



**RFP SPECIFICATIONS FOR FOR THE DIGITIZATION OF  
AUDIOVISUAL MATERIAL FROM LEGACY VIDEO TAPE FORMATS  
OF ERT ARCHIVES**

EPT SA

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## **PROPOSAL OF ERT ARCHIVE FOR CONDUCTING AN INTERNATIONAL RFP VIDEO TAPE DIGITIZATION TENDER.**

### **INTRODUCTION – FOREWORD**

ERT Archives (Audiovisual, Photographic, Radio & Audio, and Printed) contains more than one million assets, in which the most important historical and cultural events of Greece have been recorded since the beginning of the 20th century. It is a unique asset of the Hellenic public television and the most important intangible asset of public broadcasting and national cultural heritage.

The peculiarity of ERT Archive versus other European Archives is that it manages in a single integrated metadata database television programs, radio programs, photographic archives, historical recordings and various materials in printed form.

The Archive is the main source of content for ERT's Terrestrial & Sat TV channels, its hybrid TV platform as well as its online streaming services, and provides digitized audio archival material for the needs of the Hellenic Radio (ERA). In addition, it grants archival material (audiovisual, radio, photographic and printed) to any new production or co-production of ERT on the basis of the contracts signed.

ERT archives is of unique national importance and can, in use, acquire unique usefulness and scope. It is literally an ark of memory of Greek History, society and Greek culture for the twentieth century, through the vast wealth of its audio and visual assets. The main threat to the Archive, like any Archive worldwide, is time. Time contributes to the deterioration of the archives, especially when storage conditions of sensitive formats & materials are not according to international preservation standards, and is in danger of being destroyed by moisture, heat, etc. Also, the frequent reuse of the Main original copies and volumes, slowly wears down quality and integrity, which over time, creates issues in its overall quality.

In addition to its Audiovisual archive, ERT holds a large collection of Broadcast and professional vintage equipment in museum like status, technical and operation manuals for the operation of public radio and television from previous decades, covering the entire century and indicating the evolution of both ERT itself in parallel with Greek society during this period.

The aim of this and all ERT digitization projects is to ensure in every way that this precious Materials remain available at the service of the Greek citizens, with the ultimate aim of disseminating content in Greece and abroad (see Annex II) through European Partnerships and projects (Europeana, Euscreen).

The incorporation into ERT of the the National EOA archives and IOM institution, at the same time with the acquisition of the photographic collections of famous Greek photographers-photojournalists P. Poulidis and A. Sarrikostas, as well as the audiovisual collections from the older EIP, YENED, ET2 TV networks and the collections donated by the Hellenic Army Geographical Service made ERT Archives the sole owner of such audiovisual & media wealth. It is also worth noting that, for the first time in Greece, ERT Archive has developed and continues to develop technological innovations for qualitative improvement, as well as extroversion applications over web, that will bring citizens even closer to the material wealth of the Archive, highlighting also its multimedia learning role. The acceleration of the preservation, digitization and promotion of rare audiovisual material aims to promote the history and importance of ERT, to develop historical consciousness and awareness among young and not so young people through audiovisual material, to create a reference point of academic research activity, to

facilitate and enhance the operation of educational programs combined with basic education, as well as to inform foreign visitors.

### **EMERGING THREATS CONCERNING VIDEO TAPE**

ERT Archives video tape recordings are in danger of:

1. With the continuous reproduction of master tapes, The layers of video materials that recorded into magnetic tape and cassettes , are altered over time at the risk of loss and degradation of the audiovisual signal.
2. The reproduction equipment VTRs by which video recordings are read and ingested from old video formats is no longer manufactured. Spare parts of these machines are no longer produced and their stock is close to being depleted almost globally, so they cannot be maintained. Therefore, there is only minimal technological equipment in reliable state.
3. The specialized technicians who had the technical expertise of maintaining and servicing these legacy units in order to reproduce the content for the purpose of ingest and digitization, have retired, and this know-how has passed today to only a few video technicians of the ERT Archive, who as expected do not have time to deal systematically, as necessary, with the restoration and digitization of the material, since they are engaged daily for the needs of feeding programming demands

### **History - Brief description of the project**

In 2004, the Archive Department of ERT SA started to implement a digitization project of its audiovisual archive, and today it has a significant number of digitized assets (over 179,000). Today, the Archive has a complete enterprise system of audiovisual management, digitization, preservation and storage of audiovisual material. Every day it restores, processes and converts into digital form archival material from modern or older formats, thanks to its team of highly trained technically staff. It is a mature project with immediate results that only ERT archives have developed and implemented at national level, thanks to its innovation, technical know-how and infrastructure.

ERT, however, due to the very large volume of material still remaining only in old storage formats, and taking into account immediate and current needs, announces this invitation to a tender, in order to speed up the processes of digitization and transferring of remaining old format cassettes /tapes to digital files, which it can implement directly with the contractor that will emerge from this process.

ERT, through the proposed project, aims to digitize a large part of its audiovisual files that remain non-digitized in its central legacy format archives.

The aim of this project is that :

1. Valuable audiovisual material will be preserved from physical wear and the risk of non-reproducibility by abolished and outdated broadcast systems that can no longer be maintained due to the global shortage of spare parts.

2. Video material will become widely available in the production process and in playback (ON AIR playout), with the convenience of the digital MAM systems currently available and gradually upgraded by ERT.
3. This material will obtain additional value through the possibility of systematic electronic documentation and provision to third parties (sales of material, institutions-public organizations, educational television, production partnerships, etc.).

The digitization of archival material concerns earlier broadcast formats of professional magnetic tapes/video cassettes (Legacy Broadcast Video tapes & Cassette tapes) Umatic, Becatcam SP, Digital Betacam, DVCPRO and 1/2 video, and their transfer to high quality digital files for preservation and playback.

### **Duration of the project.**

The project should be completed within 24 months, after it has been awarded to the contractor, with actual production starting date as of completion of the installation of the necessary equipment and the start of operation for the implementation of the ERT deliverables. The time of transport, installation and testing of the equipment should not exceed 40 days after the date of award.

### **Description of Materials and Formats (Tape formats - Video carriers)**

As detailed in subsequent sections, the digitization concerns archival material recorded in earlier professional magnetic tape/video cassette formats (Legacy Broadcast Video tapes & Cassette tapes) video Umatic (3/4 inch), Becatcam SP, Digital Betacam and DVCPRO, and their necessary transfer to high quality digital files for preservation and reproduction.

At the time of publication of this declaration, ERT estimates that the material to be transferred to digital files that will form part of the project is:

○ **Table of deliverables**

<b>SOURCE VIDEO TAPES</b>	<b>QUANTITY</b>	<b>NUMBER OF DELIVERABLE DIGITAL MXF op1a FILES (Approximate)</b>
1. BETACAM	96,568	96,568
2. DVCPRO (25 & 50)	54,421	54,421
3. UMATIC (Hi Band) Secam Color	2,800	2,800
4. ½ VIDEO (SHINBADEN - SONY)	150	150
<b>Total</b>	<b>153,389</b>	153,389 digital files mxf op1a (Approximation ,should be more since news tapes are 1 file per subject not hour).Amount of hours will should be the same though.

## **DESCRIPTION OF PROPOSED WORKFLOW – PRODUCTION**

The proposed audiovisual digitization system should meet the requirements for a realistic and effective implementation of the specific volume of material (Betacam SP, Digital Betacam and DVCPRO) that remains in the Archive storage vaults in an earlier non-digital tape based format (Legacy Broadcast Video Tape Formats).

The digitization of audiovisual archival material will deliver digital files . Digital files will be MXFop1a 50 Mbps main level 4:2:2 with DVCPRO 50 video codec and 4 channels of audio 16 bit 48 khz with full (QC) quality control certification per file, from a technical control system - software (Validated QC coordination report). The total number of material to be digitized is approximately 153,389 digital mxf op1a files. The actual number of files will differ since every item one tape will be a separate digital file after ingest.

There may be slight deviations in the numbers of tape carriers mention. In any case, this potential deviation must have been taken into consideration and budgeted by the contractor.

### **DETAILS OF VIDEO SOURCE MATERIAL CAPTURED IN OLD VIDEO FORMATS**

- The total volume of the physical media contains programs are owned by ERT S.A.
- The total volume of the physical media is searchable in a database and a web accessed (ERT internally) application based MAM.
- The materials to be digitized are divided into the program categories listed below. Categorization affects the naming and segmentation of the deliverable files as described in the section below; for example, news tapes or cassettes all include separate items so separate files. An hour-long cassette one may contain 6 ten-minute items or stories that should be saved as 6 separate digital files.

#### **MATERIAL CATEGORIES:**

Program Archive:

**20,800 DVCPRO**

**13,000 BETACAM ,**

The volumes of this material includes the following program categories:

- Stand-alone shows and documentary series
- Fiction series
  
- Children's series

- Magazine programs
- Informative daily and weekly shows
- Entertainment, travel and cultural shows
- Music shows
- Plays
- Specials-Portraits
- Concerts, major official events
- Parades and celebration of national anniversaries
- Co-productions and sponsorships of ERT maintained for the period specified in each contract, etc.

This material is recorded with detailed metadata and accessible through the database ERT program database.

### **SPORTS ARCHIVE (Sports)**

21,000 DVCPRO  
22,500 BETACAM

The volumes of this material includes sports events/matches owned by ERT, an archive of edited sports issues as well as sports shows. Part of the material does not belong to ERT, but it is preserved because it was broadcast by ERT channels, contains deliveries and descriptions owned by ERT, and is maintained for use in news shows. Most of this material is documented and accessible through a database that has been managing news content since 1995.

### **Permanent Archive** (approximately ERT ownership ONLY):

46.600 BETACAM  
2,980 DVCPRO

These volumes of the archive owned by ERT, is of particular importance due to its rarity, uniqueness, quality and/or subject recorded, is collected and stored. Of all the above-mentioned material, 75,000 audiovisual documents/themes have been digitized and fully documented in the ERT Archive's Audiovisual Archive Management System (MAM), which corresponds to about 4% of the volume of physical material (Film 16mm & 35mm, video 1" & 2" inch, Umatic, Betacam, Dvcpro). This material is fully available for anyone.

### **News Archives:**

9,641 DVCPRO  
14,468 BETACAM

Since 1989, the News Archive was recorded in BETACAM SP and BETACAM DIGITAL and then on DVCPRO Video Cassettes. These recorded materials are annotated with metadata and accessible through the database used by the General Directorate of News, by the General Directorate of Program in internal productions and also granted with or without financial consideration to external users.

The news archive with its largest percentage completely ERT owned, is an active archive. It receives all the newly admitted news material of the broadcasting organization daily, inserts it through a specific selection and editing processes into the database and sorts it in news clips on its premises. Since 2014, the files has been kept only in digital file format.

The Archive also has audiovisual material in older video formats:

- 2800 U-matic
- 150 ½-INCH BLACK FILMS

### **GENERAL REQUIREMENTS OF THE DIGITIZATION SYSTEM**

ERT S.A. is launching an rfp invitation to an open international public tender for the digitization of remaining existing material in cassette format (mainly Betacam SP & Digital as well as DVCPPro) into usable and archival digital files.

The contractor awarded the project ,following the public tender, will have to implement a single integrated digitization system for the requirements of the project, with specialized software and equipment as well as VTR playback units that meet mass digitization requirements. The system will be transferred, installed on the premises of ERT Archive and in the end uninstalled under the responsibility and supervision of the contractor. These costs are included in the project budget. The system should have a production management system so that it can quickly adjust workflows, and add or remove playback and technical control units without stopping the reproduction-digitization process.

The project will be implemented and completed entirely on ERT SA premises. No archival format (tapes-cassettes, etc.) will be transferred outside ERT premises for any processing, except for 1/2-inch tapes which may be transferred to the contractor's laboratories under the sole responsibility and insurance of the contractor, if their digitization is not possible on ERT premises.

The equipment should for the most part be automated for the implementation of mass digitization of large volumes of materials. In other words, it should consist of automation systems or robotic mass-digitization libraries, with mass loading and automated remotely controlled software with easy-to-use interface (GUI) operation, touch panels or control interfaces & automated batch recordings in volumes ,for faster digitization with security of content.

Alternatively, grouped and automated VTR racks & arrays can be used for mass digitization, but always within the same automated single system of control and digitization software.

The number of total VTR playback units should be appropriate so the project can be completed after or within 24 months.

The Service - maintenance and adjustment of the technical equipment as well as the supply of spare parts that will be needed until the completion of the project is the sole responsibility of the contractor.

The contractor must provide a certificate and certification that he has the appropriate quantity of the required spare parts in the first place.



The service and maintenance process will be repeated throughout the project (cleaning, changing heads, settings, changing rollers, etc.) according to the manufacturers' hours and service manuals so that the units yield the maximum of their playback quality.

At the same time, the contractor should maintain, in the premises to be granted by ERT, spare VTR playback units for each format, in case a repair and/or maintenance unit is needed, in order to be replaced immediately, without interruption of the production process, until completion of the repair of the problematic unit. The contractor should provide, by undertaking the project, all the necessary spare parts and consumables that will be needed until completion of the project, and provide a certificate and a related list that they will be reserved within the time limits mentioned in the project contract. Delays will not be accepted due to a lack of spare parts, consumables or equipment malfunctions. Otherwise there will be causes and penalties as provided for by the terms of the Contract of the Project.

All VTR playback units initially available for reproduction and digitization must have completed the service provided by the manufacturer for their life and operation time, and the corresponding Maintenance Cards must be submitted.

Machines or devices addressed to the consumer or semi-professional market as well as Freeware Software, codecs without certification and support aimed at ordinary users (such as ffmpeg, FFASTRANS, Avisynth, virtualdub) will not be accepted. Software and video codes must be professional broadcast software. Also due to incompatibility of playback and digitization systems within the ERT Archive machines, mxf coders of AVID TECHNOLOGY (AVID MEDIA PROCESSOR, MXF WRITING LIBRARY) should not be used during the production process of the files.

A complete list of the total solution including software and hardware components under a single system must be provided.

## **SUPPORT**

ERT will provide space, offices and data Center, for the installation of equipment, electrical power supply of uninterrupted operation (UPS supported), Ethernet access to the archive network, where necessary, as well as interconnection with the audiovisual management system for the final transfer and migration of digital files to ERT's Enterprise MAM (Media Asset Management System) through reserved watch folders to be designated by the Archive technicians.

ERT should also extend the capacity of the main storage host and the number of concurrent Ingest Licenses) of its MAM system. It must also have provisioned for the uninterrupted supply of LTO-7 data Cartridges in order to be able to cope with the massive migration and flow of digital files.

## **REQUIREMENTS FOR IMPLEMENTATION AND MANAGEMENT OF WORK**

The Contractor, together with the technological equipment that he will install at ERT's Facilities for the implementation of the digitization project, should organize and provide the appropriate working group that will carry out the project and its deliverables. The contractor will be responsible for selecting the appropriate technical and administrative staff or his associates for the completion of the project. The complete team members and their roles should be mentioned in the initial proposal.

ERT should be given a detailed description of the proposed project implementation methodology, profiles and staff CVs (form, equipment, organization and planning of the project, project team, implementation of tasks per day, week, etc.). From the beginning of the project the Contractor should appoint a permanent General Project Manager and a local technical manager until the completion of the project who will be in constant communication with the project manager to be designated by ERT Archive upon conclusion of the contract.

In particular, the following elements should be mentioned:

- Group composition
- Contractor's project manager
- Technical/Other staff
- Partners
- Project Team Personnel Experience

Subcontracting is not allowed. The only exception is the 1/2-inch material (150 tapes), which due to the rarity of the reproduction machines, the Contractor can assign to a third party with its own responsibility and assurance. The contractor should mention this in his technical offer in detail by listing the name of the subcontractor, the digitization site and the way in which the material will be secured.

The contractor must, from the beginning of the project, describe the project implementation scheme and indicate his/her partner.

In any case it can choose to implement the project in its entirety or to work with approved partners only for:

- Provision of maintenance services - reproduction services for the preparation and digitization of the media
- Provision of human resources - personnel services

The Working Group should be the same and remain the same throughout the process.

In case of force majeure, that is if a member of the working group will need to be replaced, this should be done with the agreement of ERT Archives and the Project Manager of the Archive.

Checks and reports on the progress of the project will be carried out weekly and monthly and through detailed reports and sampling (Reports – Sample file Evaluations). ERT has the right to request digitization samples or progress report at any time and without notice.

In addition to certain reports and check under the contract, the Project Manager of ERT Archive will have the right to make extraordinary checks on staff and to request on demand progress reports.

The system should record and keep log files for all user movements and activities, in case they are requested.

The preparation of the material before digitization, i.e. the cleaning of tapes and the printing of barcode labels for automated digitization, is also the responsibility of the Contractor.

The material before digitization will need the necessary preparation, such as cleaning of tapes, hydrolysis ovens, etc. This procedure is the contractor's obligation and should be carried out with the appropriate units, which the Contractor should have cared to supply together with the rest of the equipment.

The Contractor must deliver the material as planned in time within the implementation time, (partially, according to the implementation schedule), without exceeding the cost. The contractor's business plan must provide that it will cover all costs incurred for human resources, equipment, travel, rentals, purchases, maintenance, repairs, etc.

## DELIVERABLES

All deliverables will be digital audiovisual files MXF op1a DVCPRO 50 with 4 16-bit 48 khz audio channels that will each be fully certified by a certified QC communication report via accepted broadcast QC applications such as Interra Batton, Telestream Vidicheck, Aurora.

Specific the files must be:

- Wrapper – container : MXF op1a
- Codec : DVCPRO50 PAL Resolution: 720 x 576 PIXELS
- Subsampling: 4:2:2 ▪
- Scan type: Interlaced (BFF) ▪
- Display aspect ratio (DAR): 4:3 or 16:9
- Audio: 4 channel Uncompressed PCM linear
- Resolution: 48 kHz / 16 bits
- Data rate of 50 MB/s.

The naming of the deliverable files must be in Latin capital characters without spaces with an underscore between the words, and will include the code found on the tape (Tape ID).

For example, if the tapecode is 1267 and contains 4 themes, the files with the themes will have as file code within their title, 1267-1 ,1267-2, 1267-3 ,1267 -4

The final name of the file must not exceed 32 characters.

The name will be in the form of:

Type\_Tape\_Code\_Name.mxf

For the Files that come from the cassettes/tapes of the Television Program of the Permanent Archival Space, the following nomenclature will be followed:

PGM\_TAPEID\_TITLE\_NAME.mxf

For the Files that come from the cassettes/tapes of the Program Archive, the following nomenclature will be followed:

PGM\_TAPEID\_TITLE\_NAME.MXF.mxf

For the Files that come from the cassettes/tapes of the News Archive, the following nomenclature will be followed:

NEWS\_TAPEID\_TITLE\_NAME.mxf

For the Files that come from the cassettes/tapes of the Sports Archive, the following nomenclature will be followed:

SPORTS\_TAPEID\_TITLE\_NAME.mxf

## **WORKFLOW and SECURITY**

Upon the start of the production process of digitization, ERT Archive, in consultation with the Contractor and according to the production schedule will deliver, per week, a number of archival video tapes agreed with the contractor, cataloged in detail within the Permanent Archival Storage System, and will be charged to the technical receiver of the Contractor's team.

After completion of the weekly digitization, the cassettes will be returned to the Archive, fully rewound, and new ones will be received. The receiver will be able to keep tapes after a selective evidence of a problematic tape or cassette, for a second attempt at digitization, which will also be mentioned in the relevant technical bulletins to be completed.

The digital files produced per tape or cassette should be equivalent to the logical number of usable material recorded. For example, when a 90-minute cassette has 60 minutes of recorded useful material, a 60-minute file should be delivered, not a 90-minute file with a 60-minute program and a 30-minute blank, black, bars, etc. In the case of news content material where themes are split by tape, all the mess should be separate files. For example, if there is a 60-minute tape with 10 separate 10-minute themes, 10 separate 10-minute files should be created. 98 % of all useful material per cassette is recorded on the basis of time code in the databases of ERT Archive. The contractor will have access to this documentation during the project process for the proper creation of useful digital files.

## **MECHANICAL AND TECHNICAL PROBLEMS**

The following mechanical and technical problems may occur during the digitization process and provision by the contractor should be made to address them.

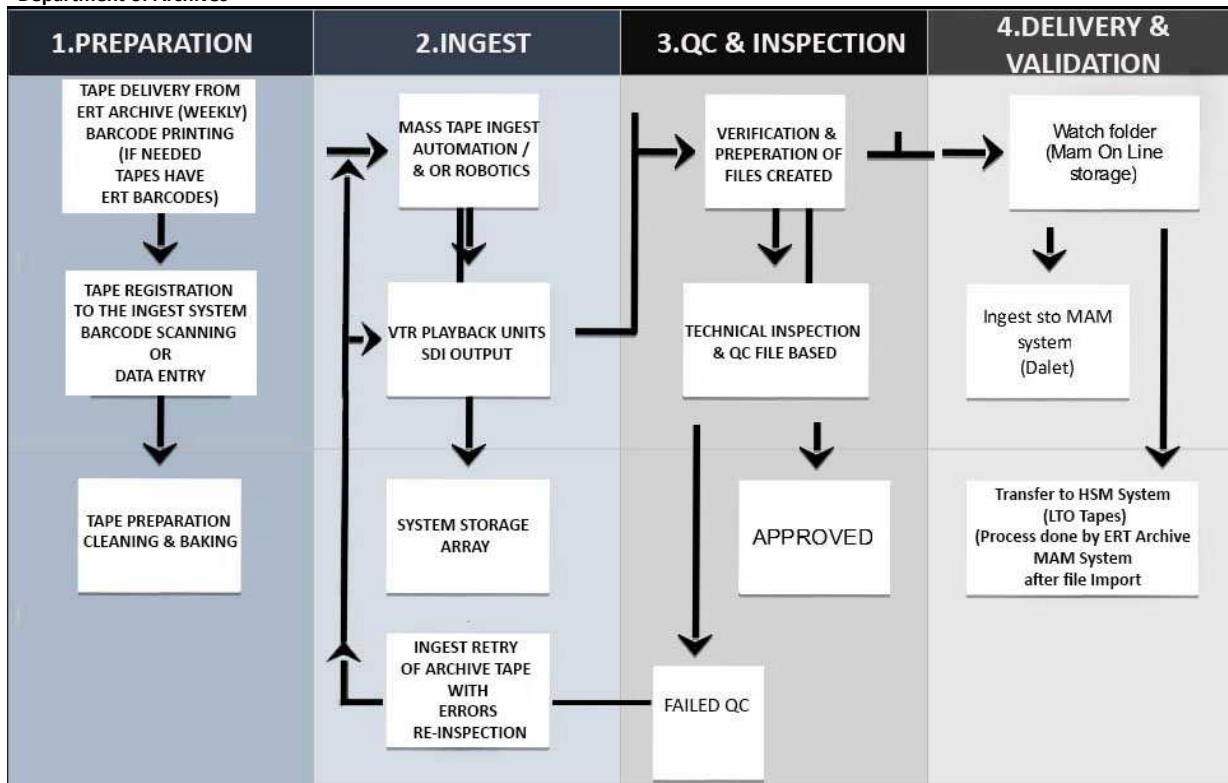
- Tape cuts. The contractor must take into account that no more than 1/% of the tapes can be cut during the reproduction process.
- Altered and joined together tapes. It is less than 2% likely for cartridges to be altered or joined together (Tape cleaning or baking before playback should care for this)
- Low video signal level on recorded material.
- Recordings in different TV standards such as Secam on the Umatic tapes. The requested files must always be PAL.

During the processing of the material, the Contractor will be solely responsible for the safety and integrity of the material. The Contractor is obliged to keep backups for 90 days from migration to the storage space of ERT Archive. After 90 days, the material will be deleted or delivered along with the regular files by request of ERT Archive. A confidentiality agreement for the material and its management will be signed with ERT S.A. and will bind the contractor and its employees upon undertaking the project. The contractor must take all steps that no ERT material will leave ERT archives.

## **Workflow Stages**

The workflow consists of four stages.

- 1) preparation
- 2) digitization
- 3) check
- 4) migration-transfer of files



## A. PREPARATION (STAGE 1)

### 1) MATERIAL COLLECTION-DETECTION (by ERT Archive staff).

- Metadata: Search the Existing Database or other Directory catalog, collect the audiovisual file based on the published "Objective Criteria List.'Selection'
- Essence: Physical carrier status check.
- COLLECTION AND LISTING OF THE ARCHIVAL MATERIAL TO BE DIGITIZED: The material will be delivered to the contractor on a weekly basis, according to the specifications of the weekly production line of the digitization project.

### 2) DELIVERY TO CONTRACTOR (on ERT facilities)

- Signing of a material delivery and receipt debit note
- Receipt of material of physical carrier media –tapes and cassettes - related to the audiovisual digitization project, such as BETACAM, DVCPRO, UMATIC.

### 3) PREPARATION FOR DIGITIZATION (CONTRACTOR'S STAFF).

- All tapes – cassettes that will be given to the Contractor for digitization have barcode and RFID.
- In the event that a different marking with other special barcode labels is needed on each document (tape) delivered to be read and imported in mass digitization units (Robotic, Bulk VTR Arrays), this will be done at this stage by the contractor's staff.
- Cleaning of material: Cleaning of tapes/cassettes by special cleaning units (to be supplied by the contractor), treatment in special ovens with dehumidifiers (if necessary).

## B. DIGITIZATION OF MATERIAL BY THE CONTRACTOR (STAGE 2)

### Equipment:

- Signal and playback testing through signal analyzers, reference AV monitors, Signal testers (Multiscopes, waveforms, vectroscopes, RGB parade, etc.). Cleaning of heads, service maintenance in case of playback failure.
- Signal correction units (noise reduction, image enhancers).
- MATERIAL: Transfer of content from the original physical medium to a digital environment. Conversion of analog material into digital format of predefined specifications (mxfop1a), and storage in AV Storage Arrays to be made available by the contractor during the project. Signals should be converted and transferred through an Embedded Audio interface. In the case of analog formats, the signal should be converted to digital via appropriate 10-bit A/D converters according to broadcast standards. A detailed list of equipment, and instructions on how to implement the digitization should be given.

## C. CONTROL - VERIFICATION (Stage 3)

- Technical control of generated files by Automated QC system, and generation (Validated QC verification report) via broadcast QC applications, such as Interra, batton, Telestream Vidicheck, Aurora.
- Validation and verification by an operator.
- Total debugging / validation, discarding or accepting files.
- Command - programming to recheck, and attempt to re-digitize problematic files.

## D. DELIVERY – TRANSFERT O MAM (STAGE 4)

- Transfer and delivery of files to a watchfolder of the properly configured storage space of the Archive.
- Check and verification of files by ERT Archive technicians, deletion of backups.
- Permanent Storage of Material after switching from watchfolders to LTO Data cartridges.

## **PROCESS FLOW – OPERATION**

The archival material digitization and management system with automated operation should, in its entirety and during the digitization -documentation process, fully cover the following stages:

1. Process for the digitization of an audiovisual file (ingest)
  2. Storage process
  3. Application of descriptive metadata import.
  4. Managing audiovisual material and metadata with search, preview, playback and transfer features. The existing design of the metadata management fields designed by the Archive managers and already in operation will be followed.
- Import – export of audiovisual material with or without the accompanying metadata.



## **ARCHITECTURE OF THE PROPOSED SYSTEM**

Based on studies carried out by ERT Archive, certain requirements for the project have emerged, taking into account the specific nature and age of each format.

The proposed digitization system and its subunits, to be supplied by the contractor, should operate under a single management system, with a controlled and secured workflow, automated mass digitization, technical control and quality assurance, and not by individual separate units that will simply make and store digital files without organization via automation to a storage folder.

The digitization system should:

- Have high-volume storage with high performance to support all video channels (50Mb/s),
- QC and Report deliveries.
- Manage workflow with a tracking database.
- Maintain the status of all tapes in the workflow.
- Allow tracking and logs of all tasks.
- Use automated tasks.
- Provide information to its operators and ERT archive personel.
- Allow printing of the derived electronic progress reports.
- Allow easy transfer of the digital material through the ERT DATA network.
- Support multi-type material formats:

(It should support multiplicity in the format of the archived data. This is necessary in order to meet the different specific requirements of each file, and allow the appropriate digital standards to be adopted).

## **INTEGRATION OF PROCESSES**

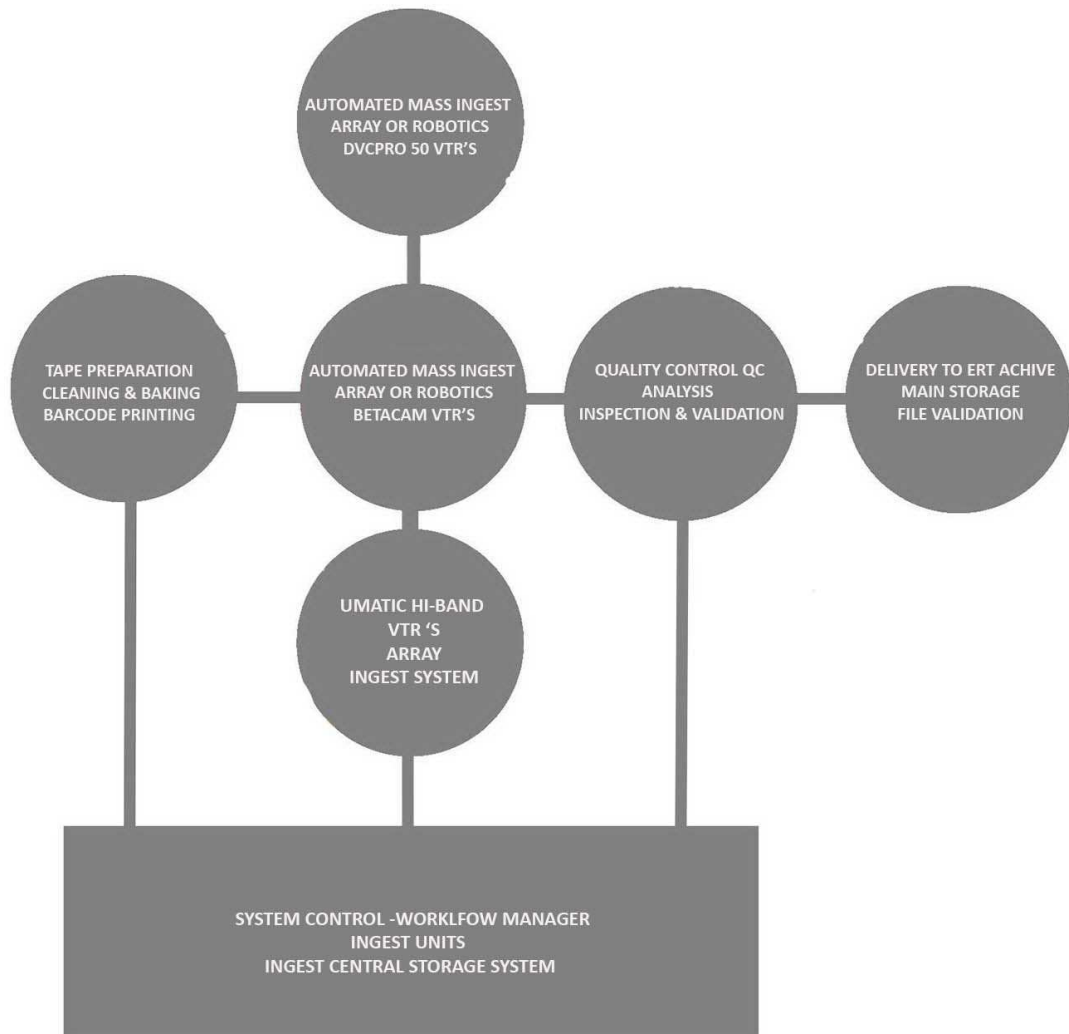
Integration and control of processes at material import level. Create progress report sheets, data volume, and material appropriateness after conversion to files.

Technically sufficient preview with technical control features:

Preview at least at low resolution for all the material that will be integrated in to the project. The solution should offer satisfactory quality, but it should also be efficient. The produced files will be technical and quality checked in the stored medium before delivery to the Archive system.

## **DIAGRAM OF PROPOSED PROJECT ARCHITECTURE**

Implementing the preferred time tables and keeping to the workflow stages, the system should consist of the following subsystems:



### **PRODUCTION SYSTEM (Subsystems) BASED ON THE IMPLEMENTATION TIME**

The architecture diagram is proposed after research of ERT Archive according to the specific nature and requirements of the multiple formats available in the Archive. The Contractor may propose an alternative or similar architecture and implementation, provided that the solution ensures its function as a single system of mass digitization and its subsystems through automation. In order to ensure low-cost but high-quality deliverable material, it is very important that the contractor has a know-how on mass digitization systems, media asset management software and broadcast systems, and has the ability to implement similar technological solutions internally.

A detailed timetable for the implementation of the project, as well as approach tables performance quota, through the corresponding digitization subsystem and human resources team work, should be given for all tasks, including preparation, digitization and QC stations.



A proposed system should include the following sub-units, according to the material to be digitized.

- SYSTEM – SUBUNIT FOR BETACAM ROBOTIC DIGITIZATION
- SYSTEM – SUBUNIT FOR DVCPROROBOTIC OR MASS DIGITIZATION
- SYSTEM – SUBUNIT FOR UMATIC ROBOTIC MASS DIGITIZATION
- SYSTEM – SUBUNIT FOR QUALITY CONTROL AND PREVIEW

#### **½ " INCH VIDEO TAPES - REEL TO REEL (150 pieces)**

1/2-inch tapes are not required to be part of the system that will be installed, and maybe delivered to the Contractor for processing, restoration & digitization in its laboratories, due to the specific nature of the format of this archival material, which is characterized by great instability and requires special treatment and handling by experienced technicians, so as not to cause damage during its reproduction.

Estimated time 6-8 months. This does not affect the above subsystems and will take place a long side the rest of the project.

#### **CRITICAL FACTORS FOR SELECTING CONTRACTOR –CONTRACTOR’S PROFILE**

- a) Contractor’s infrastructure for the audiovisual material digitization, management and storage system.
- b) Technical support in removed (from production) Video and TV broadcast reproduction units.
- c) Adequacy of spare parts and reproduction devices for the requested materials, certification of maintenance technicians by manufacturers.
- d) Supplier’s company form abroad or in Greece.
- e) The contractor shall have or have secured, prior to the award, the required number of main and reserve (Spare) reproduction units, as well as all equipment - systems and project implementation software. A detailed list of equipment should be provided.
- f) The contractor should be able to provide spare parts/parts and units which are no longer manufactured by the main manufacturer of the system, and fully repair them. A list of spare parts, as well as repair and service certifications should be provided.
- g) Due to the importance that ERT places to the preservation of its archive, the technical infrastructure of the supplier will be taken seriously into account in projects such as broadcasting and archiving, as well as its infrastructure in supporting archival and television substrates/formats. In order to prove the above, the supplier shall provide the necessary documents proving the above, such as: list of the required technological units, machinery, spare parts, etc. in its possession, experience in maintenance and operation of the required means, specialized personnel, etc.).

- h) Full provision of services on ERT premises; no material may be transferred via outsourcing to subcontractors (except the 1/2-inch file), while it should be ensured that there will be no loss or interception of any material owned by ERT.
- i) On-the-spot (ERT premises) control of the production process and mode of operation of the contractor to be appointed by the works contract by ERT Archive staff .
- j) The system with the same architecture and technical solution must have been used with positive results in at least 3 broadcasters or Audiovisual archive institutions of size and diversity equivalent to that of ERT Archive.
- k) The Contractor must have successfully participated with positive results, in similar completed projects on at least two (2) broadcasting organizations or audiovisual archives , abroad or inside Greece
- l) The contractor shall implement International quality standards, such as ISO 9001, 2015, TUV, etc. which need to be mentioned in detail.
- m) A list of the implemented projects, emails and addresses of the respective project managers should be given for clarifications or additional information.
- n) If it is found that certain volume of the archival material to be digitized cannot be saved due to technical problems (e.g. downloading & recording, substrate wear, etc.), ERT Archive should be able to replace it with an equivalent volume of material, also imprinted in an old video format, in agreement with the Contractor

### **Installation – putting into operation**

The archival material digitization, storage and management system is delivered complete and in operation, according to the above and to any and all to be subsequently agreed, on ERT premises. Before the production process, the following should be ensured:

- Any elements or units required for the operation of the archival material management system, not specified or mentioned in these specifications, shall be provided by the supplier and shall be included in its offer.
- Full support and material maintenance without intervention by ERT.
- Full support for the installation of all equipment provided by the supplier, at least 12 hours/day.
- The implementation time starts right after the final receipt and putting into operation of the equipment on ERT premises.
- The equipment support shall be performed by specialized personnel of the supplier.
- All the above should be made clear to ERT with the use of reports, technical references, diagrams, etc.
- Any and all related to technical specifications, implementation diagrams, project designs, or workflow may be delivered in the Greek or English language.

Information & Contact :

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