

PrestoSpace User Group Feedback Meeting

London, 23 September 2004

Summary:

Sixty people from across Europe attended a meeting in the BBC's new Media Centre, to hear the results of the PrestoSpace Survey of User Requirements, and to discuss and approve a programme of work to meet those requirements. There were presentations summarising the state of the art in digitisation, restoration, storage, metadata and access. There were also presentations from the commercial world, showing what services they could provide to archives. The following day delegates viewed commercial and non-commercial preservation facilities in the London area.

What the archives want

Daniel Teruggi of the French national audiovisual institute INA introduced the speakers.



Brigit Hoomans of the Beeld & Geluid (the Dutch national audiovisual centre) had organised the questionnaire and collected the results, and gave a presentation summarising the findings.

The full report is on the PrestoSpace website,
http://www.prestospace.org/project/deliverables/D2-1_User_Requirements_Final_Report.pdf

Principal findings were:

Who was surveyed?

29 organisations from 11 European countries:

- 15 broadcast archives
- 5 film archives
- 9 service providers

But- most of these are large institutions. We have a pressing need to make better contact with smaller institutions.

What material do they hold?

- 1 million hrs. of film
- 4 million hrs. of video
- 5 million hrs. of audio

This is twice the amount of material found four years ago by project Presto - for 10 broadcasters - and confirms our belief that there is likely to be around 100 million hours of collected (not personal) audiovisual material across Europe, in collections of all types and sizes.

What are the Problems?

- Lack of condition assessment information
- Poor condition of materials
- Lack of infrastructure (workflow)
- Budget
- Rights negotiation

What are their major needs?

- Bulk preservation/migration
- Cleaning/physical repair
- Quality assessment

Are they doing anything about preservation?

Between now and 2010, these archives are planning 'preservation transfers' of the following:

- 450,000 hrs video = 11 % of total reported holdings
- 45,000 hrs of film = 4.5 %
- 214,000 hrs of audio = 4.3 %

These are disturbing results. Film can use conservation procedures rather than digitisation for preservation, but audio and video need to be migrated. Transferring 11% of video holding is 6 years extrapolates to transferring everything in 55 years! For audio, the equivalent duration (at these rates) is over 125 years! An additional worry is that these same archives reported they only have 50 % of the funding needed – and the service providers reported they only have 50 % of the capacity needed.

More transfers, more funding and more service provision are all urgently needed.

State of the Art in audiovisual preservation and related technology

Brief updates in digitisation, restoration, storage, metadata and access were presented.

Digitisation for Preservation: Jean-Hugues Chenot of INA, gave these headline conclusions for the state of the art of digitisation for preservation (or, especially in the case of film, access):

- Workflow – For film, it takes one operator per film machine, but for audio one operator can run roughly four simultaneous transfers, and for video it is also possible for one operator to do multiple transfers.
- Quality Control – Every second (or every frame) of the material does not need to be checked in order to achieve archive standards. A pyramid of spot-checking operations can be used, during and after the transfer. But – the sooner a problem is spotted, the less expensive it is to fix.
- Automation – of everything that can be automated – is the key to reducing cost while maintaining quality. Automation of metadata extraction and handling, bar codes for automated material identification, and eventually automation of fault detection and remediation are the keys to lowering the cost of preservation transfers.



Georg Thallinger of Joanneum Research in Graz, Austria reviewed **restoration**. Joanneum have worked in image, film and video restoration for many years, in research and as developers of a commercial software product.



Georg showed and played examples of the current ability of hardware and software methods to recover deteriorated audiovisual materials. Unfortunately the quality of media for web-delivery is too low to present those examples on the PrestoSpace website.

He also listed all the commonly-available systems, mentioning:

- Visual systems
 - Hardware based
 - Archangel (Snell & Wilcox), DVNR/ASC (Digital Vision), Scratchbox (Edifis), Teranex
 - Software based
 - DIAMANT (HS-Art Digital), Correct/DRS (MTI), Restore (Da Vinci), Shout/Scream (Thomson)
- Audio systems – audio
 - Audio Cube/Quadriga, Cedar Audio, Sonic Solutions

A main effort of work on restoration in PrestoSpace will be to find ways to integrate to work so that it can be as fast and inexpensive as possible, to allow greater use of this powerful technology.

Better solutions for specific faults will also be sought, concentrating on:

- Line scratch removal
- Motion estimation
 - improves dust / dirt / blotch /drop out concealment & stabilisation
- Colour fading
- Choice of quality vs. speed

Richard Wright described the main choices available for **storage**. The first choice is not between different technologies or media, but rather between ‘storing it yourself’ or outsourcing the whole issue. Various kinds of managed storage are developing rapidly. If the cost and security requirements of archives can be met, archivists could cease attempting to become experts in storage hardware, and concentrate on their core curatorial and catalogue issues.



The PrestoSpace survey found that

- Most material is still on shelves
 - 2 million hours in 12 archives
- But: half of respondents use mass storage
 - 100 terabytes in 12 archives
 - Roughly 20 thousand hours DVD qual = 1%

The main choices for storage are:

- Media on shelves
- Mass Storage
 - In-house
 - External
 - Within the Enterprise
 - Outsourced
 - ⇒ Commercial
 - ⇒ Public Service

The choices for media – which is a separate issue from choice of ‘storage philosophy’ just listed above – breaks down as follows:

- Media on shelves
 - Optical or Magnetic
 - Optical: AV or IT format
 - ⇒ Audio CD or CD-ROM
 - ⇒ DVD or DVD-ROM
 - Magnetic: Videotape, Datatape
- Mass Storage
 - Robotics: issues of quality checking and refreshing
 - Magnetic or Optical
 - Magnetic: tape or disc
 - ⇒ Discs on shelves?
 - ⇒ MAID: Massive Arrays of Inactive Discs

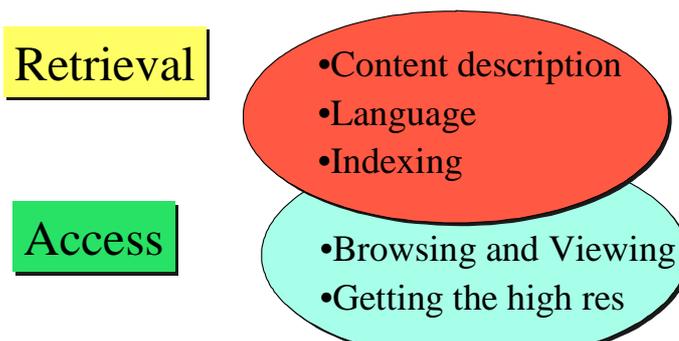
Whatever the choice, the key issue is not media cost, but life-cycle management and costs. These are hard to estimate, but our best effort to supply useful information will be on the SAM part of the PrestoSpace website, early in 2005.

Giorgio Dimino presented the work of PrestoSpace surrounding the area that, at the end, matters most: **access**. The scope of his presentation covered:



The goal

Improve the usability of content within large collections



This work area will deliver:

- A documentation platform --fully modular and customizable:
 - Process
 - Tools
 - Computing power and storage
 - Data model attributes
- A publication platform -- connected to documentation via the export functionality , but also detachable

This work area will deliver in three ways:

- Specifications and guidelines
- Software tools and API
- Full small scale implementation (a.k.a. turnkey system)

The day concluded with presentation from the **audiovisual 'facilities'** industry – the companies which provide specialist services to the media industry. Stephen Weil of TI partners introduced speakers from **Ascent Media, BT Broadcast Services, Cambridge Imaging Systems, Centrimage, Clipstream, Sound Arts Group / Musica Numeris**



All these companies either already work with archives, or would like to do so. There is definitely a pact to be made: these companies have expensive equipment and staff, so they are looking at ways to keep their facilities fully occupied. Archives can enter into long-term contracts, allowing these companies to work on archive material in between other work – at rates which can attract archive business.

On the following day, delegates visited the premises of Ascent Media, BT Broadcast and Machine Room in central London, as well as visiting BBC and British Film Institute preservation areas.

The full User Requirements report is here:

http://www.prestospace.org/project/delivrables/D2-1_User_Requirements_Final_Report.pdf