and software c) Formatting, documentation and logging requirements for a specific project d) Edit data lists and their use e) Back-up and storage requirements and facilities f) How to check for and identify potential problems in a task g) The schedule for conforming audio and its relation to the rest of the workflow h) Who to consult on problems or creative solutions you identify i) Cost implications of problems or overrunning and how to mitigate them 	<p>What you must be able to do</p> <ul style="list-style-type: none"> 1) Check that you have all required audio material required for edit 2) Clarify the content and sequence of material to be conformed 3) Assess the technical quality of input audio materials and consult on issues and changes that may be needed 4) Identify the technical standards required for output 5) Import and match audio components to each specified video component 6) Create and code with positional information a single audio file that allows audio changes to match video changes automatically or manually consistent with follow-on workflow, equipment and software 7) When necessary make changes manually to the audio file to match changes to video on an event by event basis 8) Create files that contain only necessary material and allow for efficient subsequent workflow 9) Convert audio material to the required audio sample rate 10) Save files securely in a format required for workflow and consistent with the required project output 11) Identify threats to delivery on time and to cost and discuss necessary variations

SUPPORT FOR POST PRODUCTION

PP16 Support clients and colleagues in post production (Runners 1)

Overview	Knowledge & Understanding	Performance Statements
<p>This Standard is about providing technical, hospitality and administrative support to clients and colleagues in a post production facility. It requires showing initiative because in a pressured environment people's needs must often be met without their having to make a request.</p>	<p>What you need to know</p> <ul style="list-style-type: none"> a) The layout of the post production facility and how different locations and facilities are referred to b) Personnel, their names and what they do c) Food and drink preparation and hygiene d) How to obtain foods of different kinds locally e) Regular clients' preferences for drinks and food and dietary needs f) How to handle data and materials securely g) Administrative procedures for receipt and dispatch of materials h) Safe ways of working, including electrical safety and manual handling 	<p>What you must be able to do</p> <ul style="list-style-type: none"> 1) Anticipate and identify what a client will need during a work session including information, catering, materials and facilities 2) Communicate with clients in a way that puts them at ease and promotes the post production facility 3) Respond to clients' requests promptly and in a supportive and hospitable manner 4) Maintain the readiness, appearance and security of facilities for clients and colleagues proactively 5) Support colleagues in individual tasks and in working with clients 6) Discuss with colleagues clients needs and preferences that you identify 7) Obtain and deliver materials when requested promptly 8) Log and store materials and data securely and accurately 9) Carry out requested technical, information and administrative tasks accurately and promptly

PP17 Learn about post production (Runners 2)

Overview	Knowledge & Understanding	Performance Statements
<p>This Standard is about learning the techniques, methods of working and operation of equipment in post production. It also means learning about yourself, the kind of skills you would like to develop and job you would eventually like to do.</p>	<p>What you need to know</p> <ul style="list-style-type: none"> a) How and when to ask questions about things you don't yet understand b) Your own learning style c) The layout of the post production facility and how different locations and facilities are referred to d) Personnel, their names and what they do e) People who are reliable and open sources of information f) Sources of information on post production and equipment you use g) What scope you are allowed for using equipment h) Technical work that you can volunteer to carry out i) Safe operation of equipment you use 	<p>What you must be able to do</p> <ul style="list-style-type: none"> 1) Identify how post production is carried out in this facility 2) Find out how individual tasks are carried out, in what order and what knowledge is required to do them well 3) Ask questions to develop your understanding 4) Ask for help whenever you are uncertain about how to carry out a task or what is required 5) Find out who can provide reliable support and advice so that you can develop understanding quickly and thoroughly 6) Make opportunities to assist with technical tasks 7) Find opportunities to learn how to operate and practice on equipment safely and reliably 8) Find out about protocols, standards and conventions used in post production 9) Identify the kind(s) of job that you might aspire to and that might suit you 10) Identify what might be a next step in developing your career 11) Check your intentions with colleagues to see if they are realistic and feasible given their knowledge of you

PP18 Make use of engineering expertise in post production

Overview	Knowledge & Understanding	Performance Statements
<p>This Standard is about working with engineers to create and maintain a software and hardware set-up that enables workflow in post production to proceed smoothly.</p>	<p>What you need to know</p> <ul style="list-style-type: none"> a) Workflows and the types of equipment that they require b) Weaknesses and common faults in equipment used in the facility c) Principles of the different operations that occur within post production workflows d) Principles of signal paths e) Terminology used by engineers f) Susceptibility of quality and formats to variations in equipment performance g) Acceptable and unacceptable short cuts h) Communication with technical colleagues 	<p>What you must be able to do</p> <ul style="list-style-type: none"> 1) Identify the technical demands of the project and the types of hardware and software set-up that will be required 2) Identify software and hardware set-up needs of the proposed workflow with which you will need assistance 3) Anticipate technical problems that may impact on the feasibility, cost and duration of the post production process 4) Recognise faults or technical difficulties that are occurring at an early stage 5) Identify the expertise that is needed to create or remedy the set-up 6) Brief your engineering colleagues on the product technical requirements and the stages of the workflow 7) Assess the feasibility, cost and time demands of the proposed set-up or problem solution 8) Keep a record of set-ups and solutions and how effective they were