



NATIONAL FILM AND SOUND ARCHIVE OF AUSTRALIA

Request for Tender NFSA RFT 2425/P125

Remastering Suite Digital Cinema Package (DCP) Projection System

RFT Document 2 Statement of Requirements

Request For Tender Closing Time:
2:00 PM Canberra Time, Friday 8 November 2024

Important Dates

4 October 2024	Request For Tender Release Time (2:00PM Canberra Time)
23 October 2024	Site Inspection (10:00AM Canberra Time)
30 October 2024	Question and Clarification Request Deadline
8 November 2024	Request For Tender Closing Time (2:00PM Canberra Time)

Content

- 1. Introduction 3
- 2. Statement of Requirements..... 3
- 3. Delivery Timeframes 8
- 4. Tenderer Non-compliance 9
- 5. END..... 9

1. Introduction

- 1.1 The National Film and Sound Archive of Australia (NFSA) invites Tender Responses from suitably qualified and experienced organisations for the provision of a Digital Cinema Package (DCP) Cinema Quality Projection System, Associated Hardware and Ongoing Support (Goods/Services) as set out in this *RFT Document 2 – Statement of Requirements* in accordance with Request for Tender (**RFT**) NFSA 2425/P125.
- 1.2 For more information about this RFT process, refer to *RFT Document 1 – Conditions of Tender*.

2. Statement of Requirements

2.1 Background and Scope

The NFSA has continued to refocus its approach towards a fully digital preservation pathway for the film collection and now operates multiple film scanners with further capacity available to introduce additional units to reduce the current time frames to digitally preserve the film collection.

The NFSA requires the installation of a fully calibrated Digital Cinema Package (DCP) cinema quality projection system including 5.1 and 7.1 fully synchronised sound playback capability within the existing post production suite equipment.

Remastering Suites/Quality Control (QC) Theatres are standard in commercial post-production and digitisation facilities as they provide efficient and effective workflows to create the high-quality digital outcomes needed for film.

The suites are designed as a small theatre with digital projection, cinema quality screen and high-end sound systems to allow skilled operators to:

- Assess a Digital Cinema Initiative (DCI) compliant projected image that uses a completely different light source (larger projected image as opposed to back lit through a broadcast monitor) and process allowing the operator to adjust the colour grade, density, luminance, aspect ratio and reframing etc. in real-time as they work on the digital film file.
- Screen and check digital film files progressively throughout the post-production process as the image appearance is significantly different when viewed on a grading monitor (tv screen) compared with the image from a projector onto a screen.
- The projected grading combined with the high-end sound system allows the operator to sync sound including identifying and correcting issues which can be indistinguishable on a smaller broadcast monitor. Also enabling soundtrack laying QC and adjustments to be made (most restoration requests require remixing and/or retiming from frame rates).

The primary usage of the Remastering Suite is to undertake projected grading, restoration, sound mixing and DCP mastering of the files being created to industry-recognised preservation and distribution standards.

This will enable the NFSA to undertake additional post production utilising high resolution digital scans to create master file components in a form which can be screened to today's cinema audiences as an industry standard DCP.

DCP has replaced traditional analogue film screening formats around the world and opened up potential audience bases. DCP files are delivered more quickly, cheaply and efficiently, without risk of damage or quality loss, utilising the latest digital delivery mechanisms.

2.2 Objectives and Outcomes

The new purpose designed room, will centralise all these activities and provide the ability to screen, appraise and adjust media as a working project, prior to final rendering and mastering. The room will also facilitate the screening of completed DCP projects.

The room may need further acoustic treatments for ensuring that sound is accurately represented during the grading and review processes. Acoustic Room Analysis has been performed in the space with the findings below:

Overall Room size: 7.2M Long x 5.5M Wide x 3.0M High

Volume: 120 M³

Resonant Frequency of room 141 Hz

Fundamental frequency, Length 23.82 Hz, Width 31.8 Hz, Height 57.17 Hz

Room Ratio 1:1.83:2.4,

Nearest Bolt Ratio 1:1.6:2.33

Critical distance = 5.10M (direct = reverberation field)

The NFSA's preferred technical solution will include current industry tested solutions which incorporate seamlessly with the existing post production suite equipment installed within the space. The primary objective for colour grading off a DCI compliant projected image is to ensure accurate, consistent and reliable colour representation with real-time playback.

The solution must be compatible with the NFSA's existing ICT infrastructure and able to move large, scanned files into the NFSA's ICT environment.

A copy of the room floor plan has been attached as *RFT Document 2A – Floor Plan*.

2.3 Goods/Services Description

The NFSA is seeking Responses from a suitably qualified and experienced supplier in the supply and ongoing support of a professional cinema standard infrastructure and is capable of delivering systems able to meet the NFSA's technical specifications outlined in the Deliverables.

Potential Respondents should set out itemised pricing for all capable devices and/or multi-device solutions, including consideration for any volume-based discounts that may apply.

All goods/services are expected to be delivered to the NFSA Building, 20 McCoy Circuit, Acton, Australian Capital Territory 2601.

2.4 Deliverables

Respondents are advised that these three (3) sections form the material basis for the NFSA’s evaluation of any Tender Response against Evaluation Criterion 1 through 4.

1) Remastering Suite Hardware

The suite is currently operating as a fully functional edit suite which includes grading and sound mixing panels using broadcast quality monitoring. The NFSA requires the installation of a fully calibrated DCP cinema quality projection system that is compatible with DaVinci Resolve post-production software, including 5.1 and 7.1 fully synchronised sound playback capability.

Respondents may quote on one or more combinations of solutions and/or partial or full package of ancillary equipment, each to include price itemisation.

For clarity, the proposed devices **must** be capable of meeting the NFSA’s technical requirements set out below:

Deliverable 1: Hardware Technical Requirements	
RGB laser 4K DCP Projector - with touch screen panel and lenses.	Must Have
Custom built screen with adjustable masking (manual and automated options to be costed separately) and suitable room acoustic treatments.	Must Have
Dolby CP950 w/8 channel audio harness and network switch, or similar.	Must Have
Local storage minimum 96TB 24x 3.84TB SSD as an option for editing and post-production operations utilising scanned files, including real time playback with a minimum redundancy of Raid 5 and a preference of Raid 6 or equivalent, with suitable licence support.	Must Have
Dolby IMS3000 w/10TB external NAS and HDMI, SDI inputs, or similar	Must Have
Power cables must be concealed and routed via cable management systems, such as under-floor and through wall mounted channels, to maintain a neat and tidy appearance in the suite.	Must Have
Ancillary equipment such as control computers, monitors, and keyboards, including proposed connectivity/ network designs.	Must Have

2) ICT Network Capability

The NFSA Digital Team manage the hardware and software within the NFSA’s ICT environment including the systems that support collection digitisation.

The NFSA’s current and future 16mm/35mm scanning systems will capture high resolution DPX sequences to a 345TB slice of a Dell PowerScale storage system via network that can provide 100Gb/s of throughput per stream.

When digitisation/capture is complete, quality control (QC), Tape Archive (tar) wrapping and checksum generation tasks are performed on NFSA workstations before the data is introduced to the NFSA’s Media Asset Management System (MAMS).

Respondents must identify all ICT components, including software and hardware required by any proposed solution for proposed system operation and connection to the NFSA’s network.

For clarity, the proposed devices **must** be capable of meeting the NFSA’s technical requirements set out below:

Deliverable 2: ICT Infrastructure Technical Requirements	
NFSA existing storage systems and workstations support Server Message Block (SMBv2/3) and Network File System (NFSv3) protocols. Any supplied hosts must support the use of these protocols to facilitate access to data storage, with required access to the Dell PowerScale hosted storage. Proprietary protocols to provide enhanced performance may be specified, however use of those protocols must not be the only method of accessing the data.	Must Have
Integration with the NFSA’s Active Directory environment to allow for central management of access controls for hosts shares/folders/files on local storage.	Must Have
Preferred and alternative interfaces to NFSA networks noting the NFSA can support network connectivity from 1Gb/s though to 100Gb/s with a preference for 40 or 100Gb/s). Vendors must specify the network connectivity they intend to use when connecting to the network.	Must Have
Maximum network throughput of each system of the proposed device(s)/solution(s). Vendors must show that the proposed solution(s) have adequate bandwidth/performance to support all concurrent tasks. Any performance constraints must be clearly identified.	Must Have
Ancillary equipment such as control computers, monitors, and keyboards, including proposed connectivity/ network designs.	Must Have
The MAMS uses Server to Server FTP (FXP) to facilitate data movement between storage systems. Support for FXP either directly or optionally via another means allows the MAMS to deposit data directly eliminating secondary data transfers.	Should Have

This includes the requirement to detail:

- Recommended computer requirements/specifications, including operating system, computer hardware, and any essential third-party components (if applicable).
- Note: the NFSA has installed structured cabling using MPO-12 OM4 between equipment areas and switches. This supports the use of LC-based 1/10/25Gb transceivers through breakout cables and SR-4 style 40 and 100Gb transceivers. The NFSA also supports the use of 1/10Gb Cat 6 connectivity although optical connectivity is preferred for production systems.

All known ICT-based requirements necessary for successful commissioning, training, and support delivery of any proposed device(s)/solution(s), including network connectivity, on-site/remote access protocols, patching protocols, and any NFSA-supported ICT tasking.

3) Ongoing Support and Maintenance Arrangements

Respondents **must** demonstrate an ability to provide ongoing technical support and maintenance to a customer in Australia or to a location remote of their primary facilities.

Respondents should also set out the terms of any minimum device/solution warranty period, annualised costs and terms of any extended warranty periods offered and detail the impact of any extended warranty on support and maintenance arrangements (if applicable).

Should third-party (i.e. externally provided/supported) hardware or software be proposed as part of any solution, Respondents **must** clearly set out how warranty and ongoing support and maintenance agreements will be managed.

Respondents **must** detail any support and maintenance arrangements, including a comprehensive list of inclusions (including spare parts or parts replacement/exchange options), and annualised costs for planned and on-demand support, including costs for multi-year (i.e. 2, 3, and 5-year) support agreements.

Respondents should also set out how support will be provided, including telephone-based support, on-site access requirements, and remote access arrangements.

Respondents should include costs for any consumable parts required by any proposed device/solution per annum. The volume of consumables reasonably required to support and maintain the proposed device(s)/solution(s) should be commensurately identified and costed in any proposed fee structure.

Respondents **must** set out the following information in any RFT Response:

- Respondent's ability to deliver any procured items by **30 June 2025**, and any associated building, shipping, delivery, and commissioning timelines.
- Installation commissioning requirements, including a commissioning timeline with milestones taking into consideration each device and/or solution proposed.
- Proposed training scope and schedule for NFSA-engaged scanner operators and any in-house engineers.

2.5 Physical Security Requirements

Strict physical security protocols are in place to ensure the current and enduring preservation of archive collections, sophisticated equipment and cultural sensitive material stored at the proposed work premises.

The Supplier must comply with all security procedures and protocols and conform to all instructions and directives issued by the NFSA as they relate to security and preservation of property, processes, collections and intellectual assets on-site, including but not limited to the NFSA Contractor Protocols and all reasonable directions of the Australian Government Protective Security Policy Framework (PSPF).

The NFSA may require that Respondent personnel obtain and maintain an Australian Government Security Vetting Agency (AGSVA) Baseline security clearance and/or undergo an Australian Federal Police Check with no adverse findings.

2.6 IT Security Requirements

To the extent that the Supplier may be required to access IT systems in the on-site or remote delivery of the Goods/Services, the Supplier must comply with all IT security procedures and protocols and conform to all instructions and directives issued by the NFSA as they relate to IT security, including but not limited to its IT Acceptable Use Policy and all reasonable directions of the Australian Government Information Security Manual (ISM).

2.7 Work Health and Safety Plan

The Supplier must comply with all procedures and protocols and conform to all instructions and directives issued by the NFSA as they relate to work health and safety, including but not limited to its Work Health and Safety Policy, the *Work Health and Safety Act 2011* (Cth), *Work Health and Safety Regulations 2011* (Cth), and National Construction Code.

3. Delivery Timeframes

3.1 Goods/Services Delivery Timetable

The NFSA is seeking to complete this project by no later than 30 June 2025.

All other delivery scheduling is open to negotiation with the Supplier.

An indicative Goods/Services delivery timetable is set out below, noting these dates will be clarified subject to any received Tender Response(s) and/or resultant contract:

Task/Deliverable	Due Date
Identify Power Requirements	As mutually agreed by both parties
Acoustic Room Analysis	As mutually agreed by both parties
Refit of Existing Remaster Room	As mutually agreed by both parties

Refit of Existing BioBox	As mutually agreed by both parties
Screen and Projector Installation	As mutually agreed by both parties
Server Rack Installation	As mutually agreed by both parties
Network Setup	As mutually agreed by both parties
Control Equipment Setup	As mutually agreed by both parties
7.1 Speaker Installation	As mutually agreed by both parties
Testing and Calibration	As mutually agreed by both parties
Training and Handover	As mutually agreed by both parties
Project Completion Date	No later than 30 June 2025

3.2 Ongoing Support and Maintenance

Respondents should set out the terms of any minimum device/solution warranty period, annualised costs and terms of any extended warranty periods offered and detail the impact of any extended warranty on support and maintenance arrangements (if applicable).

Should third-party (i.e. externally provided/supported) hardware or software be proposed as part of any solution, Respondents **must** clearly set out how warranty and ongoing support and maintenance agreements will be managed.

Respondents **must** detail any support and maintenance arrangements, including a comprehensive list of inclusions (including spare parts or parts replacement/exchange options), and annualised costs for planned and on-demand support, including costs for multi-year (i.e. 2, 3, and 5-year) support agreements. Respondents should also set out how support will be provided, including telephone-based support, on-site access requirements, and remote access arrangements.

4. Tenderer Non-compliance

4.1 Tenderers must set out any identified or proposed non-compliance with each RFT Document at Section 8 of *RFT Document 3 – Tenderer Response Form*.

4.2 Tenderers are advised that non-compliance with any RFT Document that is not clearly set out in its Tender Response may not be considered by the NFSA at a later stage in the process, including possible revocation of a successful or preferred Tenderer status.

5. END