



# PrestoPRIME

FP7 3<sup>rd</sup> Call

Integrated Project – 42 months

Starting date : 1/1/2009- ending 30/11/2012

Partners : INA, BBC, RAI, B&G, ORF, JRS, ExLibris,  
Eurix, Doremi, IT Innov, Vrije Universiteit Amsterdam

Universität Innsbruck, University of Liverpool

European Digital Library Foundation



# PrestoPRIME Summary

- R&D for the long-term preservation of digital audiovisual objects, programmes and collections. Increasing access by integrating the media archives with European on-line digital portals in a digital preservation framework.
  - **O1** To research and develop means of ensuring the permanence of digital audiovisual content in archives, libraries, museums and other collections.
  - **O2** To research and develop means of ensuring the long-term future access to audiovisual content in dynamically changing contexts.
  - **O3** To integrate, evaluate and demonstrate tools and processes for audiovisual digital permanence and access.
  - **O4** To establish a European networked Competence Centre to gather the knowledge created by PrestoPRIME and deliver advanced digital preservation advice and services in conjunction with the European Digital Library Foundation and other projects.

## Some PrestoPRIME actions

- Models and Metadata for Audiovisual long-term preservation
- Storage strategies and rule sets for preservation
- Processing and workflows for Audiovisual migration
- Content quality appraisal and risk management
- Multivalent approaches to long-term AV media preservation
- Infrastructures for AV content storage and processing
- Metadata interoperability for access
- User-generated and contextualised metadata
- Content provenance and tracking
- Audiovisual rights modelling at European level
- Integration of Archives, Libraries and user generated content
- Audiovisual Competence Centre

# Some PrestoPRIME actions

## WP2 - **Models and environments for Long-term Audiovisual Preservation**

- What does long term mean? Making digital preservation explicit and specific in audiovisual context
- How are preservation actions implemented? Sequence of operations beyond usual IT system timescales

Strong relation to implementation WPs (3 and 4)

# Some PrestoPRIME actions

## WP3 – **Data management and processing for media preservation**

Implementing the strategies, tools, models, rules from WP2

- Processing and workflows for audiovisual migration
- Content quality appraisal and risk management
- New and complementary alternatives to migration based strategies by using a multivalent approach
- Infrastructures for audiovisual content storage and processing



# Some PrestoPRIME actions

## **WP4 –Long-term audiovisual access and use in changing contexts**

- Mapping of metadata models and vocabularies
- User generated metadata strategies
- Video fingerprinting for content tracking and identification
- Rights modelling at European level



# Some PrestoPRIME actions

## WP5 –Integration and validation

- Software infrastructure, services and collaborative tools
- Preservation platform implementation
- Integration of PrestoPRIME software with a commercial system



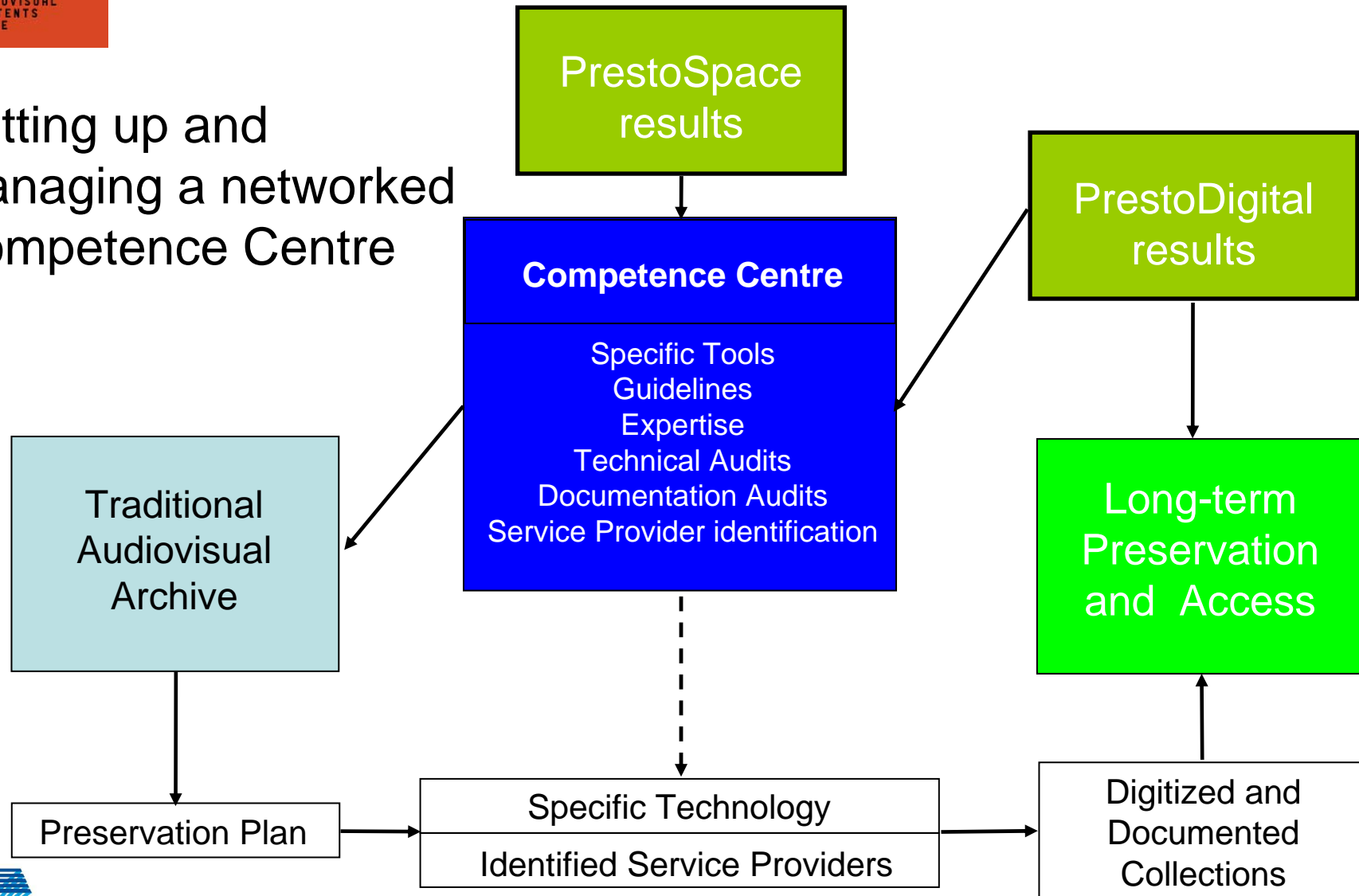
# Some PrestoPRIME actions

## WP6 – A European Audiovisual Competence Centre

- Community portal for the audiovisual domain on digital preservation and digitisation
- Information portal for digital preservation knowledge, best practices, tools and services
- Dedicated services for content holders
- Network of associated information institutions
- Strong link with Europeana

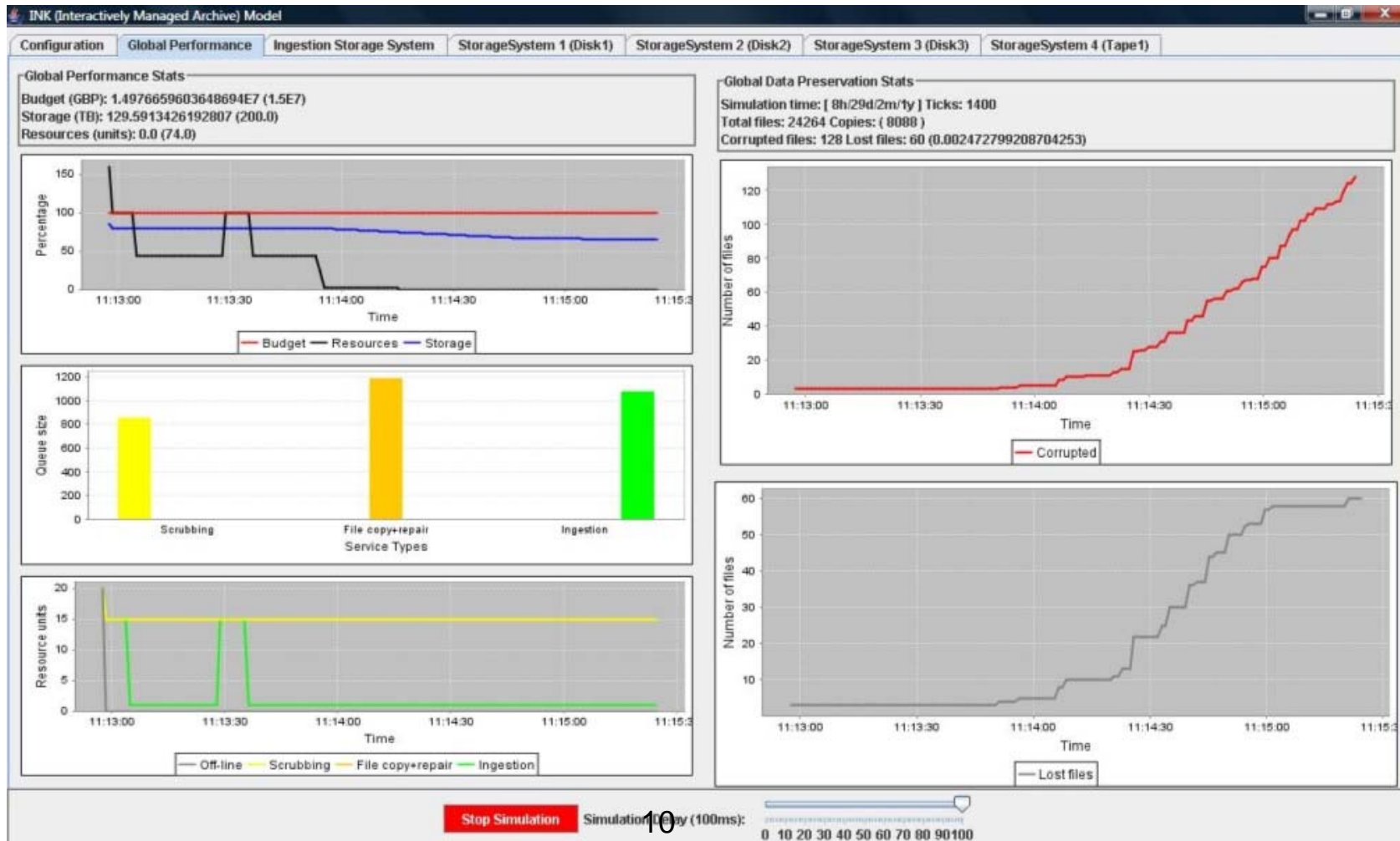


Setting up and managing a networked Competence Centre



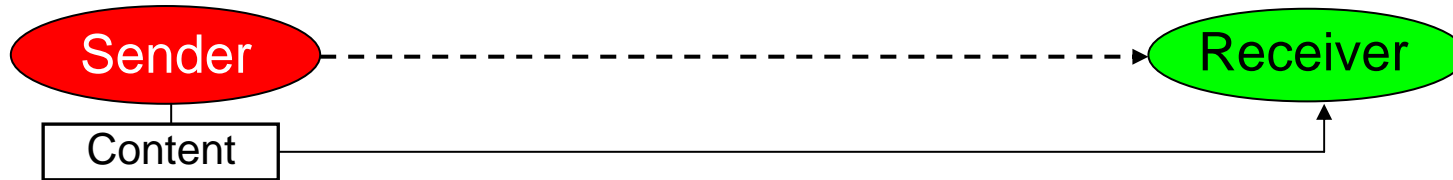
# Tools for Storage management

Long-term management: Total Cost of Ownership through 20 years. Interactive simulation interactive: «what happens if? », « what are my informations? »

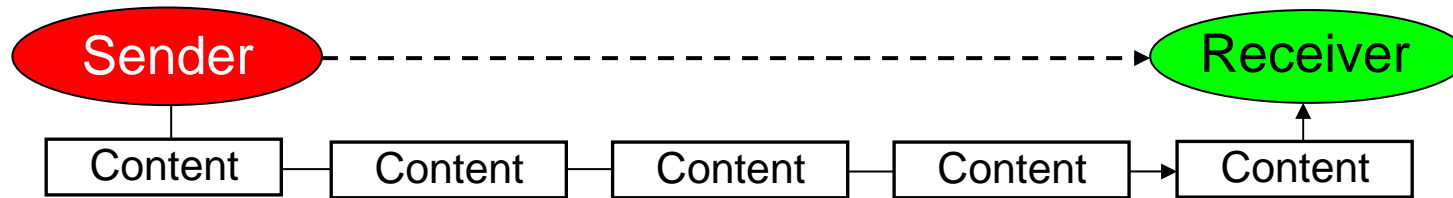


# Three ways of sending Digital contents to the Future:

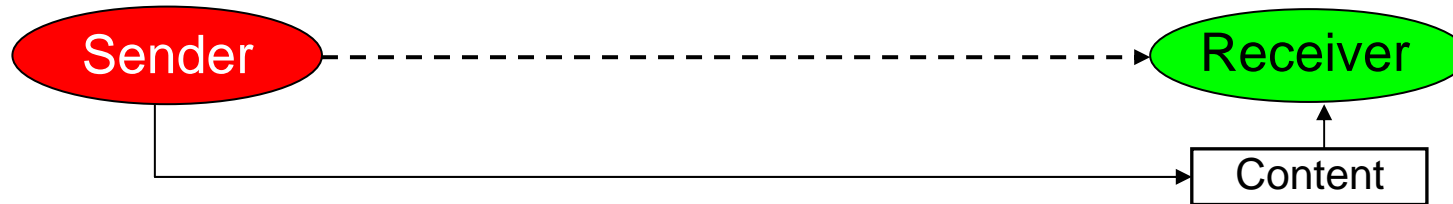
1) Change now, recover later



2) Change continuously



3) Don't change, it will be solved later



Present ----- Different Technologies -----> Future



# Simulation of the incidence of Service Level Agreements on long-term storage



The screenshot shows a web browser displaying a file details page for 'BIRD\_LARGE.JPG'. The file information includes:

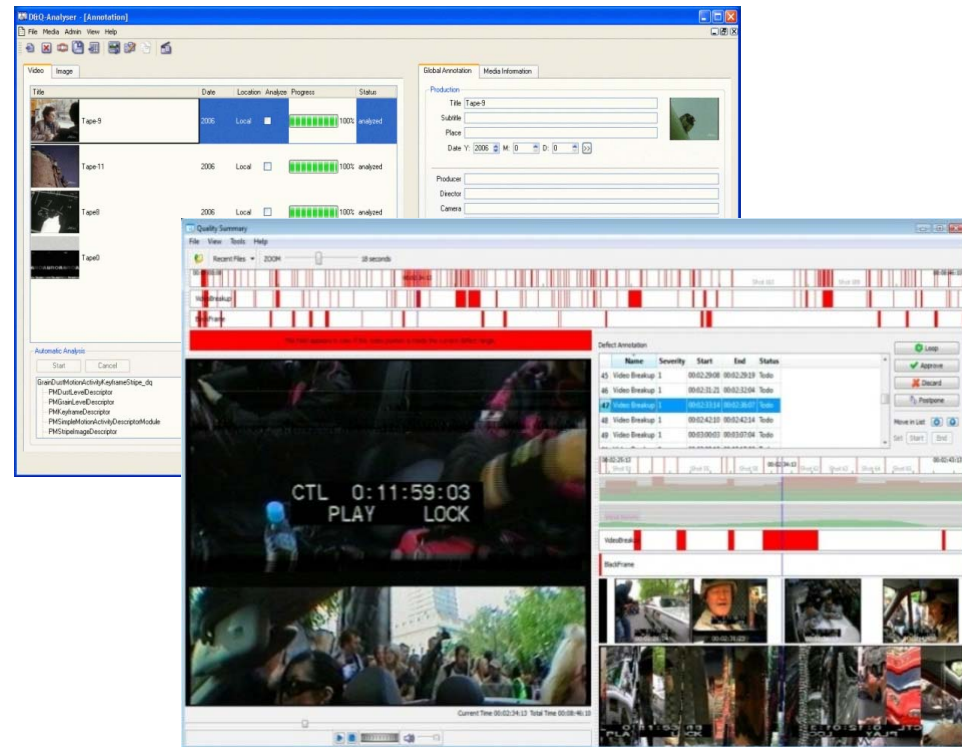
- Name:** bird\_large.jpg
- Created:** Nov. 24, 2010, 5:45 p.m.
- Checksum:** 2e4cddfcbeb6fcbd23b07489fd7930ef
- Updated:** Nov. 24, 2010, 5:45 p.m.
- Mime:** image/jpeg; charset=binary
- Size:** 3.3 MB

Below the file details is a preview of the image, which is a toucan. The 'METHODS' section lists various actions like get, put, delete, etc.

Overlaid on the bottom right is a 'Developer Workbench' window showing a table of SLA metrics:

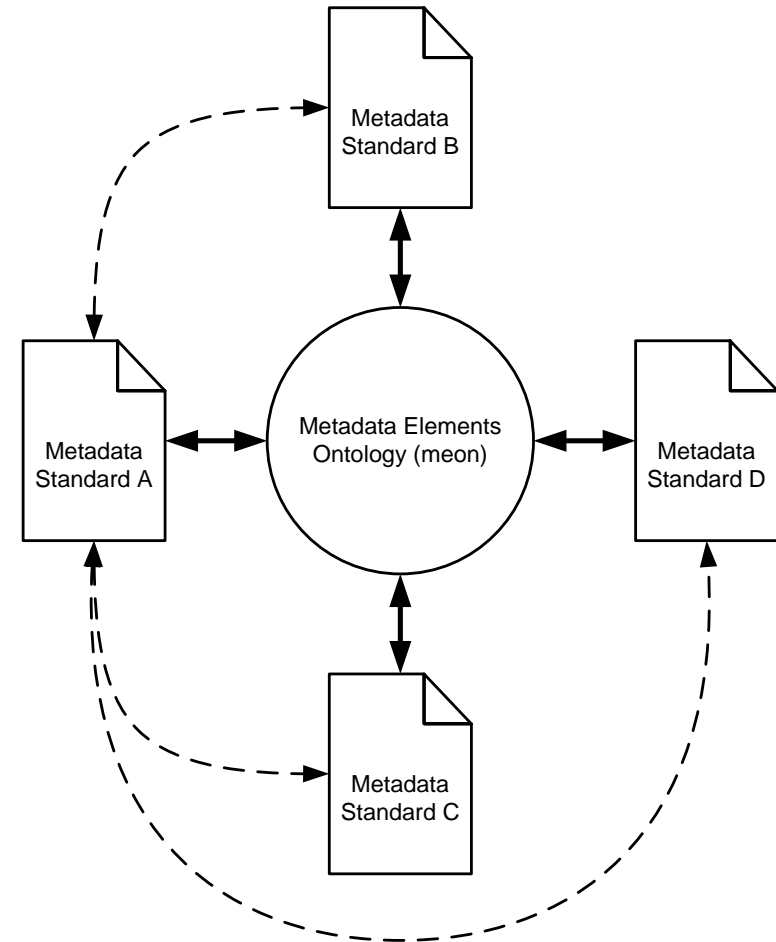
	Reports	Sum	Min	Mean	Max	Description	
prime/access	4	15.243 MB	3.333 MB	3.811 MB	4.288 MB	Amount of data accessed	
prime/archived	2 (2.0 B)	0				Amount of data archived for how l	
prime/corruption	0 (0.0 corruptions/s)	2	2.0 corruptions	1.0 corruptions	1.0 corruptions	Number of corruptions	
prime/dataloss	0 (0 B/s)	1	3.333 MB	3.333 MB	3.333 MB	Amount of data lost	
prime/disc	0 (0 B/s)	2	7.622 MB	3.333 MB	3.811 MB	Amount of data stored on disc	
prime/file	2 (2.0 /s)	0	0				
prime/ingest	-	2	7.622 MB	3.333 MB	3.811 MB	Amount of data ingested	
prime/responsetime	0 (0.0 responses)	5	27.951 s	0.042 s	5.59 s	Time from request to start readin	
prime/service	1 (1 services)	0	0			Services over time	
/provided	1 (1 slas)	0	0			Number of SLAs	
ms/customer/access/state/ok	-	3	199.717	12.974	66.572	139.646	
ms/customer/access/state/violated	1 (1.0 /s)	2	11717.164	65.914	5858.582	11651.25	
ms/provider/responseTimeGuarantee/state/ok	-	1	113.279	113.279	113.279	113.279	
ms/provider/responseTimeGuarantee/state/undefined	-	2	152.083	12.825	76.042	139.258	
ms/provider/responseTimeGuarantee/state/violated	1 (1.0 /s)	1	11651.348	11651.348	11651.348	11651.348	

- Quality – Analyser Module
  - File based import & batch analysis
  - Detectors
    - Video Breakup's
    - Noise & Grain
    - Uniform Colour's
    - Test Pattern's
  - Standardised temporally detailed quality description
  
- Quality – Summary Module
  - Temporal quality summarisation
  - Efficient Human Validation



# Metadata mapping

- Avoid hand-crafted 1:1 mappings between metadata formats
- Use a high-level intermediate concept representation
- Infer relations between concepts in source and target formats
- Express mapping templates on data type level
- Derive the code for mapping instructions between a pair of formats



**Presto PRIME** Semantic Converter

Home Mapping Visualization Semantic Converter Semantic Validation

Input format:  Dublin Core  MPEG-7  W3C MA  P/META

Output format:  Dublin Core  MPEG-7  W3C MA  P/META

Convert from **MPEG-7** to **Dublin Core**: itrai-0033-nk0610.mp7

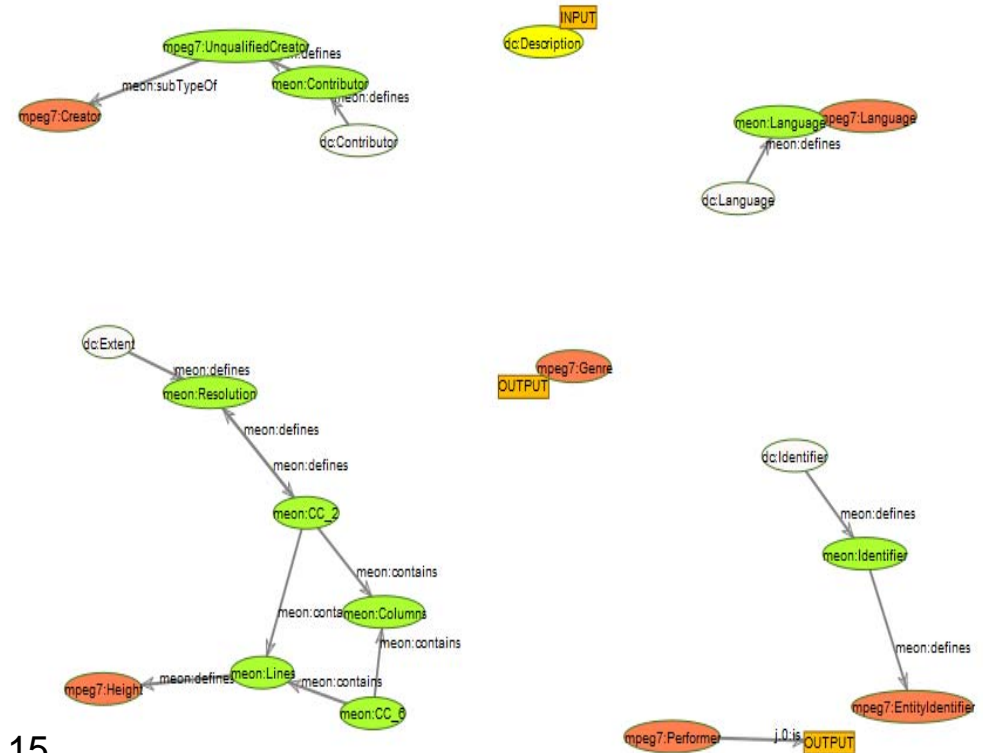
itrai-0033-nk0610.mp7

Steps:  
Input files was: input file (mpeg7)

**1. Create firing templates based on ontology:**

```
<xsl:template match="mpeg7:Creator[mpeg7:Role[@href='urn:mpeg:mpeg7:cs:RoleCS:200/mpeg7:Agent[@xsi:type='PersonType']"]">
<xsl:call-template name="Mpeg7_PersonType__TaggedText">
<xsl:with-param name="tag">dc:creator</xsl:with-param>
</xsl:call-template>
</xsl:template>

<xsl:template match="//mpeg7:Creator[mpeg7:Role[@href='urn:mpeg:mpeg7:cs:RoleCS:200/mpeg7:Agent[@xsi:type='OrganizationType']"]">
<xsl:call-template name="Mpeg7_OrganizationType__TaggedText">
<xsl:with-param name="tag">dc:creator</xsl:with-param>
</xsl:template>
```



## *semantic* **VAMP** A Semantic Validation Service for MPEG-7 Profile Descriptions

- [validator](#)
- [references](#)
- [contact](#)
- [disclaimer](#)
- [FAQ](#)

1. Type the MPEG-7 Document URL:

or [use the following demo example](#)

2. Select MPEG-7 version:

MPEG-7 v1 (2001)     MPEG-7 v2 (2004)

3. Select profile:

DAVP     TRECVID     AVDP

4. Select semantic validation type:

Profile validation (default)     Temporal validation





# Video fragment annotations through crowdsourcing :



## Waisda? video labeling game

The screenshot shows the Waisda? website interface. At the top, there's a navigation bar with links: "home | aanmelden | over Waisda? | hoe werkt het? | vertel het door!". Below this is the main header with the "Waisda?" logo and instructions: "Kies een video." and "Vul woorden in die omschrijven wat je ziet en hoort." A target icon and the text "Je scoort punten als jij en iemand anders tegelijkertijd hetzelfde woord invullen." are also present. A banner for "Innovation Awards 2009" with the Accenture logo is visible. The main content area features four video thumbnails with titles and player counts: "Boer zoekt vrouw (nog 7 min) 2 spelers", "Villa bvd (wk 1996) af. 27 (nog 33 min)", "De reünie (nog 92 min) 1 speler", and "Villa bvd (wk 1998) af. 4 (nog 21 min)". Below the thumbnails are "Speel mee!" buttons. A vertical "feedback" button is on the left. The bottom section contains four leaderboards: "Waisda? helden", "Eendagsvliegen", "Hoogste treffers", and "Actiefste kloppers", each with a list of names and the user's current position. The footer includes "Een project van WERELD IN BEELD" and "Mogelijk gemaakt door: WERELDEN".

## Engagement with the public

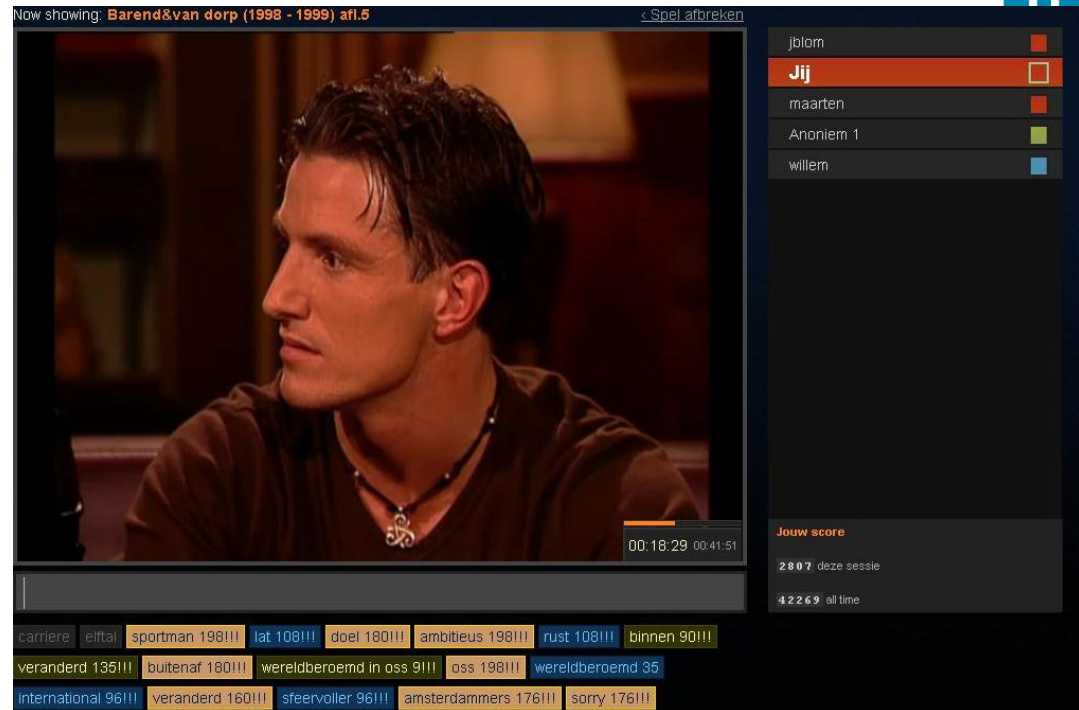
- 44,362 pageviews
- 555 registered players  
and thousands of anonymous players

## Time-based annotations

- 600 videos tagged
- 340,000 tags added
- 42,000 unique tags

## Vocabulary gap

Tags provide a user perspective on the collection



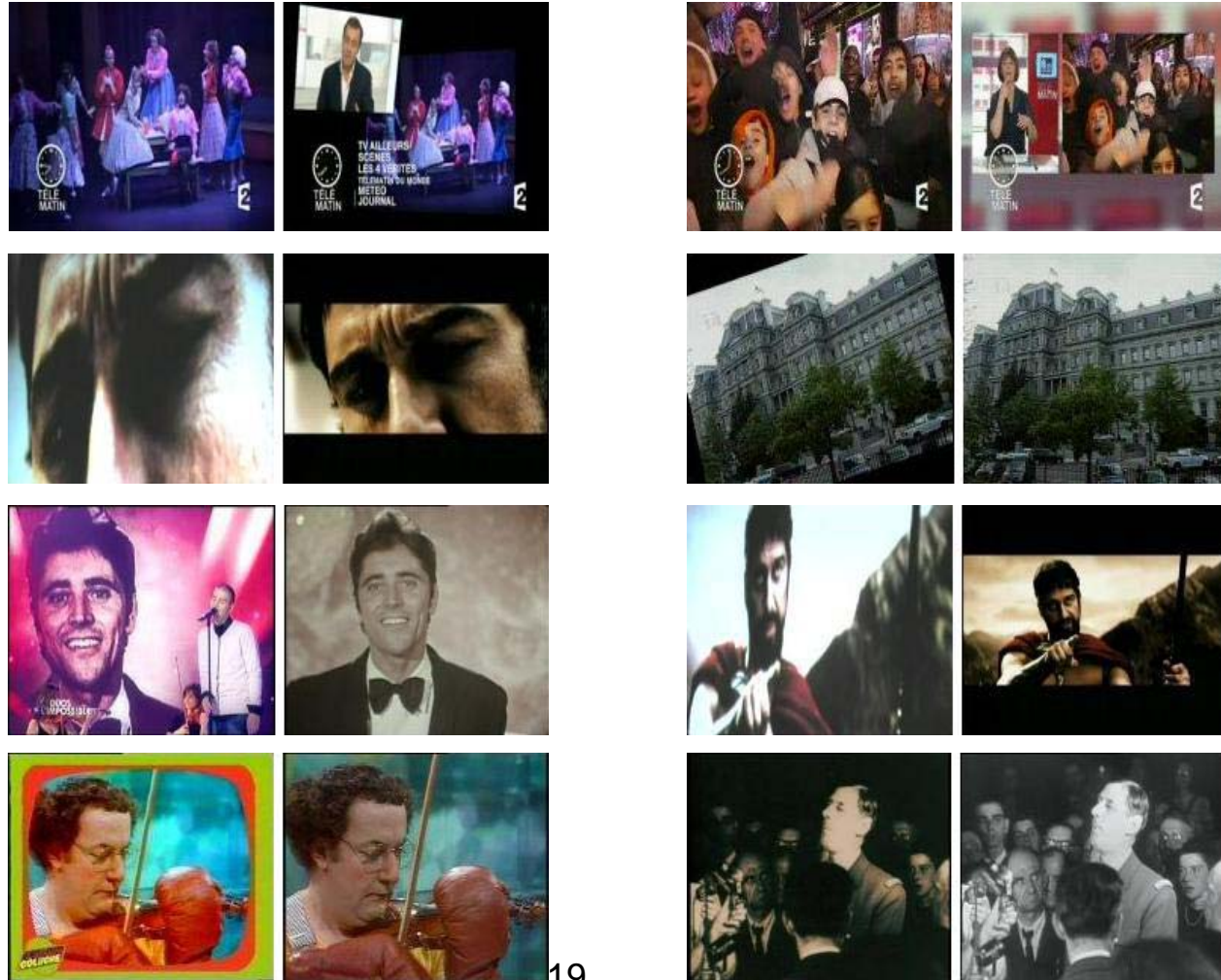
## Community consensus as a measure of 'usefulness'

Players score points when their tag exactly matches the tag entered by another player within 10 seconds



# Content Tracking

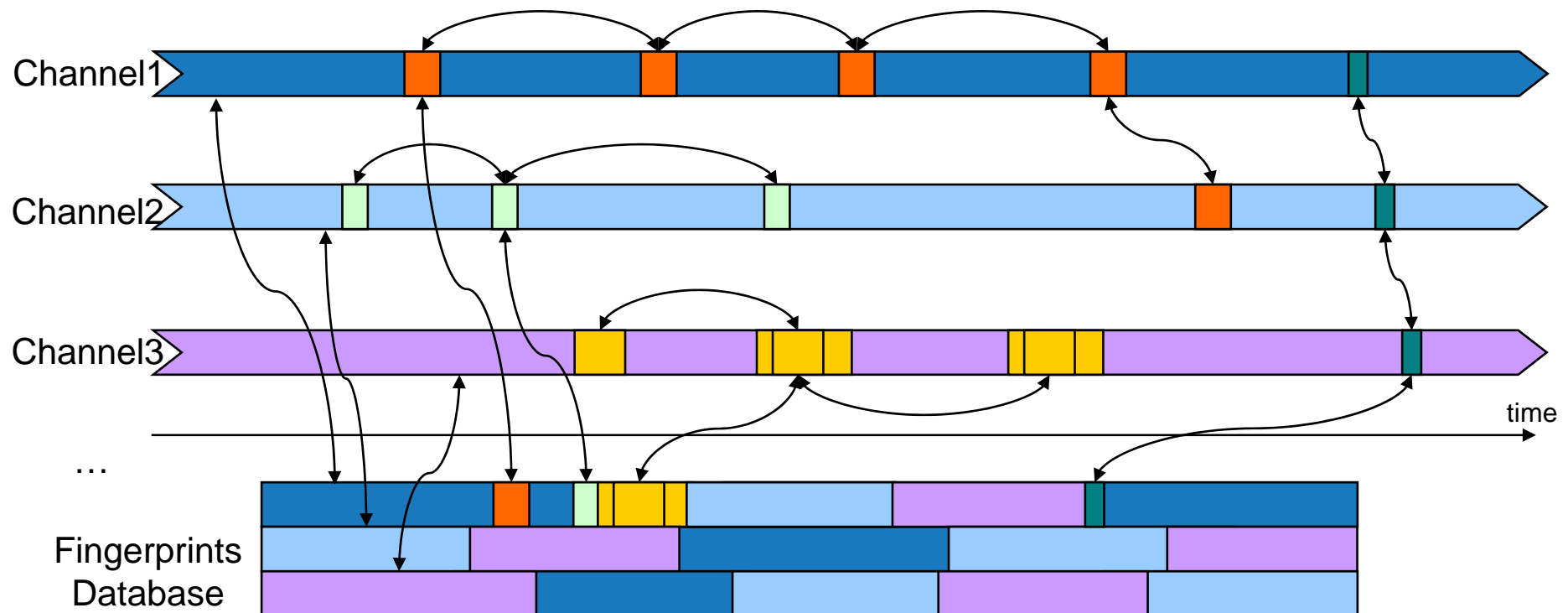
- Fingerprints allow detecting repeated contents, even when changed



# Content tracking through redundancy

Using large-scale audio+video redundancy to help indexing

- Building up a fingerprints database without (too many) repeats



## Early results

1		(Studio News Reader)
2		(News items)
3		(credits)
4		(Teasers)
5		(Cartoons)
6		(Commercials)
7		(TV Games)
8		(TV Movies)

9		(Documentaries)
10		(Short News stories)
11		(Documentaries ?)
12		(TV series)
13		(TV series ?)
14		(Songs)



# Automatic classification of groups of repeats:



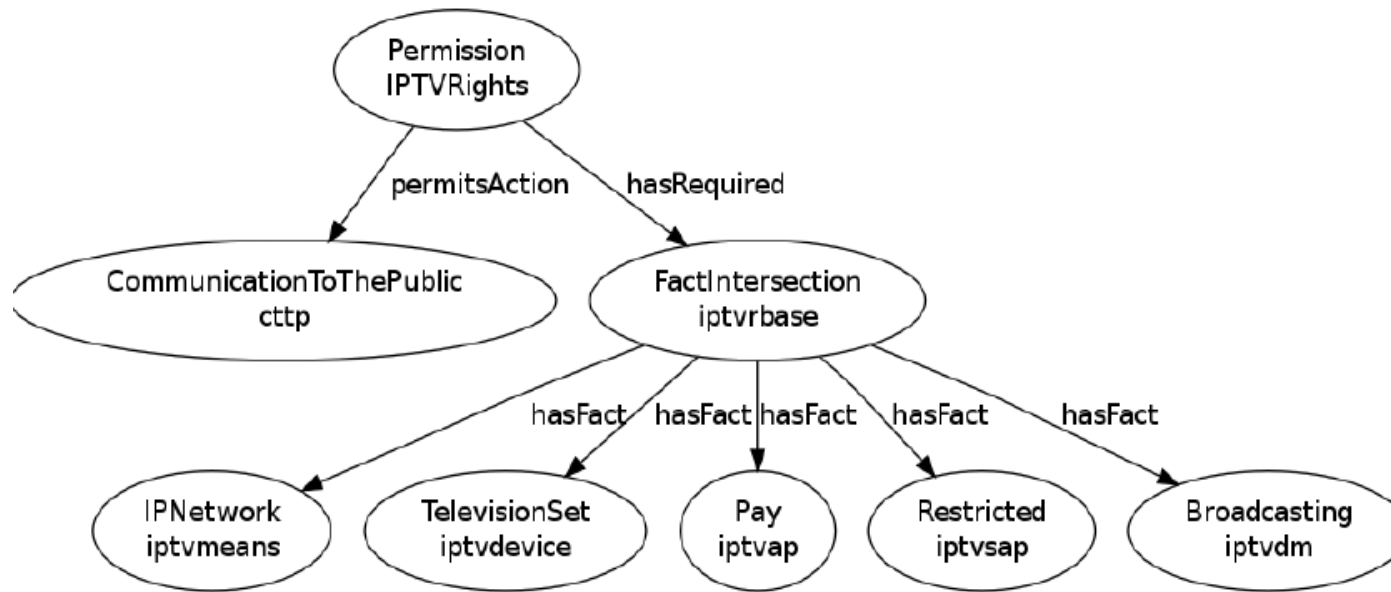
- Exemple : Excerpts repeted twice on two different channels

Change date: 2010-12-01

Hide	Segment ID	Tc in	Date time in	Channel ID	thumbnail	Segment duration	Rgroup name	Rgroup duration	Rgroup tech	Rcount	Count	Interval min	Interval max	Interval med	Interval spread	Main Channel	Channel Spread
<input type="button" value="Clear"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	CPL FR2 FR3	<input type="text"/>	>= 10	<input type="text"/>	=	1	=	<= 2	=	=	=	0	*	>= 2
<a href="#">Clear</a> Sorted By: Rgroup name descending, Segment duration ascending, Chanel Spread ascending, Segment ID ascending <a href="#">Clear</a> Current Query: 'PMEtable0'.segment_duration' >= '10' AND 'PMEtable0'.count' <= '2' AND 'PMEtable0'.channelspread' >= '2'																	
<a href="#">View</a>	ITL.2010_12_01.2300.2400_00:28:53:22	00:28:53:22	2010-12-01 23:28:53	ITL		13.04	gTF1.2010_12_01.2200.2300_00:20:56:00	13.04	1	0	2	0	0	0	0		2
<a href="#">View</a>	TF1.2010_12_01.2200.2300_00:20:56:00	00:20:56:00	2010-12-01 22:20:56	TF1		13.04	gTF1.2010_12_01.2200.2300_00:20:56:00	13.04	1	0	2	0	0	0	0		2
<a href="#">View</a>	LCI.2010_12_01.2300.2400_00:08:03:09	00:08:03:09	2010-12-01 23:08:03	LCI		12.96	gTF1.2010_12_01.2000.2100_00:14:12:06	12.96	1	0	2	0	0	0	0		2
<a href="#">View</a>	TF1.2010_12_01.2000.2100_00:14:12:06	00:14:12:06	2010-12-01 20:14:12	TF1		12.96	gTF1.2010_12_01.2000.2100_00:14:12:06	12.96	1	0	2	0	0	0	0		2
<a href="#">View</a>	LCI.2010_12_01.2200.2300_00:37:23:08	00:37:23:08	2010-12-01 22:37:23	LCI		11.68	gTF1.2010_12_01.2000.2100_00:13:44:16	11.68	1	0	2	0	0	0	0		2
<a href="#">View</a>	TF1.2010_12_01.2000.2100_00:13:44:16	00:13:44:16	2010-12-01 20:13:44	TF1		11.68	gTF1.2010_12_01.2000.2100_00:13:44:16	11.68	1	0	2	0	0	0	0		2
<a href="#">View</a>	LCI.2010_12_01.2200.2300_00:01:52:01	00:01:52:01	2010-12-01 22:01:52	LCI		43.72	gTF1.2010_12_01.2000.2100_00:00:02:18	43.72	1	0	2	0	0	0	0		2
<a href="#">View</a>	TF1.2010_12_01.2000.2100_00:00:02:18	00:00:02:18	2010-12-01 20:00:02	TF1		43.72	gTF1.2010_12_01.2000.2100_00:00:02:18	43.72	1	0	2	0	0	0	0		2
<a href="#">View</a>	LCI.2010_12_01.2100.2200_00:31:01:13	00:31:01:13	2010-12-01 21:31:01	LCI		45.36	gTF1.2010_12_01.2000.2100_00:00:01:02	45.36	1	0	2	0	0	0	0		2

22

Find:      Match case  Phrase not found



*from Glossary of Rights*

**IPTV:** The rights to make any linear transmission and delivery of a television signal using IP-based protocol via a dedicated private (or virtual private) network infrastructure and where access is restricted to only viewers that have subscribed to the network service provider for the right to receive such programming through such network for viewing on a television set



# Objectives for the PrestoCentre

Reduce the gap between Research, Industry, Service Providers and... Audiovisual Archives (of any kind)

- Identify and organise knowledge and information so to permit digital preservation to advance and accelerate
- Develop and promote the collaboration among the actors of the Audiovisual domain
- Promote access to digital Audiovisual contents
- Develop an information centre for Audiovisual content owners with state of the art and innovative processes
- Develop specific Services in order to simplify and give impulse to digital preservation and access





# PrestoCentre.eu

Identify and organise knowledge and information so to permit digital preservation to advance and accelerate

Available documents on the PrestoCentre site: [www.prestocentre.eu](http://www.prestocentre.eu) (reports, online information, technical wikis, etc.) and Services on demand

Best practice reports and guides

Annual reports on digital preservation in Europe

Technical reports

- Information and guidelines to promote access to digitized contents (Europeana)

- Guides on Business models and Public Private Partnerships

- Training tools

- Technical assistance

- Technical developments (R&D) for Archives and Libraries

- Finance search assistance

- Preservation plans for small and medium Audiovisual collections



# PrestoCentre.eu



## Develop and promote the collaboration among the actors of the Audiovisual domain

- Coordination with international organisations (FIAT, IASA, etc.)
- Networking Service Providers, experts and audiovisual collections
- Development of a community of user (conferences, summer courses)
- Professional training activities
- Expertise services

## Promote access to digital Audiovisual contents

- Digital Portals
- Strategies for right management
- Metadata exchange



PrestoCentre.eu



## Domain Registries

Several registries permit to identify and network different actors of the domain at a European and International scale

Audiovisual archives Registry (large, medium and small collections)

Registry of Service Providers specialized in the Audiovisual domain (all activities, from analogue to digital transfer, to documentation, storage and exploitation)

Registry of experts, managed by the PrestoCenter, identifying experts for technical, documentation and legal expertise

Registry of industrials of the domain



## PrestoCentre.eu is:

- A large library of good practice codes, reports on monitoring, technical watch reports, business-models, training material, white books, technical analysis and synthesis, evaluation papers. Etc.
- Interactive tools, preservation simulators, cost calculators, risk assessment tools, storage calculating tool, decision making diagrams for digital formats, etc.
- Registries for Service Providers, technological providers, industrials, consultants, experts, etc.
- Dedicated tools issued from PrestoSpace and PrestoPRIME
- A policy orienting instance in relation with the European Commission



# PrestoCentre.eu is not:



- Money for digitisation (you will still have to fight for it)
- A broker for digitisation services: the PrestoCentre fosters the relations and monitors them without interfering
- A substitute to efficient international federations which are already making a wonderful job



# However, PrestoCentre.eu is



- A repertoire of financing bodies, call for tenders, guidance for finance search, assistance for tender calls, assistance for PPP, licensing models, SLAs and
- A repertoire of running European projects on Digitization and Digital Preservation
- Regular News: RSS calendar, newsletters, Forum, social networks
- International meetings, summer courses, training sessions, test sessions; an open space for all

**PrestoCentre has the ambition to be more than the result of a project, and to become a permanent actor of the domain**



# PrestoCentre.eu Founders



- The founding members of the PrestoCentre are five large European Audiovisual archives highly committed to digitization and access: BBC, B&G, Ina, ORF and RAI.
- A collaboration tool to improve exchange and knowledge
- A governance tool: each Archive is represented in a board to follow the activities of the Centre
- Establishing a Director and a team for the PrestoCentre
- Financing through the PrestoPRIME project until 2012; further financing through other projects
- A starting point for a wide European collaboration among broadcast archives
- A responsibility given to the Centre by the European Commission

- PrestoCentre Launch

-International Conference held on March 14 and 15 at B&G Hilversum







PRESTO CENTRE

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.....

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**New Library Additions**

Guidelines for AV content...

Screening the Future conference program is at [bit.ly/stf11final](http://bit.ly/stf11final)  
4 days 15 hours ago

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**Institute of Network Cultures presents Video Vortex Reader II: moving images beyond YouTube**  
MARCH 12

The Institute of Network Cultures published the latest INC reader #6, Video Vortex Reader II: moving images beyond YouTube during the...

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**MAR 14 Screening the Future 2011**  
Screening the Future 2011 will connect small and large archives, service providers, vendors, funders, policymakers,...

[read more](#)

PrestoCentre Blog More blog

**The challenge of finding video on Google**  
MARCH 10

Claire Harvey - The past few years have seen the AV archive industry mature and progress at a significant pace. Since the advent of the Presto projects at the beginning of the century, the industry has moved from being manual and analogue...

- Access
- Archives
- Audio
- Broadcasting
- Costs
- Digital
- Digital film
- Digitisation
- File formats
- Metadata
- Preservation
- Preservation metadata
- Preservation Plans
- Research
- Standards
- Strategy
- Sustainability
- Video

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