



ASSETS 1st year review

Luxembourg, 10th of June 2011

Silvia Boi

Engineering Ingegneria Informatica





ATTENDEES

• Speakers:

- Silvia Boi, Luigi Briguglio, Maria Luisa Porro (ENG)
- Sergiu Gordea (AIT)
- Fabrizio Sebastiani, Carlo Meghini (CNR)
- Ghislain Sullaime (CVCE)
- Anne Marie Van Gerwen (Europeana)
- Morena Rizzo (Ciaotech)

• More...

Giuseppe Amato, Nicola Aloia, Claudio Lucchese (CNR),
 Steffen Lalande (INA), Victor Valdes, (UAM), Òscar Paytuví (BMAT), Efstratios Tzoannos (ATC), Cristina Martinez (Tecnalia), Michalis Lazaridis (CERTH)





Agenda

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Description	Responsible	(30') 20'
Welcome and introduction. Context, purpose and	Federico Milani, European	09:15 - 09:30
objectives of the review	Commission	
Agenda approval – introduction	Silvia Boi, ENG	09:30 - 09:50
Project overview		
Results of the first year		
■ Deliverable, Milestones, KPIs, Demos list		
Introduction to Stream 2		
■ Architecture		09:50 - 11:30
■ Services Overview	Sergiu Gordea, AIT	
■ Development Framework		
Indexing and retrieval		
■ Image Similarity Search	Sergiu Gordea, AIT	
o demo	Giuseppe Amato, CNR	
■ Text based Search	Sergiu Gordea, AIT	
o demo	Claudio Lucchese, CNR	
■ Video Summarisations and Retrieval	Sergiu Gordea, AIT	
o demo	Victor Valdez (∨ Chema),	
	UAM	
■ 3D Retrieval	Sergiu Gordea, AIT	
o demo	Michalis Lazaridis, CERTH	
■ Audio similarity search	Sergiu Gordea, AIT	
o demo	Oscar Paytuvi, BMAT	
Semantic cross linking browsing	Sergiu Gordea, AIT	
o demo	Michalis Lazaridis, CERTH	
Coffee break		11:30 - 11:45





Ingestion services	Fabrizio Sebastiani, CNR	11:45-12:15
Digital preservation services	Luigi Briguglio, ENG	
Introduction of Stream 3		
■ Introduction	Carlo Meghini CNR	12:15-13:10
Content Provision	Ghislain Sillaume CVCE	
User perspective	Anne Marie	
	Europeana	
Community services	Carlo Meghini, CNR	
o demo		
LUNCH		13:10- 14:00
Introduction of Stream 1		
■ Introduction	Silvia Boi, ENG	14:00 - 14:05
Dissemination and Exploitation	Morena Rizzo, CTECH	14:05- 14:30
Financial and Administrative status	Maria Luisa Porro, ENG	14:30'-14:50
Conclusion		14:50 - 15:00
 Meeting to discuss initial impressions and preliminary conclusions (without project representatives) 	Federico Milani/Reviewers	15:00- 15:20
 Feedback from PO and reviewers to ASSETS representatives 	Federico Milani/Reviewers	15:20 - 15:35
■ Closing remarks	Federico Milani	15:35 . 15:40



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Project Overview





Main Objectives

- Services to improve usability of Europeana
 - Metadata and content similarity search for multimedia objects
 - Ranking algorithm for improved search
 - Semantic cross-links for rapid navigation of multimedia objects
 - GUI especially designed for interacting with multimedia objects
 - Long-term Access to digital information services
 - Ingestion of metadata requiring cleaning, knowledge extraction, classification and mapping to a common structure





ASSETS Services

Enrichment (Ingestion)

Cleaning
Knowledge extraction
Classification

Browsing & characterisation

Semantic browsing Improved Interfaces Notification

Indexing and retrieval

Search and retrieval
Image, Text, Audio, Video and 3D

Digital Preservation

Risk management
Normalisation
Notification

Community services

Content creation (UGC)

Taxonomy based notification

Personalisation





Impact of the ASSETS services

- Search and retrieval: ASSETS will enhance in quality and widen in scope the search and retrieval service of Europeana. This will solve a large usability problem for Europeana, giving the user sets of results that have meaningful ranking and assurance of the quality of the service.
- Semantic Browsing will allow users to explore information in an interactive way leading to the discovery not only of the Europeana content but also of the interests, ideas and vocabularies of other communities.
- Interface improvements: deploying interfaces specially designed for browsing multimedia content.





Other impacts

- Impact on Europeana: The components developed by ASSETS are planned to be <u>fully</u> <u>integrated into Europeana</u>
- Long-term viability will be guaranteed since the ASSETS services will be <u>loosely coupled</u> with the platform, which means that they can be used together or in isolation by the adopters.





Project Structure

- Stream 1: Management and Networking:
 - Management and coordination
 - Networking dissemination and exploitation



- Stream 2: Foundation:
 - Technical Coordination
 - Service implementation
 - Service integration
 - ASSETS platform



- Stream 3: Content and Users
 - Content provision and adaptation
 - Service user evaluation and testing
 - Community services



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1st year results



Indicators

Ind. No.	Objective/expected result	Indicator name	Expected Progress Year 1	Achieved results Year 1
1	make Europeana content accessible through metadata-based searches	Deployment of Metadata search service	10% of content will be accessible	YES 100%
2	make multimedia content accessible through content-based similarity searches	Deployment of Content-based similarity search service	30% of the ASSETS multimedia content	YES ASSETS content provided Total 324.038 (83%) Baseline 389.918
3	create semantic links between Europeana surrogates	Deployment of Semantic Browsing Component	5.000	YES
4	provide digital preservation planning services to Europeana Content Providers	Deployment of Digital Preservation services	analyse the content of Europeana (metadata)and ASSETS (content)	YES a service has been created to analyse Europeana metadata
5	Enrich new and existing content using the ingestion services	Deployment of Ingestion Services	10% of the Europeana metaddata 50% of the ASSETS content	YES
6	Add ASSETS new multimedia (audio, video, image) content to Europeana	Content aggregation	30%	YES 162.273 of ASSETS metadata in ESE aggregate into Europeana portal Baseline: 542.648 Percentage 30%
7	Aggregate critical mass	ASSETS Community	< 50 members	YES LinkedIn 91 members 30 internal to ASSETS and 61 external







1st Year Deliverables

Del.	Deliverable name	WP no.	Lead	Natur	Disse	deliver	Delivered
No.			participa nt			y date	Y es /N o
D1.0.1	Quality Plan	1.0	ENG	R	CO	3	Yes
D1.0.2	Management Website	1.0	ENG	P	СО	3	Yes
D1.1.1	ASSETS	1.1	CTECH	P	PU	3	Yes
	Dissemination						
	Website and						
	dissemination						
	material						
D1.1.2	Dissemination Plan	1.1	CTECH	R	PU	12	Yes
D2.0.4	The ASSETS API	2.0	ENG	R	PU	11	Yes
D2.1.1	Specification of	2.1	CNR	0	PU	12	Yes
	Ingestion services						
D2.2.1	Specification of post	2.2	CNR	R	PU	12	Yes
	querying processing						
	functionality						
D2.4.5	Service deployment	2.4	CNR	R	PU	12	Yes
	and experimentation						
	in EuropeanaLabs						
D3.2.2	Content creation	3.2	CNR	P	PU	12	Yes
	services						





1st Year Milestones

Milestone no.	Milestone name	Due achievement date	Achieved Yes/No
		from Annex I	
MS1	Definition of the quality procedures	M3	Y
MS2	Management Web site running	M6	Y
MS3	First Progress Monitoring report available	M12	Y
MS5	Financial check-point year 1	M 12	Y
M 7	User Community website site running	M3	Y
M8	First dissemination material	M4	Y
M9	Rolling Dissemination Plan	M13	Y
MS12	System architecture completed	M4	Υ
MS13	Europeana Cluster Technical Meeting, Pisa	M3	Υ
MS14	Europeana Cluster Technical Meeting, the Hauge	M6	Υ
MS15	First revision of Service API published	M12	Υ
MS16	Europeana Cluster Technical Meeting, Vienna	M12	Υ





1st Year Milestones

Milestone no.	Milestone name	Due achievement date from Annex I	Achieved Yes/No
MS18	Selection of reference data- set for metadata cleaning	M6	N
MS19	Selection of reference data- set for knowledge extraction from metadata records	M8	Υ
MS20	Selection of reference data- set for metadata classification	M10	Υ
MS22	Multimedia content feature extraction software	M8	Υ
MS23	Index structure management software	M12	Υ
MS27	Digital Preservation Service Design	M5	Υ
MS28	Digital Preservation Service Prototypes	M12	Υ
MS39	Provision of a first set of content	M12	Υ
MS43	Content creation by re-use	M10	Υ
MS44	Taxonomy based notification	M12	Υ





Tangible results

- Prototypes (DEMOs)
- Content aggregation (to ASSETS and to Europeana)
- Dissemination Material





Prototypes

- 7 prototypes
 - Image Similarity Search
 - Text-based Search
 - Video Summarisation and Retrieval
 - 3D Similarity Search
 - Audio similarity search
 - Semantic cross-linking browsing
 - Content creation



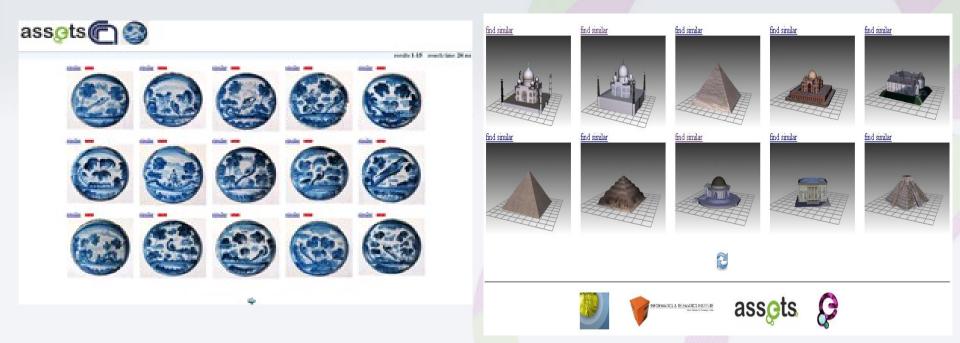




ThoughtLab demonstrations

Image Similarity Search

3D Similarity Search







Content aggregation

ASSETS Content Provision

PROVIDERS				М	edia files (cont	ent-based ind	exing)					Metadata	
Content providers	Short Name	3D Models	Audio		lmo	ige	Vid	leo	Total	Total	Training	E	SE
			1st Year	in the End	1st Year	in the end	1st Year	in the end	1st year	finally	First Year	First Year	In the end
Accademia Nazionale di Santa Ce	<u>c</u> ANSC		2.997	3.000	0	5.000			2.997	8.000	10.000	21.051	21.051
Centre Virtuel de la Connaissance	CVCE		308	308	8.631	8.631	1.323	1.323	10.262	10.262		23.075	23.075
Deutsche Welle	DW		364	364			408	408	772	772	0	772	772
Dias Publishing Public	DIAS				240271	240.271	7.842	7.842	248.113	248.113		195.892	303.600
Fondazione Micheletti	FLM				15.790	15.790			15.790	15.790	250	15.790	41.290
Fundaciòn Albeniz	ALBENIZ		301	1.000	37.204	37.204	322	500	37.827	38.704	300	24.234	31.500
Hellenic Archive of Scientific Cult	<u>u</u> HASC				5.000	5.000			5.000	5.000		5.004	5.004
Institut National de l'Audiovisuel	INA						3.065	3.065	3.065	3.065	10.000	101.356	101.356
Liberis Publications	LIBERIS								0	0		6.104	15.000
United Nation Educational, Scient	UNESCO	50			212	212			212	212			
Europeana Foundation					60.000	60.000				60.000			
External Content								_					
Google Warehouse		300											
Carrare		100											
TOTAL		450	3.970	4.672	307.108	372.108	12.960	13.138	324.038	389.918	20.550	393.278	542.648

- Content 324.038/389.018 (83%)
- Metadata 393.278/542.648 (72%)





Content aggregation

 ASSETS Content aggregated to Europeana:

162.044 objects







Dissemination material

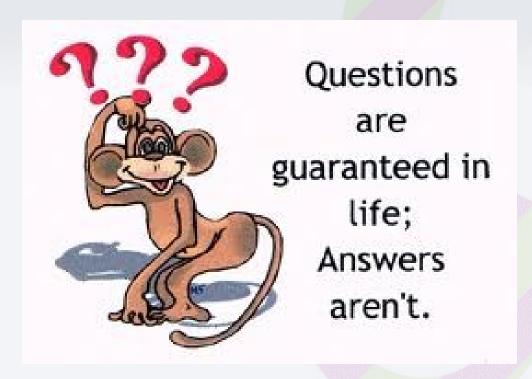
- ASSETS Public Website
- 1 Leaflet
- 1 Brochure
- 1 Poster
- 35 Press releases (5 different languages)
- 11 Papers
- 2 Video interviews (2 languages: English and Greek)







Questions?





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Stream 2 Foundation

Sergiu.Gordea @ AIT.AC.AT

Luxembourg, June 10th 2011





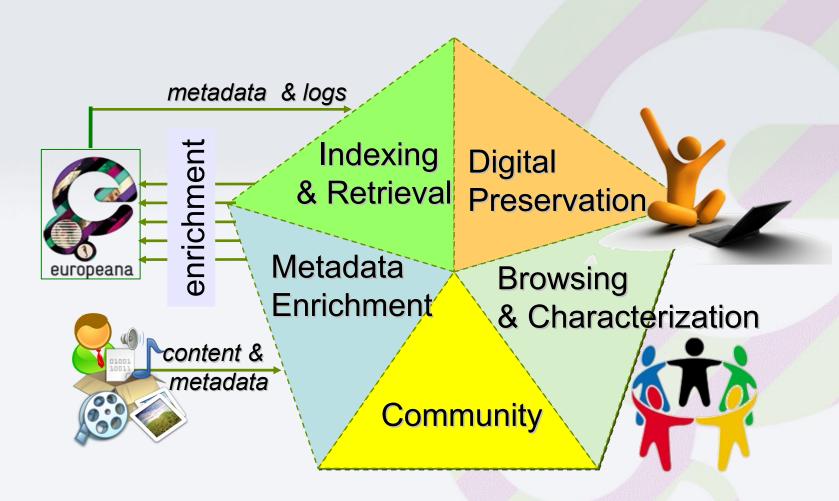
Outline

- Assets Services Overview
- System Architecture
- First Year Project Results
- & Demonstrations
- Question answering





Service Overview







Metadata Enrichment Services



ingestion workflow

metadata cleaning

knowledge extraction

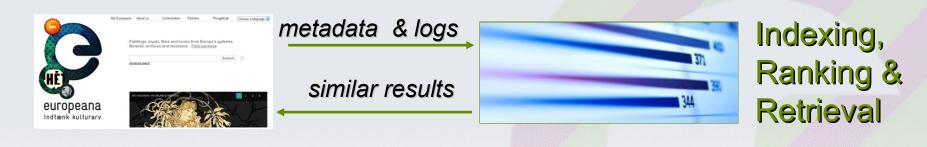
metadata classification

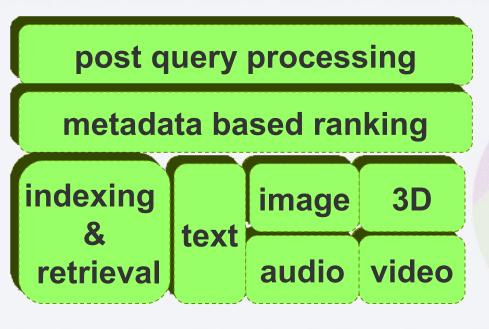
- Reduce inhomogeneities and errors in metadata
- Enrich description by extracting information from metadata
- Perform classifications according to well defined domain ontology





Indexing & Retrieval





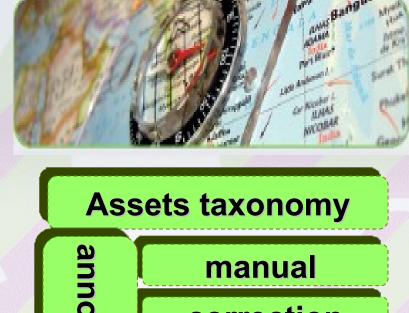
- Advanced Indexing &
 Ranking techniques for the
 efficient & effective retrieval
 of multimedia objects
- Image/3D/Video/Audio
- Multimedia-based similarity
- Feedback from users improve quality of results





Browsing & Characterisation

- GUI: look & feel, usability
- User feedback: personalisation of search results
- Semantic browsing
- Content categorisation: support for semantic browsing
- Manual annotation of metadata



manual correction propagation

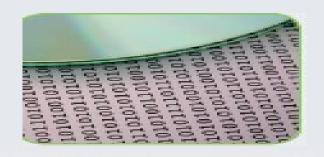
query log analysis

relevance feedback





Digital Preservation Services



- Estimate Preservation
 Risks for data and provide
 Recommendations
- Report, Notify and Track
 Impacting Events
- Enact Preservation Plans



Risk Management

Notification

Normalization





ASSETS System Architecture

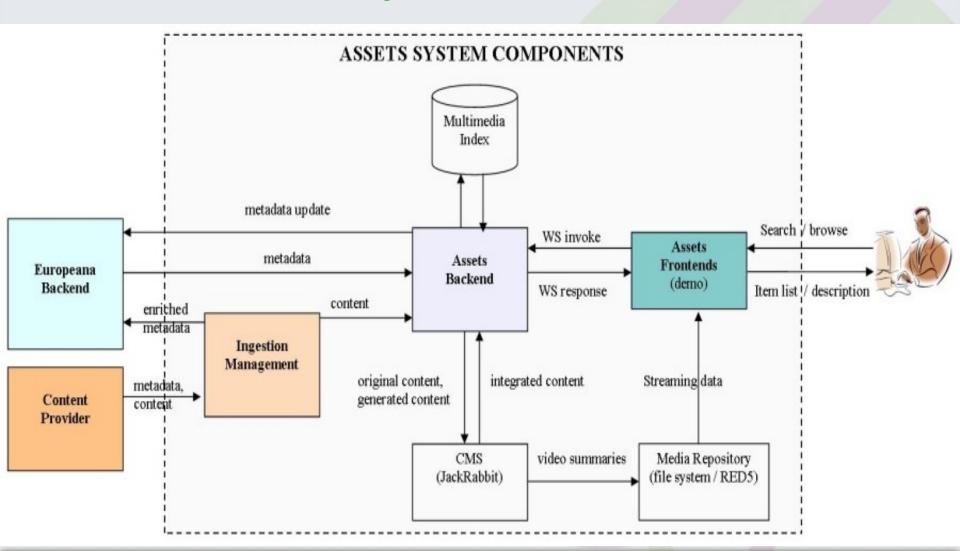
Requirements

- Compatibility with Europeana architecture
- Easy integration into Europeana infrastructure
- Reuse framework & technologies
- Compliant with Europeana policies regarding technology selection





ASSETS System Architecture







WP 2.4

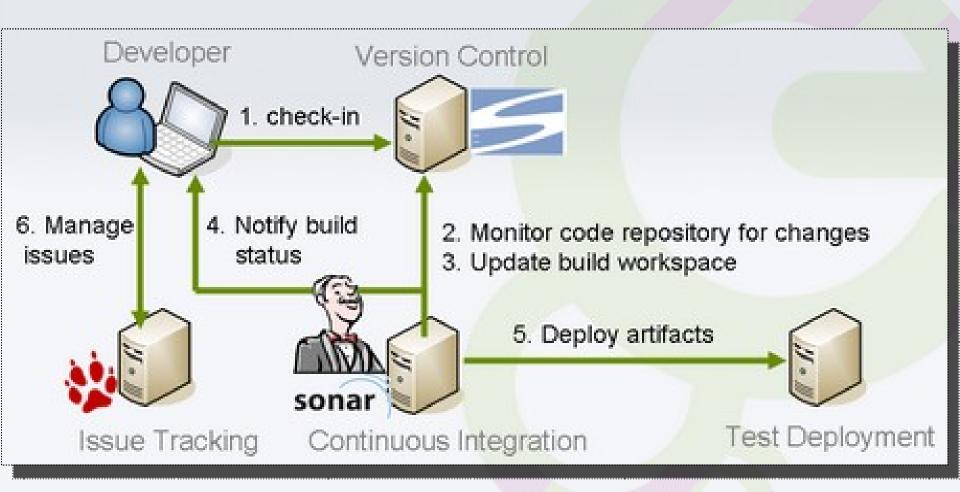
Service integration, testing and deployment

- Technical Infrastructure
- Development Framework
- Platform and service integration
- Service set-up and testing
- Service deployment and experimentation





Development Infrastructure







ASSETS Demos



ASSETS ThoughtLab: First year review

Demo	Url	Description
lmage similarity search	Europeana Thoughlab Assets image similarity search	A user is viewing the result page of a search in ASSETS. Selecting an image, among the ones shown in the result page, a image content-based similarity search is performed, and the index returns the most similar ones with respect to the image query.
Text based search	Assets query suggestions Assets metadata based ranking	Show the results of a text query re-ranked by the BM25F function, fine-tuned by exploiting query log information.
Video summarisation and retrieval	Stand alone demonstrator	
3D retrieval	Assets 3D similarity search Europeana Thoughlab	A user is viewing the result page of a 3D search in ASSETS. The user selects one of the results and clicks on the "Search similar" button. The 3D content based search is initiated and a list of 3D models, geometrically similar to the selected, is returned. A set of ca. 300 models will be used for the demo
Audio similarity search	Stand alone demonstrator	
Semantic cross linking browsing	Assets semantic browsing Assets metadata editor	
Community services		

more information here





WP 2.2

Scalable metadata- and similarity-based indexing and retrieval

- Largest WP of the project
- Computing intensive
- Resource consuming
- (Most) Interesting functionality





Image Indexing & Retrieval

Activities

- Image feature extraction
 - Developing the feature extraction software
 - Extract features accessing ASSETS and Europeana data
- Access methods for image matching
 - Organize extracted features so that they can be searched efficiently
- Searching/Ranking
 - Rank search results so that the user find what he/she is searching for





Achievements

Images indexed and ready to be searched

Europeana	65.970
DIAS images	237.520
DIAS video thumbnails	7.795
HASC	4.861
CVCE	8.538
FLM	4.419
TOTAL	329.103





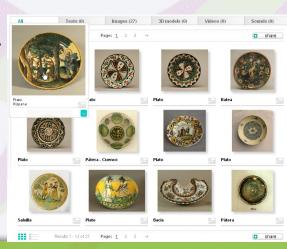
Image Search Engine

- Europeana Thumbnails
 - Published in the ThoughtLabs
 - http://virserv.isti.cnr.it:8080/assetsIRService



- ASSETS+Europeana Images
 - http://capolegrotte.isti.cnr.it/assetsIRService

Integration in ASSETS Portal







Text Based Indexing & Retrieval

- Tasks
 - Post-query processing
 - Query log analysis
 - Query suggestion computation
 - Metadata based ranking
 - Implementation of an effective scoring function based on BM25F
 - Text indexing and retrieval
 - Design and management of text indexes supporting implementation of other text based services



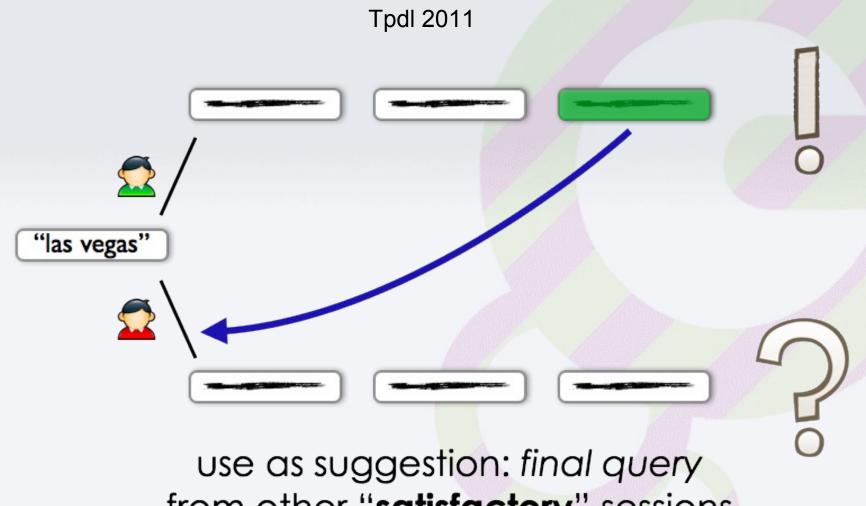


Achievements

- Analysis of the Europeana query log
 - 197.447 sessions
 - Average length of a session: 2.32 (distinct queries)
 - Average time spent searching: 248s
 - 89.369 (45%) successuful sessions ending with a click
 - 64% in the MSN query log
- Query suggestion index
 - Suggested queries: ~60.000
 - Text queries: ~ 113.000

assets

How to suggest good queries?

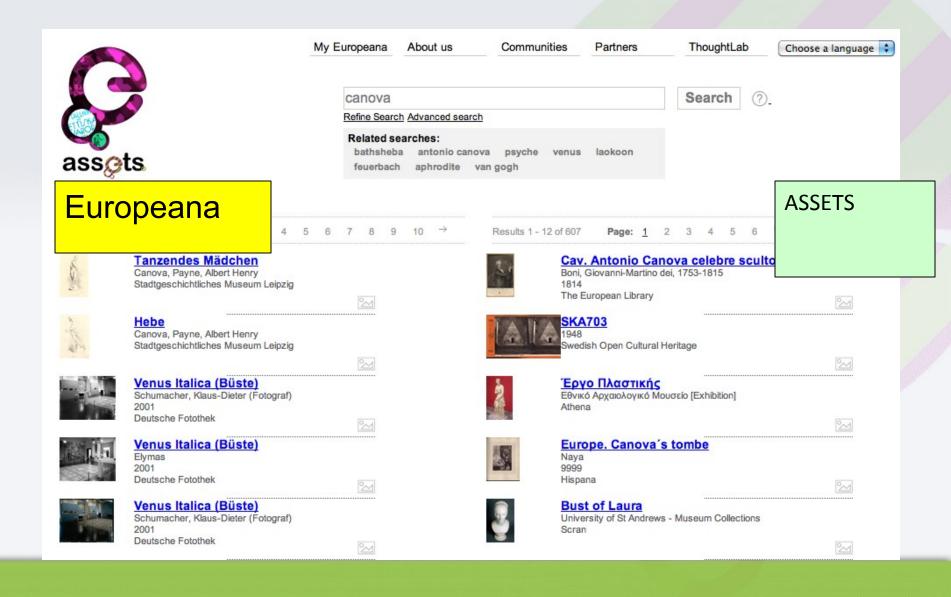


from other "satisfactory" sessions





Demo







Video Summarisation & Retrieval

Objectives

 Enhance the functionalities of Europeana for searching, browsing and previewing video content

Services Provided

- Video Summarization: generation of summaries (video skim and keyframes)
- Video Indexing & Search: retrieval by similar video content





Achievements

•First Year Achievements:

- Java implementation of a video summarization algorithm specifically developed and customized for the ASSETS project
- Development of the first version of the video indexing and search module

•Ongoing Work:

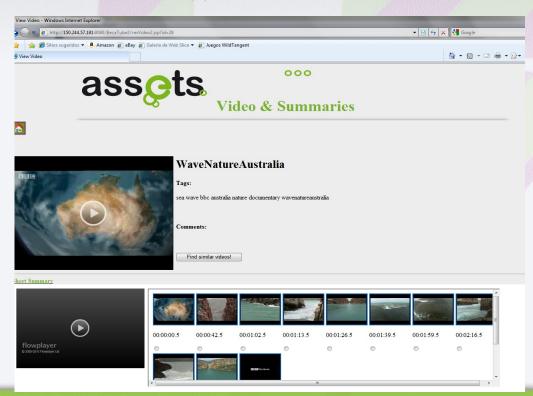
 Integration of the video summarization service within the ASSETS platform





Standalone demonstrator

- Video summarization
- Keyframe extraction and navigation functionalities.
- Query by example (based on visual similarity).







Audio Similarity Search

Objectives

 Enhance the functionalities of Europeana for searching and browsing audio content

Services Provided

- Audio description: mood, tempo, etc.
- Audio Search: retrieval by similar audio content







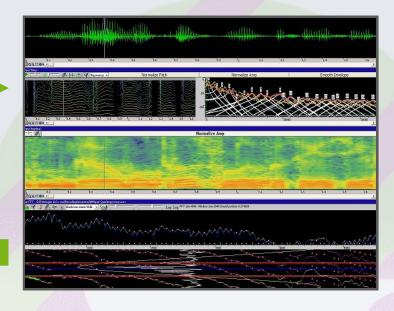
Automatic Music Description:

- * Moods: party, happy
- * rhythm: simple (128bpm)
- * key: Dm
- * Timbre: bright
- * Pitch: low (male vocalist)
- * music vs speech: music

Similar tracks:

- * Branded by Monkey Business
- * A dream's dream by Soul II Soul
- * Saga by Basement Jaxx

T ..



Contextual Enrichment:

- * Country: UK
- * Record labels: Acid Jazz, Sony BMG,
- Columbia
- * Genres: Funk, Disco, Acid Jazz, Jazz
- Fusion, Pop-rock
- * Years active: 1992 present
- * Related artists: Brand New Heavies,
- Jestofunk, etc.





Demo







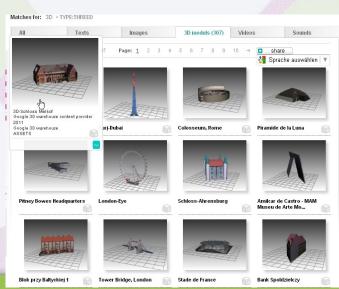
3D Indexing & Retrieval

Objectives:

To develop a unified framework for 3D model retrieval

Achievements:

- Creation of test dataset:
- ca. 300 models, downloaded from Google 3D Warehouse
- 3D Models from UNESCO and CARARE
- 3D Search & Retrieval implementation
- Search using existing models
- Demos
- Europeana thoughtlab demo
- Integration into the ASSETS framework







WP 2.5

Browsing and visual interfaces:

- Addresses imidiate user needs
- Public user: semantic browsing, enhanced system usability
- Librarian user: metadata editing, ingestion log analysis
- Portal integration for indexing & retrieval services





Metadata Editing

Objectives

- Develop a manual annotation tool connected to the ASSETS metadata repository
- Handle OWL & SKOS taxonomies
- Take benefit of open knowledge repositories to help users to enrich records with relevant information related to Named Entities: DBPedia, Freebase & Geonames

Usage

- A tool dedicated to providers/aggregators
- Involved in two scenarios:
 - Metadata enrichment/correction after ingestion
 - Building training set for the ASSETS annotation propagation module





Semantic Cross-linking

- Creation of ASSETS Taxonomy
 - ca. 8000 taxonomy terms
- Definition of components and interfaces
 - Content selection/manual annotation/training/annotation propagation
- Creation of semantic links
 - 8400 semantic links, 74 categories for 2D
 - 300 semantic links, 15 categories for 3D
- •Integration into the ASSETS framework
 - Loading/storing of semantic links, visualization on portal





GUI Improvements

Activities:

- Design mock-ups for the ASSETS end-user service
- Definition of GUI Implementation Guidelines for the integration into Europeana portal
- Developments to support the First Review integrated demos and demo pages of the ASSETS services
- Assets Portal Improvements:
 - Support for 3D-models in the search results
 - Playing media files (video player, audio player)
 - Zoom tool over thumbnails (metadata, action buttons)
 - Thoughtlab page





Thank you!



Questions?





ASSETS Valuables

Making Europe's cultural heritage more accessible & usable

- Improve the Accessibility and Usability of
- Provide new Services for
- Provide new Multimedia
 Content to
- Showcase for services to be integrated in





ASSETS Application Architecture

Frontends	Europeana Portal (with asset services)		Assets Demo Portal (all services)			
Assets Backend	Ja	est API va API Assets nponent 1	Asset Compon	ets .		Assets
			Rest AP Java AP Assets (
Europeana Backend				Eui	Java API ropeana	Core





Community Services

- Community services aimed at supporting this information exchange
- Composition of new content by combining existing and/or new digital objects
- Selective dissemination of events to communities that have expressed interest in those
- Personalisation of search results based on the specific user/community preferences



content creation by re-use

taxonomy-based notification

personalisation

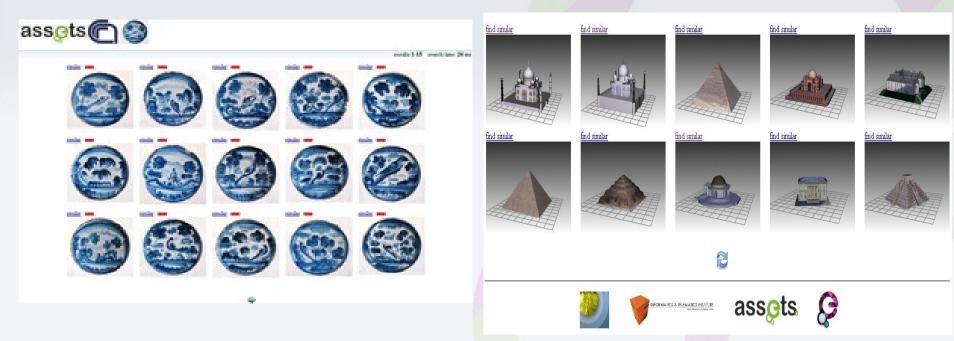




Thoughtlab demonstrations

Image Similarity Search

3D Similarity Search







Achievements

- Implementation and Integration of BM25F ranking function inside Solr
- •Retrieval of the ranking results from the Europeana index
- •Integration of the query log analysis within MongoDB
- Ready for being integrated in portal
- Paper accepted for publication on TPDL 2011





WP2.1: Ingestion

Fabrizio Sebastiani

Consiglio Nazionale delle Ricerche, Italy

ASSETS 1st Year Review - Luxembourg, June 10, 2011



Structure + Main Objectives of the WP

- ► The stated objective of WP2.1 "Ingestion" is to implement services allowing to automatically enrich metadata records in a way that facilitates the searching and browsing experience
- ▶ The three metadata enrichment services are
 - ▶ A metadata cleaning service (T2.2.1)
 - A service for the automatic extraction of information from metadata records (T2.2.2)
 - ▶ A service for the automatic classification of metadata records (T2.2.3)
- ► Each of the three services is going to be implemented via supervised learning techniques: a general-purpose learning algorithm learns to enrich metadata records from a small set of example metadata records manually enriched by the CPs.



Work carried out in the 1st year

For each of the 3 services the following tasks were carried out:

- 1. Requirements specification, following the official template of the Europeana Danube release;
- 2. Definition of use cases;
- Definition of APIs;
- 4. Specification of ESE-based XML schemas for training data;
- 5. Provision of annotation guidelines to the CPs;
- 6. Implementation of enrichment (T2.1.2 and T2.1.3) services;
- 7. Actual enrichment of ASSETS and Europeana metadata records.





Cleaning

- Cleaning has been substantially downsized with respect to what was specified in the proposal:
 - Feedback from CPs has revealed that their metadata do not exhibit the "noise" that had been foreseen in the proposal.
 - Therefore, the CPs could not generate a reference dataset for cleaning, and no model for cleaning could thus be trained.
- Corrective action:
 - ▶ Part of the original effort devoted to cleaning has been reallocated to the extraction / classification services, which require additional effort due to the complexity of the Europeana infrastructure.



Extraction

- ▶ We have used a learning algorithm based on conditional random fields, on which we had gained substantial experience in other projects (e.g., knowledge extraction from medical records).
- We have trained extraction models and run test experiments on the annotated datasets provided by the ASSETS CPs:

CP	Language	# of	# of	Experimental	F_1^{μ}
		records	concepts	protocol	
INA	French	10,000	3 (a)	10-fold X-validation	.735
Albeniz	Spanish	75	5 (b)	leave-one-out	.466
Total		10,075			

a = Person, Organization, Location

b = Person, Organization, Location, Musical Composition, Award

► The experiments show that the accuracy is pretty good once the system is trained on a sufficiently large training set.





Extraction (cont'd)

We have applied the extraction model trained on INA data on another non-annotated dataset (101,356 items), plus five other datasets from Europeana CPs.

Dataset	Language	# of
		records
Ag_FR_MCC_memoireSAP	French	400,000
Ag_FR_MCC_branly	French	265,000
L_FR_NatLib_gallica_periodiques_fascicules_d	French	600,000
$Ag_FR_MCC_j$ oconde	French	215,000
Ag_FR_MCC_memoireSAP	French	400,000
Ag_FR_MCC_rmn	French	288,000
Total		1,768,000

Given that these data are not manually annotated, it was not possible to evaluate accuracy quantitatively. The automatically annotated data are available for anecdotal evaluation.



Classification

- We have used a learning algorithm based on hierarchical boosting technology, on which we had obtained substantial experience in other projects (e.g., classifying medical discharge reports).
- We have trained classification models, and run experiments, on the annotated datasets provided us by the ASSETS CPs:

CP	Language	# of	# of	Experimental	F_1^{μ}
		records	categories	protocol	
INA	French	10,000	48	10-fold X-validation	.647
INA	French	811	176	leave-one-out	.661
INA	French	862	308	leave-one-out	.537
INA	French	891	73	leave-one-out	.852
LIBERIS	Greek	6,104	6	10-fold X-validation	.667
ANSC	Italian	15,559	522	10-fold X-validation	.465
ALBENIZ	Spanish	75	7	leave-one-out	.842
HASC	Greek	1,665	32	10-fold X-validation	.424
FLM	Italian	786	4	leave-one-out	.993
FLM	Italian	10	4	leave-one-out	.435
Total		36,763			



Classification (cont'd)

We have further trained classification models, and run experiments, on 3 among the largest datasets provided by Europeana CPs.

СР	Language	# of	# of	Experimental	F_1^{μ}
		records	classes	protocol	
DeutscheFotothek	German	1,097,321	1,999	10-fold X-validation	.632
DeutscheFotothek	German	529,482	220	10-fold X-validation	.744
landesarchiv	German	10,407	2,442	10-fold X-validation	.262
Total		1,637,210			

▶ We also automatically classified 55,458 unlabeled "landesarchiv" records and 101,356 unlabeled INA records, which are available for anecdotal evaluation.



Achievements

СР	Task	# of processed	total # of	%
		records	records	
ASSETS	Extraction	111,431	68.7%	162,044
ASSETS	Classification	138,119	85.2%	162,044
	Total	148,194	91.4%	162,044
Europeana	Extraction	1,768,000	11.7%	15,009,060
Europeana	Classification	1,692,668	11.2%	15,009,060
	Total	3,460,668	23.0%	15,009,060





After M12

- ▶ Development of prototypes (due at M16):
 - completing the integration of our code into the ASSETS services;
 - logging + definition of the ingestion log API;
 - integrating the services into the ingestion workflow;
 - migrating from ESE to EDM.

assets Thank you for your attention. Questions?





Data from ASSETS CPs

СР	Cleaning	Extraction		Classification
INA	0		10,000	12,564
Albeniz	1		75	75
CVCE	0		17	13
Deutsche Welle	12		22	21
FLM	0		20	796
Liberis	0	A	0	6,104
ANSC	0		0	15,559
HASC	0		0	1,665







WP2.3
Digital Preservation

Luigi.Briguglio @ ENG.IT &

Andrew.Lindley @ AIT.AC.AT

Luxembourg, June 10th 2011





Presentation Plan

- Preservation in ASSETS
- Risk Management
- Normalization
- Notification







Preservation in ASSETS - I

"Europeana is not so much a portal characterised by sheer volume, ... but the core agenda of our endeavour is to make rich data and functionality available on an API basis."



Doerr, Gradmann, Hennicke, Isaac, Meghini, van de Sompel, "The Europeana Data Model (EDM)"

Making Europe's cultural heritage more accessible & usable

- Main objective of ASSETS is to provide new services through APIs for improving accessibility and usability of
- Those features continuously risk to be corrupted by events and for this reason it is important to include a long-term perspective in the development activities







Preservation in ASSETS - II

- Instead, during the activities of first year, ASSETS has identified the following needs:
 - Tracking changes on digital objects and metadata
 - Processing metadata by considering "aging-related errors"
 - Common Notification models
- Those are some concrete examples of needs which can be supported by OAIS-based solutions, such as the ASSETS Digital Preservation Services aims to do.







Preservation in ASSETS - III



Digital Preservation Services

- Estimate Preservation Risks for data and provide Recommendations
- Report, Notify and Track
 Impacting Events
- Enact Preservation Plans

Risk Management

Notification

Normalisation







Risk Management

Objectives

- content classification / collection profiling
- risk analysis and rule based preservation plan recommendations
- preservation watch

"The services aims at mitigating the risk of digital obsolescence by providing risk management reports to content providers"







Risk Management

achievements 1/2

- system design and implementation
 - use-case, requirements, concepts and domain objects,
 evaluation of technology stacks, API definition, design and proof of concept implementation.
- preservation watch
 - user defined risk-models and unified properties
 - adapted knowledge sources Pronom, DBPedia, Freebase
 - semi-automated property evaluation







Risk Management

achievements 2/2

- KPI executed key performance indicator #4 through the ASSETS preservation infrastructure
 - ran on the entire metadata collection of Europeana: 15M



- provided reports on properties in the area of
 - provenance, accessibility and context
 - field population, language distribution, date dissemination,...
 - quality: 0,43% broken object links



Ø

- ran on the entire collection of ASSETS contents: 730K
- identification of almost of them
- only 264 "NotIdentified": 0,04%





Normalisation



Objectives

- wrapping of existing tools through standardized preservation operations
- administration and deployment of preservation services
- execute workflows of i...n preservation services on a specific digital object or a given collection of objects.

"Based on the results of the risk management analysis, the service can automatically perform a normalization strategy on the provider's collection."







Normalisation

achievements 1/2

- system design and implementation
 - evaluation of technology stacks (from legacy JBoss and Enterprise Java to OSGi / Karaf, iPojo and Maven)
 - API and domain object definitions
 - decoupling of existing complexities and creation of customized components (e.g. event driven service registry, command line interface, key value data store)
- OPF (Open Planets Foundation) preservation services ported to the Assets environment







Notification



Objectives - I

- Exchange vital knowledge of change/impacting events with Data Curators
- Notification of Change/Impacting Events are filtered and processed by adopting rules and classifications
- And that allows to generate informational/warning alerts for delivering/exchanging knowledge to interested actors (which can then properly re-act)







Notification



Objectives - II

 By tracking changes/events for specific contents, it is possible to have further "metadata" which could enrich description of DLObjects and improve search results and support for decision-making on preservation plans.







Notification



Achievements

- Event Reporting & Classification Changes and Events are represented/reported by terms (topics of interest) which are classified in a hierarchical structure (i.e. a taxonomy).
- Selective Notification Data Curators express their interest for receiving notification for specific changes/events based on their own capabilities and skills.







Thanks for the kind attention

Questions ?







assøts.

Stream 3, first year

Carlo Meghini, CNR ISTI





Stream 3 in ASSETS

- Stream 3 consists of the activities that involve users:
 - content providers:
 - WP3.0 Content provision and adaptation
 - end users:
 - WP3.1 Service user evaluation and assessment
 - WP3.2 Community services





WP3.0 Content provision and adaptation

Objectives

- 1. To demonstrate the ability of ASSETS services to effectively clean, extract knowledge from and classify metadata
- 2. To provide high-quality metadata to Europeana

Responsible: CVCE

1st year results

Content analysis, selection and initial provision (MS39@M12)

More details: presentation by Ghislain Sillaume, CVCE





WP3.1 Service user evaluation and assessment

Objective

To validate the ASSETS services by testing them with real users in order to ensure that the services comply with the requirements set by Europeana

Responsible: HASC (EDLF, under formal approval)

1st year results

Evaluation planning and launch

More details: presentation by Anne Marie van Gerwen, EDLF





WP3.2 Community services

Objectives

Development of end-user services:

- 1. Content creation by re-use
- 2. Taxonomy-based notification
- 3. Personalization

Responsible: UPS

1st year results

Delivery of content creation by re-use (D3.2.2@M12), design of the other services

More details: presentation by Carlo Meghini, CNR





Stream 3 Content and Users



WP3.0 Content provision and adaptation







Summary

- Premise
- Tasks overview
- Objectives & expectations
- Achievements
- Next Work

• To sum up





Premise



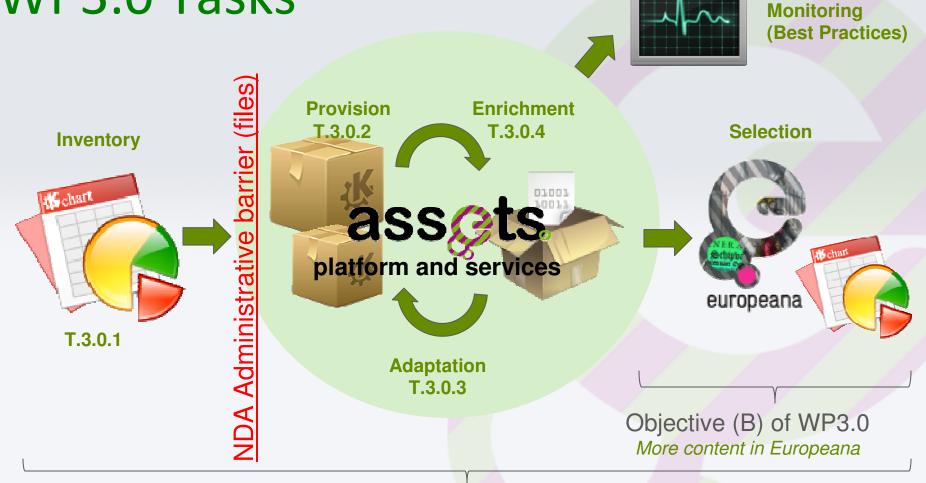
Not only metadata but also: multimedia and multilingual files...

... provided by a set of content providers from different sectors (news, music, history...) and countries having various level of experience regarding metadata management activities and technical skills.





WP3.0 Tasks



Objective (A) of WP3.0

Set of contents for improving usability in searching and browsing in Europeana





Objective (A)

 (A) Provide a relevant and heterogeneous set of contents that will demonstrate the ability of ASSETS services to improve the usability of Europeana in searching and browsing.

Ingestion Services	Manually annotated metadata + Training sets						
Content based Indexing and retrieval	Large amount of multimedia files						
Metadata based Indexing and ranking	Metadata						
Browsing and visual interfaces	Domain specific taxonomies						
Digital preservation	Heterogeneous formats						
Community services	Domain specific taxonomies						



at



Objective (B)

(B) Increase the number of high quality contents available in Europeana (in particular audio and video content)



Training Workshop ESE **Europeana Office**

First project that directly use the SIP Creator tool







Matching...



...expectations of content providers...

...and developed services ambitions.

Europeanalinking
classification
clas





Details - 1st year content provision

ASSETS Content Provision

PROVIDERS			Media files (content-based indexing)								Metadata		
Content providers	Short Name	3D Models	Audio		lmage		Video		Total	Total	Training	E	SE
			1st Year	in the End	1st Year	in the end	1st Year	in the end	1st year	finally	First Year	First Year	In the end
Accademia Nazionale di Santa Ce	c ANSC		2.997	3.000	0	5.000			2.997	8.000	10.000	21.051	21.051
Centre Virtuel de la Connaissanc	CVCE		308	308	8.631	8.631	1.323	1.323	10.262	10.262		23.075	23.075
Deutsche Welle	DW		364	364			408	408	772	772	0	772	772
Dias Publishing Public	DIAS				240271	240.271	7.842	7.842	248.113	248.113		195.892	303.600
Fondazione Micheletti	FLM				15.790	15.790			15.790	15.790	250	15.790	41.290
Fundaciòn Albeniz	ALBENIZ		301	1.000	37.204	37.204	322	500	37.827	38.704	300	24.234	31.500
Hellenic Archive of Scientific Cult	<u>u</u> HASC				5.000	5.000			5.000	5.000		5.004	5.004
Institut National de l'Audiovisuel	INA						3.065	3.065	3.065	3.065	10.000	101.356	101.356
Liberis Publications	LIBERIS								0	0		6.104	15.000
United Nation Educational, Scien	ti UNESCO	50			212	212			212	212			
Europeana Foundation					60.000	60.000				60.000			
External Content													
Google Warehouse		300											
Carrare		100											
TOTAL		450	3.970	4.672	307.108	372.108	12.960	13.138	324.038	389.918	20.550	393.278	542.648





Sample multimedia content















Next work

Complete content provision work (20% left).

 Improve the quality of metadata by leveraging on ASSETS services and/or moving to EDM.

 Provide best practices related to non-typical media files and metadata provision.





Thanks for your attention





e-mail: ghislain.sillaume@cvce.lu

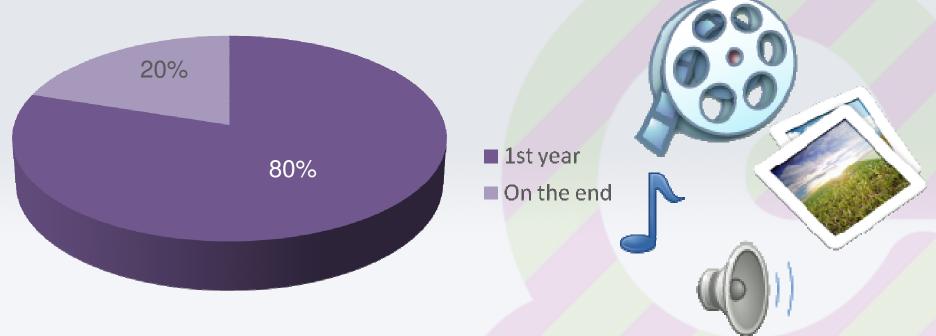
Skype: ghislain.sillaume

Tel: +352 595920 1









ASSETS did provide around 400 000 media files and associated metadata (representing 500 Go of content).



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WP 3.1: User Evaluation activities

ASSETS Mid-term review
June 10, 2011





User evaluation activities

Evaluation of the usability of the user interfaces

DOW:

- Month 3-22
- Laboratory involvement and experimentation
- Users from different age groups & backgrounds
- Held in at least 3 different European countries
- Alignment with Europeana target user groups





Scope of the task

- Laboratory testing: focus on end user services
 - Image based similarity search (T2.2.4)
 - Search recommendations/Post-query processing (T2.2.1)
 - Audio based similarity search (T2.2.6)
 - Video summarisations (T2.2.7)
 - Video similarity search (T2.2.7)
 - 3D based similarity search (T2.2.5)
 - Content creation by re-use service (T3.2.2)
 - Taxonomy based notification service (T3.2.3)
 - Personalisation service (T3.2.4)
- Laboratory testing is outsourced to a contractor
- Services for ingestion and digital preservation:
 - heuristic (expert) evaluation
 - with ASSETS content providers

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Main steps in the process:

Match ASSETS services to user groups and scenario's (T.3.1.2) Match methods to services Define required content Draft & publish tender Prepare data Select subcontractor(s) Preparation of activities Perform the evaluation activities T. 3.2.3.: Evaluation Report





Where are we now?







Dependencies and steps after this task:

Results of T. 3.1.2 feed into T 3.1.3: final reporting of evaluating activities

Before that, preliminary results of evaluation activities are shared internally with ASSETS developers





WP3.2 Community Services
Task 3.2.2 Content creation by re-use

Carlo Meghini, CNR ISTI

Work done in cooperation by ISTI, UPS & MEME Media Lab





Introduction

- The service offers a generic back-end API, for serving a wide range of specific functionalities concerning user-generated content.
- In the following:
 - requirements
 - conceptual model
 - architecture
 - demo





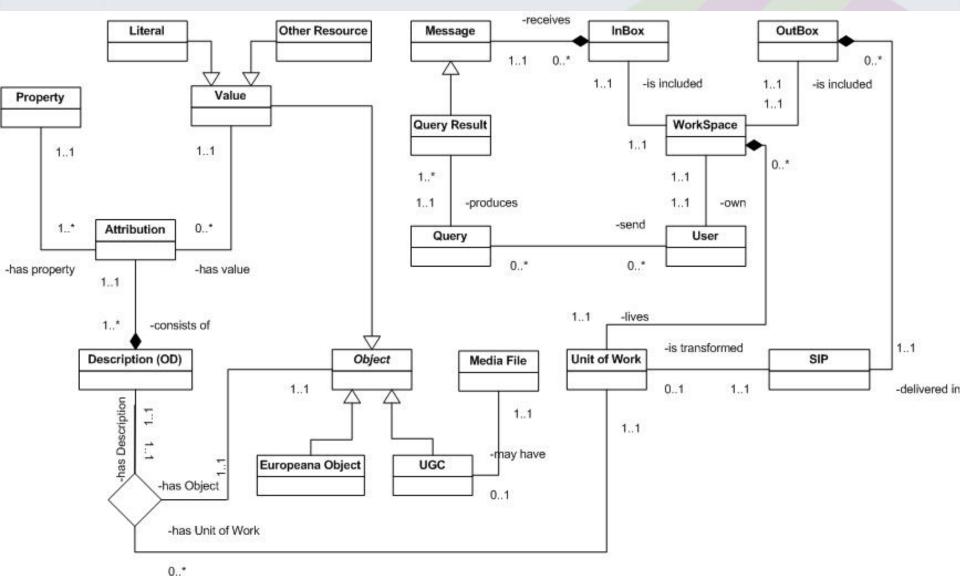
Requirements

- Functional: to allow an individual user to
 - create a new object
 - possibly with associated media files
 - part of, or including existing Europeana objects
 - add a new description to an existing object
 - enrich the description of an existing object:
 - add a new field
 - add a new value to an existing field
- Non-functional
 - operations may last a long time
 - interact with Europeana in an asynchronous way





Conceptual Model

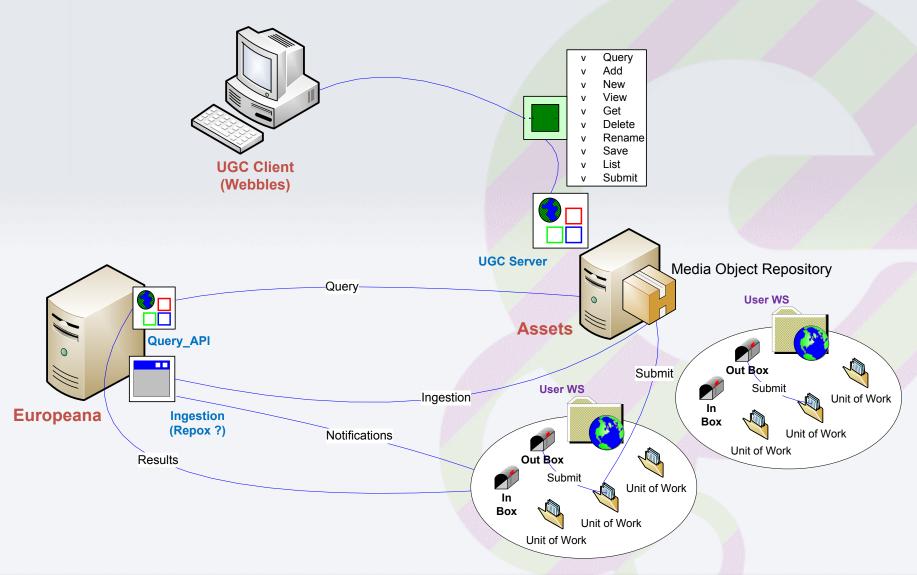


ASSETS 1st year review 4





Architecture



ASSETS 1st year review 5





Demo

Creation of a new object that represents a series of seminars about Renaissance art.

Parts:

- the programme of the seminars, a newly created object with a PDF attachment uploaded from the user disk
- the Europeana object representing Mona Lisa, with a description in Italian.

The whole demo takes place in a single Unit of Work, which is saved, then re-opened for submission to Europeana. After submission, the corresponding SIP is shown.





Thank you

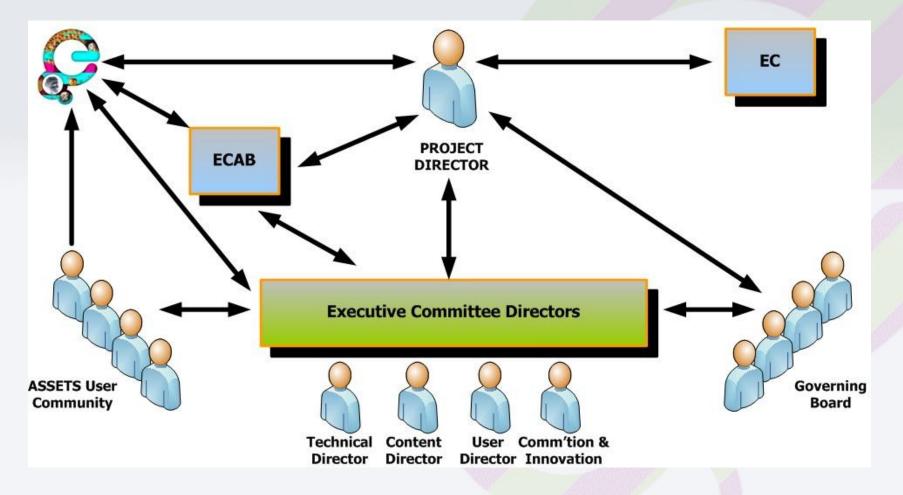
• Questions?

7





ASSETS Management Structure







WP1.1 Dissemination Activities 1st year

Morena Rizzo, Ciaotech Srl

Luxembourg 10th of June, 2011





- a. Dissemination objectives
- b. Dissemination strategy
- c. Communication tools
- d. Dissemination initiatives
- e. Community aggregation
- f. Synergy with other initiatives





Objectives

- Raise awareness and guarantee wide visibility within Europeana initiative and in the overall DL sector
- Create consensus and interest
- Attract potential users/customers and aggregate a critical mass
- Share results with the target sectors

Instrument for the future sustainability of the project results





- a. Dissemination objectives
- b. Dissemination strategy
- c. Communication tools
- d. Dissemination initiatives
- e. Community aggregation
- f. Synergy with other initiatives





Strategy

- Communicate goals, activities and results to a worldwide audience;
- Adopt different dissemination approaches according to specific targeted users and needs.

On-line actions:

- E-mail
- ASSETS website
- Use of social networks to promote the project and its activities
- Different Press releases (translated in different languages)
- Articles

Off-line actions:

Participation in conferences and events, either as speakers or attendees

Reaching a wide visibility and communicate ASSETS goals and results.





- a. Dissemination objectives
- b. Dissemination strategy
- c. Communication tools
- d. Dissemination initiatives
- e. Community aggregation
- f. Synergy with other initiatives





Communication tools

- Analysis and design of varied dissemination instruments differentiated according to:
 - different communication needs
 - various event typologies
 - the project evolution





Look and feel

 Fully Compliant with Europeana Brand Guidelines



The logo has the capability to make the project recognizable has it defines its identity for its whole duration. It is used in every document produced within the project context and in every kind of contact to the external environment

Leaflet







group

What is ASSETS?

ASSETS stands for Advanced Search Services and Enhanced Technological Solutions for the European Digital Library.

ASSETS is a Best Practice Network co-funded by the CIP PSP Programme to improve the accessibility and usability of Europeana (the European Digital Library platform). The ASSETS Consortium comprises 24 partners including institutions from ten different European countries and Japan, active in the field of cultural heritage and digital libraries. The presence of UNESCO guarantees a worldwide coverage.

Which benefits does ASSETS offer?

ASSETS brings to the forefront of the large scale service implementation and real user context validation innovative technologies allowing:

Multimedia search and retrieval

» ASSETS aims to enhance the search and retrieval services of Europeana.

Semantic browsing

» ASSETS allows users to explore the Europeana portal in an interactive way .

Interface improvements

» ASSETS will deploy interfaces specially designed for browsing multimedia content.

New multimedia content for Europeana

» ASSETS dedicates effort towards increasing the volume of digital content accessible by Europeana portal.

ASSETS is notably addressed to:

- » Cultural Heritage Organizations
- » Citizens/Users
- » Digital Libraries Communities
- » Private ICT players
- » Universities and Research Centres

Interested in ASSETS? Join us!

You'll be one of the early adopters of ASSETS' services and your content will be accessible through the EUROPEANA portal!

For more information please contact us: m.rizzo@ciaotech.com

ASSETS is co-funded by the European Commission under the ICT Policy Support Programme ICTPSP





cultural heritage and usable Europe's accessible Making I ore



Fundación Albéniz (ES)

United Nation Educational, Scientific

MEME Media Lab of the Hokkaido

IIII/III

Brochure



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CIAOTECH S.r.I. (PNO Group B.V.)

Fondazione Luigi Micheletti (IT)

assets consortium

ICTPSP ()

ASSETS Services

such as museums, libraries and archives to contribute their content to Europeana in a standardised and effective way.

metadata, thereby increasing search precision and improving the user's browsing experience. High quality results and enhanced object previews will increase the



Browsing & Characterization services

ASSETS offers advanced indexing and ranking techniques for the efficient and effective retrieval of multimedia objects. Indexing functionalities are provided for image/ video/audio30 formats, which offer the possibility to perform multimediamedia-based similarity searches. The feedback from Europeana users improve the quality and precision of the retrieved results.



This allows users to search, browse, navigate and view media content with the aim of enriching the user experience and offering customised search

Community Services

information between portal users and the digital

library, offering advantages to both. Users can enrich the library's resources with the results of their work

and the libraries will improve the description of their

objects. The added value of these services consists

in the creation of customised content, knowledge extraction and recombination, and information presentation in line with user preferences.

different media objects in order to improve access to interesting information. The users' behaviour is exploited to enhance the presentation of search results.



ASSETS provides a set of services which prepare the ground for digital preservation:

- Risk Management Service: identification and monitoring of potentially occurring events.

- Notification Service: track, report, notification, communication and management procedures for events that could impact on long term content access.

Normalization Service: enact preservation plans



www.assets4europeana.eu

Get involved in the ASSETS Community!

For organisations holding cultural or scientific content, such as museums, archives or foundations, there are various benefits to be had by making their content available to ASSETS and Europeana. These include support for metadata enrichment, international visibility, increased interest for an organisation's webset, knowledge transfer and networking opportunities with leading domain exprest. Content tell



ASSETS 4 End Users



ASSETS 4 Universities/

Researchers and ICT developers might be interested in gaining a deeper insight into the software services ASSETS is developing for

In order to find out more about the technologies used for improving access to Europe's cultural and scientific heritage, please contact us!



For educational institutions, government bodies or local authorities interested in enhancing tourism infrastructure, we offer high visibility for valuable digitised content. Europeana and ASSETS services are great resources for research and learning purposes. Europeana currently links to more than 14 million letra?







Advanced Search Service and Enhanced Technological Solutions for the European Digital Library

ASSETS is a two-year Best Practice Network co-funded by the CIP PSP Programme to improve the accessibility and usability of Europeana (the European Digital Library platform).



ASSETS Services

Ingestion Services

The unified ingestion toolset allows content providers such as museums, libraries and archives to contribute their content to Europeana in a standardised and effective way.
This process will generate enriched, clean and classified metadata, thereby increasing search precision and improving the user's browsing experience. High quality results and enhanced object previews will increase the search recall and user satisfaction.



Community Services

ASSETS provides the possibility to exchange information between portal users and the digital library, offering advantages to both. Users can enrich the library's resources with the results of their work and the libraries will improve the description of their objects. The added value of these services consists in the creation of customised content, knowledge extraction and recombination, and information presentation in line with user preferences.



Indexing & Ranking Services

ASSETS offers advanced indexing and ranking techniques for the efficient and effective retrieval of multimedia objects. Indexing functionalities are provided for image/wideo/audio/30 formats, which offer the possibility to perform multimediamedia-based similarity searches. The feedback from Europeana users improve the quality and precision of the retrieved results.



Browsing & Characterization services

This allows users to search, browse, navigate and view media content with the aim of enriching the user experience and offering customised search results. Semantic links are established between the different media objects in order to improve access to interesting information. The users' behaviour is exploited to enhance the presentation of search results.



Get involved in the ASSETS Community!

O.	Engineering Ingegneria Informatica (IT) www.eng.it	Coordinato	
ATC	Athens Technology Center (GR) www.atc.gr	/IIT-	AIT Austrian Institute of Technology GmbH (AI) www.ait.ac.at
9	EXALEAD (FR) www.exalead.com	© till	Istituto di Scienza e Tecnologie dell'Informazione, Consiglio Nazionale delle Ricerche (IT) www.isti.cnr.it
Q=	The Europeana Foundation (EU) www.europeana.eu	*bmat	Barcelona Music and Audio Technologies (ES) www.bmat.com
tecnalia 🕇	Tecnalia (ES) www.tecnalia.com	#ISIES	Swedish Institute of Computer Science (SV) www.sics.se
ina	Institut National de l'Audiovisuel (FR) www.ina.fr	LA	Universidad Autónoma de Madrid (ES) www.uam.es
•	Informatics and Telematics Institute (GR) www.iti.gr	• III	Laboratoire de Recherche en Informatique (LRI) of Université PARIS-SUD XI (FR) www.u-psud.fr
CŒ	Virtual Resource Centre for Knowledge about Europe (LU) www.cvce.lu	< DW	Deutsche Welle (DE) www.dw-world.de
Ł	Accademia Nazionale di Santa Cecilia (IT) www.santacecilia.it	LIBERIS	Liberis Publications (GR) www.liberis.gr
	Hellenic Archive of Scientific Culture (GR) www.hasc.gr	<u> 1145</u> <u>1145</u>	Dias Publishing Public (CY) www.diasmedia.com
F	Fundación Albéniz (ES) www.albeniz.com	0	CIAOTECH S.r.L (PNO Group B.V.) (IT) www.ciaotech.com
	United Nation Educational, Scientific and Cultural Organization www.unesco.org	IIIMI	Fondazione Luigi Micheletti (IT) www.fondazionemicheletti.it
* 40	MEME Media Lab of the Hokkaldo University (JP) km.meme.hokudai.ac.jp		

Register to ASSETS and discover more online services and benefits!

Contact us:

www.assets4europeana.eu

Project coordinator: Engineering SpA Ms. Silvia Boi Email: silvia.boi@eng.it

Communication point: Ciaotech Srl Ms Morena Rizzo Email: m.rizzo@ciaotech.com

Poster





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Public website



Advanced Service Search and Enhancing Technological Solutions for the European Digital Library

Welcome Why ASSETS Activities & Impact Partners Get Involved! What's New Wiki Documents Developers

•Welcome

ASSETS is a 2 year project- co-funded by the CIP Policy Support Programme- which aims to improve the usability of Europeana by developing, implementing and deploying software services focused on search, browsing and interfaces. ASSETS strives also to make more digital items available on Europeana by involving content providers across different cultural environments.

ASSETS is notably addressed to: Museums/Galleries, Libraries, Archives, Research & Education Organizations, Cultural Portals, Publishers, Private companies active in digital libraries.

Discover how to get involved according to your profile and be one of the early adopters of ASSETS services

Services outline

Overview



ASSETS will provide Europeana with software services, applicable to all digital

- · Ingestion for metadata cleaning, enrichment and classification:
- · Indexing and Ranking algorithms for improved result:
- · Browsing and Characterisation of multimedia objects;
- . Digital Preservation for planning and guaranteeing long-term access and usability of content;
- · Community for supporting user generated content.



providers such as museums, libraries and archives to contribute their content to Europeana in a standardised and effective way. This process will generate enriched, clean and classified metadata, thereby increasing search precision and improving the user's browsing experience. High quality results and enhanced object previews will increase the search recall and user satisfaction.



ASSETS provides the possibility to exchange information between portal users and the digital library, offering advantages to both. Users can enrich the library's resources with the results of their work and the libraries will improve the description of their objects. The added value of these services consists in the creation and recombination, and information presentation in line with user preferences.



customised content, knowledge extraction



Sign In You are signed in as Silvia

Indexing and Ranking



ASSETS offers advanced indexing and ranking techniques for the efficient and effective retrieval of multimedia objects. Indexing functionalities are provided for image/ video/audio/3D formats, which offer the possibility to perform multimediamediabased similarity searches. The feedback from Europeana users improve the quality and precision of the retrieved results.

Browsing & Characterization



This allows users to search, browse, navigate and view media content with the aim of enriching the user experience and offering customised search results. Semantic links are established between the different media objects in order to improve access to interesting information. The users' behaviour is exploited to enhance the presentation of search results

Digital Preservation



ASSETS provides a set of services which prepare the ground for digital preservation:

- · Risk Management: identification and monitoring of potentially occuring events:
- · Notification: track, report, notification, communication and management procedures for events that could impact on long term content access:
- · Normalization: enacts preservation plans.

www.assets4europeana.org





- a. Dissemination objectives
- b. Dissemination strategy
- c. Communication tools
- d. Dissemination initiatives
- e. Community aggregation
- f. Synergy with other initiatives





Dissemination actions

Initiatives	numbers
Press releases	35 online magazines
Conferences (Awareness raising)	More than 50
Conferences (Speaker)	5
Papers	19
Contacted Organisations	~ 130
Internal workshops	10

Date	Conference or Book	Title	Partner involved
07/12/10	SocPar 2010, Intl. Conference on Soft	TIGER: Querying Large Tables through Criteria Extension,	UPS
	Computing and Pattern Recognition,	Y.Pitarch D.Laurent P.Poncelet N.Spyratos	
20/01/11	GCOE Workshop	Preference Queries over Large Data Tables, N.Spyratos	UPS
20/01/11	7th Italian Research Conference on	Taxonomy Based Notification Service for the ASSETS Digital	UPS
	Digital Libraries	Library Platform J.Yang, T.Sugibuchi, N.Spyratos,	
22/03/11	International Journal of Digital	A Data Model for Digital Libraries C.Meghini, N.Spyratos,	UPS, CNR
	Libraries,	J.Yang, ,	
29/03/2011	WWW'11	Efficient Diversification of Search Results using Query Logs	CNR
		(poster)	
29/03/2011	WWW'11	Recommendations for the Long Tail by Term-Query Graph	CNR
		(poster)	
13/06/11	CBMI2011	"Efficient Video Summarization and Retrieval Tools" in Special	UAM
		Session on Indexing and Retrieval of Multimedia Cultural	
		Heritage Objects	
10/09/2011	Berlin, TPDL 2011	Paper proposal on User Generated Content	CNR
15/09/2011	Berlin, TPDL2011	Paper proposal on User Generated Content	EDLF
26/9/11	TPDL 2011	Joint paper submitted	AIT
18/10/2011	SPIRE'11	International Symposium on String Processing and Information	CNR
		Retrieval	
01/11/11	iPres 2011	Paper submission planned	AIT
15/12/2011	ICDM'10	Document Similarity Self-Join with MapReduce	CNR
Sept. 2010,	The 14th European Conference on	Modelling Digital Libraries Based on Logic, , C.Meghini,	UPS, CNR
	Research and Advanced Technology	N.Spyratos, T.Sugibuchi,	
	for Digital Libraries (ECDL'10)		
Sept 2010	4th International Workshop on	Combining Preference Relations: Completeness and	UPS, CNR
	Personalized AAccess, Profile	Consistency, N.Spyratos, C.Meghini	/
	Management, and Context		
	Awareness in Databases (PersDB		
	2010, in conjunction with VLDB		
	2010),		
	International Conference on Theory	Design, implementation and evaluation of a user generated	SICS
	and Practice of Digital Libraries 2011	content	
	Advances in Intelligent Information		UPS
	Systems, Z.W. Ras and LS. Tsay		
	(eds) Springer Studies in		
	Computational Intelligence Vol. 265.		
	Springer Verlag 2010		



Conferences



Italian Information Retrieval Workshop 2011



CLASSICALPLANET.COM



minerva





europeana

open culture

13 Oct 2010 (pre-conference) The Hague 14-15 Oct 2010 Amsterdam







MUSIC HACKDAY Barcelona

MUSIC HACKDAY Cannes







Minerva

Knowledge Base

Digitising Content Together

The destination for music business connections and knowledge



Press release- interviews





assets

Tecnalia participa en el proyecto de mejora de la Biblioteca Digital Europea

ASSETS: Καινοτόμο ερευνητικό έργο για την βελτίωση της λειτουργικότητας της

Ευρωπαϊκής Ψηφιακής Βιβλιοθήκης Europeana



Τετάρτη, 17 Νοεμβρίου 2010

Η ΑΤC συμμετέχει σε κοινοπραξία για την υλοποίηση του ερευνητικού έργοι and Enhancing Technological Solutions for the European Digital Library), το



Quiz | Fora | Τρίτη 7 Ιουνίου 2011 Κεντρική σελίδα > Τεχνολογία > ASSETS: Για τη βελτίωση της Ευρωπαϊκής...

Επικαιρότητα Αναρωτηθήκατε ποτέ; Απόψεις Πορτραίτα Προτάσεις Φάκελοι

Αναλυτική παρουσίαση άρθρου ASSETS: Για τη βελτίωση της Ευρωπαϊκής Ψηφιακής Βιβλιοθήκης Τρίτη 8 Ιουνίου 2010 15:23 [Σχόλια: 0, Hits: 1] b Bobit!

24 συνεργάτες από 10 διαφορετικές χώρες συναντήθηκαν στη Ρώμη για την έναρξη του ASSETS (Advanced Service Search and Enhancing Technological Solutions for the European Digital Library), ενός

Ήταν μια πολύ σημαντική και ενδιαφέρουσα συνάντηση και θα πρέπει να ευχαριστήσουμε

προγράμματος που συγχρηματοδοτείται από την Ευρωπαϊκή Επιτροπή.

Ŭ Login ASSETS: Για τη βελτίωση της Ευρωπαϊκής Ψηφιακής Βιβλιοθήκης Εγγραφή ΕΙΔΗΣΕΙΣ Λιαδίκτυο

24 συνεργάτες από 10 διαφορετικές χώρες συναντήθηκαν στη Ρώμη για την έναρξη του ASSETS (Advanced Service Search and Enhancing Technological Solutions for the European Digital Library), ενός προγράμματος που συγχρηματοδοτείται από την Ευρωπαϊκή Επιτροπή.

ΠΑΡΟΥΣΙΑΣΕΙΣ Στόχος του είναι να βελτιωθεί η ΒΗΜΑ ΠΡΟΣ ΒΗΜΑ λειτουργικότητα της Europeana, της Ευρωπαϊκής Ψηφιακής Βιβλιοθήκης FAQ (NEW) (www.europeana.eu), αναπτύσσοντας **BESTLINKS**

07.06.2011 FORUM | ANOIXTH ΓΡΑΜΜΗ | ΕΠΙΚΟΙΝΩΝΙΑ | SITEMAP

ΙΟΥΝΙΟΣ 2011

ΣΥΛΒΙΑ ΜΠΟΙ ΣΥΝΤΟΝΙΣΤΡΙΑ ΠΡΟΓΡΑΜΜΑΤΟΣ



assets

DER TECHNOLOGIE PRESS

Pressefach: PNO Consultants GmbH

Ασφάλεια

Νέα προϊόντα

Χρήση Υπολογιστών

Meldungen aus diesem Pressefach als 🔊 RSS Feed 🖂 E-Mail Ab





Κυκλοφορεί... και δεν αφήνει απορίες.

Pressemitteilung BoxID 426407

Alle Meldungen Firmeninfo

Alle Ansprechpartner

ASSETS - Netzwerk zur Verbesserung der europäischen digitalen Bibliothek Europeana

ASSETS ist ein auf zwei Jahre angelegtes Best Practice Netzwerk zur Verbesserung der Nutzerfreundlichkeit der europäischen digitalen Bibliothek Europeana





Planned ASSETS Initiatives-2011

- CBMI 2011, Madrid, June 2011
 - ASSETS Special session on Indexing and Retrieval of Multimedia Cultural Heritage



- ASSETS sponsor
- 2 papers submitted
- SPIRE 2011, Pisa, October 2011
 - ASSETS sponsor
 - workshop where preliminary results will be presented.











assets

Planned ASSETS Initiatives- 2012

- ASSETS Workshop in Luxembourg, Feb 2012
- « Digital innovation for culture, higher education & research ». Targeted to 60 attendees

With the collaboration of CVCE

- ASSETS International Workshop at UNESCO premises in Paris, mid March 2012
- Huge event, targeted to more than 100 attendees

With the collaboration of UNESCO and UPS





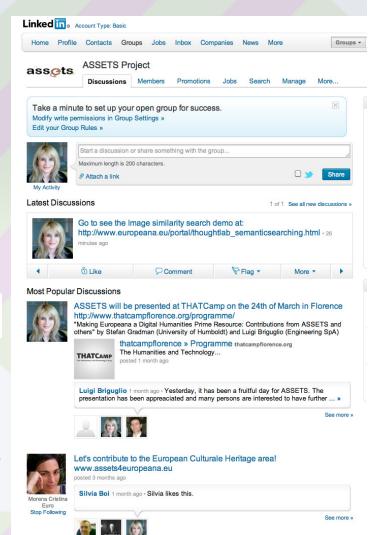
- a. Dissemination objectives
- b. Dissemination strategy
- c. Communication tools
- d. Dissemination initiatives
- e. Community aggregation
- f. Synergy with other initiatives





Community Aggregation (a)

- Contacted around 130 relevant organisations and experts:
- cultural organisations
- content providers,
- DL professionals,
- students, citizens, tourists, etc.
- ICT company and research centre
- Creation of the ASSETS Linked in group as first step to aggregate
 Community members
 - 89 members (39 internal to ASSETS + 60 external)





Community Aggregation (b)



- ASSETS User Community at: www.assets4europeana.eu
- Registration Form to collect members info.
- Members can access to:
 - Technical documentation
 - Tools, DEMOs
 - Communication Material
 - Invitation to ASSETS events

Currently we are waiting for the approval of the 1° year deliverables to officially open the ASSETS Web Community

Welcome Why ASSETS Activities & Impact Partners Get Involved! Are you interested in ASSETS? Join the ASSETS community! You will be one of the early adopte Europeana! Name of organization: Engineering Name of Department/ Institute/ Laboratory/ Unit: | D&D | aboratory Moreover you will have a preferer Nation: 194 Address: via S. Martino della Battadi Web site: www.eng.i Organisation email address Technical documentation Tools, DEMOs Phone number: +390649201 Communication Material Type of organization: (Please select your type of organization) Best Practices ePrivate · Information on ASSETS event Education establishment Cultural Heritage Organization/ As Museum/Archive/Gallery/Library ...and you will have the opportunit Main User Groups Digital Library organization Other (please specify): 2- Contact person details First name: Silvia E-mail: silvia.boi@eng.it 3 Sector of Interest and Activity Cultural Heritage sector Content Collection
Content Promotion
Content Preservation
Content Digitization
Metadata Aggregatio
Content provision
Final End user
Archive Cultural Heritage Institutions, Mu-Cultural Heritage Institutions, Mul Ublatory Science and Technology Broadcasters and Audio-Visual I Weichterweiter The Content providers are warml join ASSETS and upload/share n

Arts: Paintings/Sculptures/ Drawings/ Maps

Books/ Newspapers/ Archives /Manuscripts contents, enhancing objections of Folk/Traditions of Religion of Languages and Literature contents, enhancing object metal Books/ Other (please specify): Interest to be involved in ASSETS and Europeana Projects as Content provider at Final Ford User ASSETS SW services you are interested in: Risk Management service
Normalization service Metadata Classification Metadata Classification
Ingestion worklow
Data Repository/post quering prooMetadata based rarking
Text indexing and retrieval
Images indexing and retrieval
Auto Model Indexing and Retrieval
Auto Model Indexing and Retrieval
Cytiche survanzization, adeptation, in Notification service
Semantic cross-linking browsing
Interfaces for Ingestion and Query Log analysis
Multimedia characterisation tool
User interface improvements
Content creation by reuse / EDM prototype
Taxonomy based notification Description of organizations activities, products and services (max. 1.000 characters) ingineering is the biggest Italian ICT service provider. The R&D department beasts tens of funder rejects and proposes innovation to the Company business unit. Do you already use Europeana portal? Yese - No Do you want to supply content to the Europeana portal? Yesn - Nos



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- a. Dissemination objectives
- b. Dissemination strategy
- c. Communication tools
- d. Dissemination initiatives
- e. Community aggregation
- f. Synergy with other initiatives





Synergy with other projects

- ASSETS is part of Europeana Group of Projects
- Coordination is guaranteed by periodic ECAB meetings



- Project SHARE:
 - Provide integrated open access to Europeana project results by topic for all.
 - Archive the products of projects that have come to the end of their life-cycle.
 - Information provided will be made open access to all.
 - The key benefits identified were also twofold:
 - Increase visibility of the work done, also to increase standing in the cultural heritage community
 - Promote the broader re-use of project results by the cultural heritage community
- CARARE: provision of 3D models for 3D similarity search
- Europeana Connect: dissemination group





THANKS FOR YOUR ATTENTION!





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Inspire Improve Impact





WP1.1 Networking dissemination and exploitation

Exploitation Plan

Morena Rizzo, Ciaotech Srl

Luxembourg

10th of June, 2011





EXPLOITATION PLAN

- Objectives and Pillars
- Current status
- Pay for use services
- Targeted Users
- Business Models
- Individual exploitation
- Next steps



ASSETS Exploitation Plan



Objectives:

 Definition of a strategy for the commercial exploitation of project outputs and developed services....

To

Make ASSETS viable after EC funding

Pillars:

- Identification of ASSETS' offer: pay for use services
- Identification of ASSETS' targeted markets and users
- Analysis of business and technological framework
- Existing Competitors
- Suitable business models: pricing policies
- Partners' Individual exploitation

ASSETS Business Plan: due at M24





- Objectives and Pillars
- Current status
- Pay for use services
- Targeted Users
- Business Models
- Individual exploitation
- Next steps





Current Status:

Identification of pay-for-use services;

Main exploitable services already identified. Discussion with partners during meetings and confcalls

Identification of targeted markets and users;

Macro categories already identified.

Identification of Business Model;

Discussion within the consortium about applicable pricing policies to different services. Identification of main pricing strategies

ASSETS partners' individual exploitation.

Questionnaire about benefits and exploitation plans already filled in by each partner





- Objectives and Pillars
- Current status
- Pay for use services
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Pay for use services

Services for markets/industries, considered as final end users

1) Advanced Search services

SW and tools to support indexing, retrieving, aggregating, and creatively exploiting of different textual, non-textual, multimedia and complex objects

2) Ingestion Services

Allowing Normalization, cleaning, knowledge extraction and mapping to generate enriched, clean and classified metadata

3) Digital Preservation services

Preservation assessment. Identification of Risks. Preservation plans.

Preservation implementation





Pay for use services

Services for markets/industries, considered as final end users

4) Community Services supporting user generated content

Exchange of information between users and database owner, personalized contents.

5) ASSETS as Aggregator

- ASSETS aggregates content and makes it available with search services to targeted end users through yearly fees, subscription, etc.
- Direct services towards citizens or SMEs (pharma, medical, legal etc).

6) Consultancy Services

• Small Cultural Heritage organisations without IT departments will be interested in support but also consultancy, advice, system integration and customisation services.

7) Training Services

 These tailored services concern IT Systems to be provided to the customers: use and maintenance of the provided IT tools, usage of the services.





- Objectives and Pillars
- Current status
- Pay for use services
- Targeted Users
- Business Models
- Individual exploitation
- Next steps





Targeted Users' features

- Large Content database
- Make available to External users this content through advanced search services
- Internal users make advanced multimedia content search
- Need to offer customized services and content
- Need for digital preservation





Main Customers

- Museums/ CH Institutions (GLAM)
- Content Providers for Digital Media
- Technology Service Providers
- Ministries and Government Institutions
- Educational/Tourism Institutions
- Virtual Archaelogical Sites

...any organization concerned with managing scientific and cultural information...

Final Consumers

- Curators, researchers, professors, experts and professionals people involved with cultural activities, Customers' clients
- Citizens and Tourists





Targeted Users Matrix: example

	Museu m/Libra ry/Foun dation	Archives	Education/I earning	Tourism	Entertainme nt
Large Content database	5	5	5	5	3
External users use adv. search services	5	5	5	5	5
Internal users use adv.search services	5	5	3	2	3
Digital preservation needs	5	5	2	5	2

Once identified in detail, targeted users will be mapped and ranked against offered services and applicable business model





- Objectives and Pillars
- Current status
- Pay for use services
- Targeted Users
- Business Models
- Individual exploitation
- Next steps





Business Model

- 1. Revenues related to sw platform set up and customization+ (licensing as an option)
- 2. SaS: Yearly fee
- 3. Revenues linked to subscription to use the advanced search services
- 4. Revenues linked to the acquisition of specific information packages
- 5. Revenues linked to advertisement
- **6. Consultancy Services**
- 7. Training services. Packages.





- Objectives and Pillars
- Current status
- Pay for use services
- Targeted Users
- Business Models
- Individual exploitation
- Next steps



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Partners' Individual Exploitation

Individual Exploitation Questionnaire

Overview of ASSETS partner and its involvement in the project.	Description
Name of your Company or Institution	
What is the main reason for your participation in the ASSETS project	1 -2 sentences
What is the future strategy of your company/institution in the field of digital libraries	2-3 sentences
<u>Direct</u> Exploitation of outcomes of ASSETS project	Description (Please describe how do you plan to exploit the main results of the ASSETS project – on the level of your institution, but also on the national/EU level). PLEASE REFER TO SPECIFIC SERVICES AND TOOLS DEVELOPED WITHIN ASSETS



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Partners' Individual Exploitation

Individual Exploitation Questionnaire

Description
Please indicate if you plan to perform some of the
listed activities and <u>if yes, describe how and in what</u>
<u>extent</u>
Please highlight here other ideas on how the results
of ASSETS could be exploited.





- Objectives and Pillars
- Current status
- Pay for use services
- Targeted Users
- Business Models
- Individual exploitation
- Next steps





Next Steps

Pisa (IT), September 2011:

Specific Assets Workshop on Exploitation, with partners responsible for services development;

End September 2011:

Marketing survey among ASSETS content providers and ASSETS community about developed services

Within end of 2011

Draft of the Business Plan

• <u>M24:</u>

Business Plan final version.





Next Steps

Business Plan Focal points

- **Description of ASSETS services: offer**
- Analysis of technical and business frameworks; 🖈



- Description of usage scenario: market segments and requirements
- Competitors and existing reference services *
- Partners' Individual exploitations
- **Business Models: Strategy and Revenues**
- Pricing Policies





ASSETS WP1.1

THANKS FOR YOUR ATTENTION!



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1st YEAR PROJECT OVERVIEW

Author: Maria Luisa Porro

Engineering Ingegneria Informatica S.p.A.

Date: June 10th 2011

Location: Luxembourg





Particip ant n.	Legal name	Short name
1	Engineering Ingegneria Informatica S.p.A	ENG
2	Athens Technology Center S.A.	ATC
3	AIT Austrian Institute of Technology GmbH	AIT
4	Exalead	EXALEAD
5	Consiglio Nazionale delle Ricerche	CNR
6	Stichting European Digital Library	EDLF
7	BMAT Licensing S.L.	BMAT
8	Fundacion Robotiker	ROBOTIKER-TECNALIA
9	SICS Swedish Institute of Computer Science AB	SICS
10	Institut National de l'Audiovisuel	INA
11	Universidad Autonoma de Madrid	UAM
12	Centre for Research and Technology Hellas	EKETA CERT
13	Universite Paris-Sud XI	UPS
14	Centre Virtuel de la Connaissance sur l'Europe	CVCE
15	Deutsche Welle	DW
16	Fondazione Accademia Nazionale di Santa Cecilia	ANSC
17	Liberis Publications	LIBERIS
18	Hellenic Archive of Scientific Culture	HASC
19	Dias Publishing Public Ltd	DIAS
20	Fundacion Albeniz	ALBENIZ
21	Ciaotech S.r.I.	CIAOTECH
22 (*)	United Nations Educational, Scientific and Cultural Organization - UNESCO	UNESCO
23	Fondazione Biblioteca Archivio Luigi Micheletti	FLM
24 (*)	National University Corporation Hokkaido University	MMLHU

^(*) no EC contribution





Reporting Period 1: Administrative Issues

• Effort

- Effort Overview
 - » spent EFFORT PER W.P. in comparison with Total Planned
 - » EFFORT DISTRIBUTION PER PARTNER (PM)
 - » spent EFFORT PER PARTNER in comparison with Total Planned

Costs

- Costs Overview
 - » OTHER EXTERNAL COSTS OVERVIEW
 - » COSTS AND CONTRIBUTION M1-12 PER PARTNER

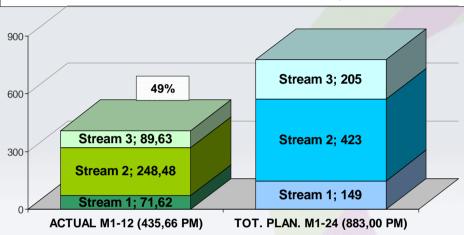


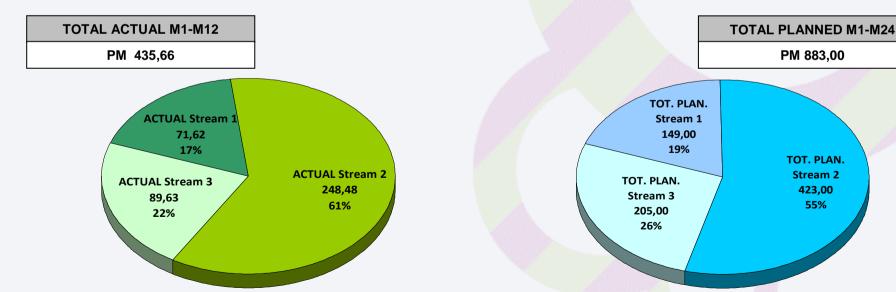
REPORTING PERIODS

1°RP (01-04-2010 31/03/2011) 2°RP (01-04-2011 31/03/2012)

24 months

THE EFFORT SPENT DURING MONTHS 1-12 IS 435,66 PM THE TOTAL USE OF RESOURCES MONTHS 1-12 REPRESENT THE 49% OF THE TOTAL PLANNED OF 883,00 PM



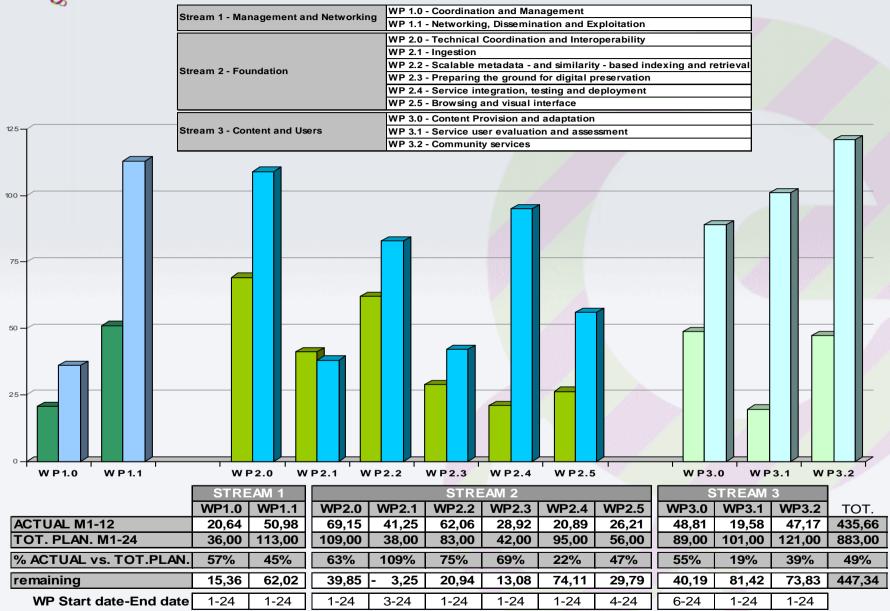


55%



assets RP1 – spent EFFORT PER WP in comparison with Total Planned

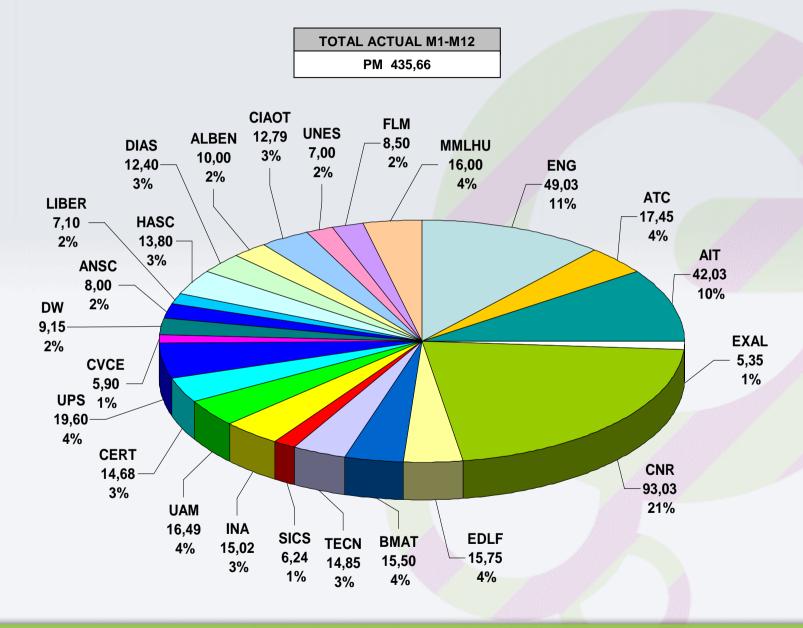










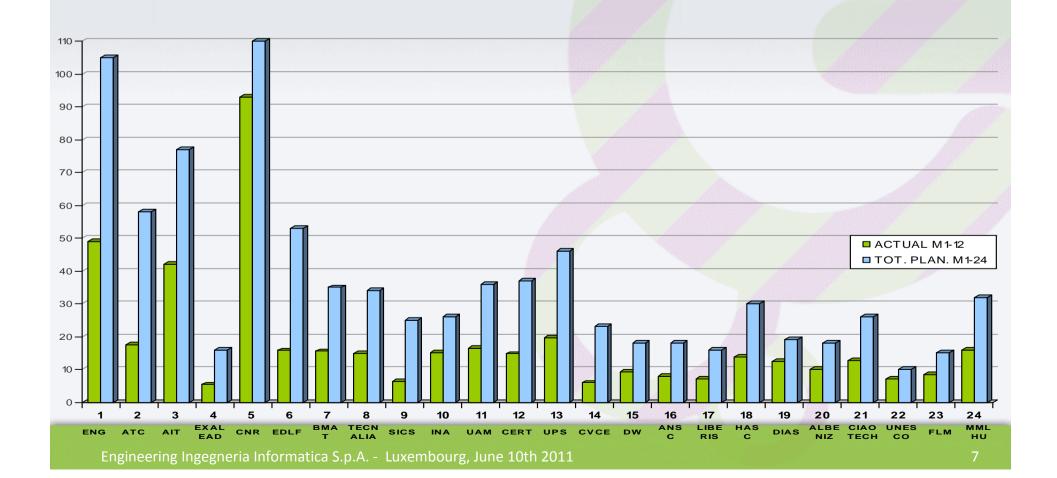




assets RP1 – spent EFFORT PER PARTNER in comparison with Tot. Planned



	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	ı
	ENG	ATC	AIT	EXAL EAD	CNR	EDLF	вмат	TECN ALIA	sics	INA	UAM	CERT	UPS	CVCE	DW	ANSC	LIBE RIS	HASC	DIAS	ALBE NIZ	CIAO TECH	UNES	FLM	MML HU	
TOT.STREAM 1	21,25	2,24	0,75	0,00	4,94	1,28	1,50	1,80	2,54	0,00	0,00	0,78	3,60	1,10	1,15	2,50	1,00	2,50	1,90	1,00	12,79	5,00	1,00	1,00	71,62
TOT.STREAM 2	26,28	14,28	40,65	5,35	78,19	6,78	12,50	10,30	2,67	10,29	16,49	13,70	5,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00	6,00	248,48
TOT.STREAM 3	1,50	0,93	0,63	0,00	9,90	7,69	1,50	2,75	1,03	4,73	0,00	0,20	11,00	4,80	8,00	5,50	6,10	11,30	10,50	9,00	0,00	2,00	7,50	9,00	115,56
ACTUAL M1-12	49,03	17,45	42,03	5,35	93,03	15,75	15,50	14,85	6,24	15,02	16,49	14,68	19,60	5,90	9,15	8,00	7,10	13,80	12,40	10,00	12,79	7,00	8,50	16,00	435,66
TOT PLAN. M1-24	105,0	58,0	77,0	16,0	110,0	53,0	35,0	34,0	25,0	26,0	36,0	37,0	46,0	23,0	18,0	18,0	16,0	30,0	19,0	18,0	26,0	10,0	15,0	32,0	883,0
% ACTUAL	47%	30%	55%	33%	85%	30%	44%	44%	25%	58%	46%	40%	43%	26%	51%	44%	44%	46%	65%	56%	49%	70%	57%	50%	49%







Reporting Period 1: Administrative Issues

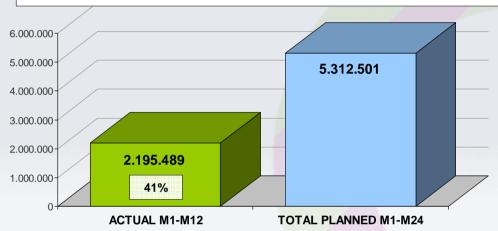
- Effort
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- Costs
 - Costs Overview
 - » OTHER EXTERNAL COSTS OVERVIEW
 - » COSTS AND CONTRIBUTION M1-12 PER PARTNER

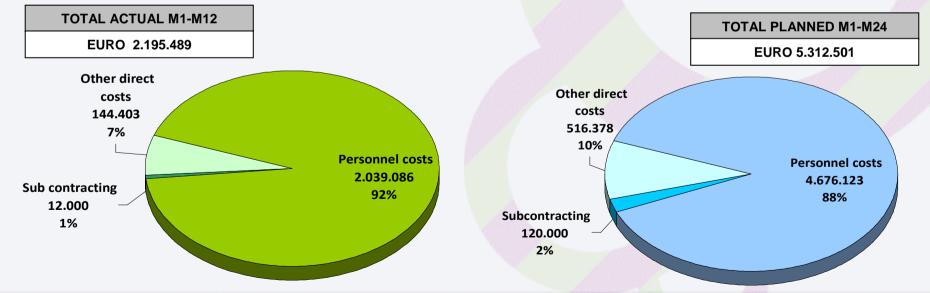




THE COSTS INCURRED DURING MONTHS 1-12 IS 2.195.489 EURO

AND REPRESENT THE 41% OF THE TOTAL PLANNED OF 5.312.501 EURO





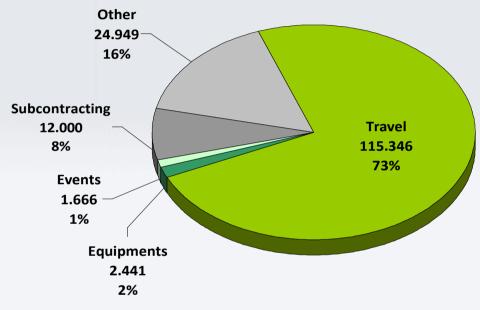


assets RP1 - OTHER EXTERNAL COSTS OVERVIEW



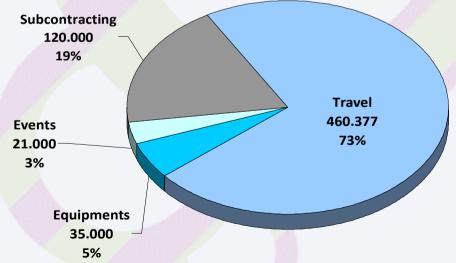
TOTAL ACTUAL OTHER EXTERNAL COSTS M1-M12

156.402 EURO (including subcontracting)



TOTAL PLANNED OTHER EXTERNAL COSTS M1-M24

636.377 EURO (including subcontracting)





assets RP1 – COSTS AND CONTRIBUTION M1-12 PER PARTNER



		COSTS									EFFOR	RT (PM)			
					ACTUAL	. M1-M12					PLANNED -M24		Ве			
Be nef	short	Person	nel costs	Sub co	ntracting	Other di	rect costs	TOTAL	ACTUAL	тот.	ACTUAL vs.	ne fic	ACTUAL	TOT. PLANNE	ACTUAL vs.	
ry n.	name	Costs	Requested grant to the budget	Costs	Requested grant to the budget	Costs	Requested grant to the budget	Costs	Requested grant to the budget	Costs	Requested grant to the budget	TOTAL PLANN ED	iar y n.	M1-M12	D M1- M24	TOTAL PLANNE D
1	ENG	287.772	230.217	12.000	9.600	3.034	2.427	302.805	242.244	700.878	560.702	43%	1	49,03	105,00	47%
2	ATC	87.113	69.690			9.317	7.454	96.430	77.144	408.000	326.400	24%	2	17,45	58,00	30%
3	AIT	221.104	176.883			10.506	8.405	231.610	185.288	424.900	339.920	55%	3	42,03	77,00	55%
4	EXALEAD	26.337	21.070			6.236	4.989	32.573	26.058	124.000	99.200	26%	4	5,35	16,00	33%
5	CNR	373.267	298.614			10.371	8.297	383.638	306.910	630.000	504.000	61%	5	93,03	110,00	85%
6	EDLF	83.619	66.896			15.002	12.002	98.621	78.897	508.845	407.076	19%	6	15,75	53,00	30%
7	BMAT	56.648	45.318			2.865	2.292	59.513	47.611	203.750	163.000	29%	7	15,50	35,00	44%
8	ROBOTIKI	71.023	56.819			7.193	5.755	78.216	62.573	191.224	152.979	41%	8	14,85	34,00	44%
9	SICS	83.636	66.909			4.737	3.790	88.373	70.698	193.000	154.400	46%	9	6,24	25,00	25%
10	INA	104.279	83.423			9.570	7.656	113.849	91.079	202.000	161.600	56%	10	15,02	26,00	58%
11	UAM	63.426	50.741			8.009	6.408	71.435	57.148	171.200	136.960	42%	11	16,49	36,00	46%
12	EKETACE	73.598	58.879			1.765	1.412	75.363	60.290	218.500	174.800	34%	12	14,68	37,00	40%
13	UPS	92.693	74.155			2.735	2.188	95.428	76.343	271.000	216.800	35%	13	19,60	46,00	43%
14	CVCE	41.300	33.040			8.118	6.494	49.418	39.534	176.000	140.800	28%	14	5,90	23,00	26%
15	DW	58.560	46.848			4.839	3.871	63.399	50.719	132.700	106.160	48%	15	9,15	18,00	51%
16	ANSC	42.660	34.128			3.541	2.832	46.201	36.961	100.104	80.083	46%	16	8,00	18,00	44%
17	LIBERIS	34.070	27.256			1.648	1.318	35.718	28.574	95.000	76.000	38%	17	7,10	16,00	44%
18	HASC	47.702	38.162			2.380	1.904	50.082	40.066	120.000	96.000	42%	18	13,80	30,00	46%
19	DIAS	55.941	44.753			24.704	19.763	80.645	64.516	95.500	76.400	84%	19	12,40	19,00	65%
20	ALBENIZ	36.431	29.144			3.484	2.787	39.915	31.932	87.000	69.600	46%	20	10,00	18,00	56%
21	CIAOTECH	52.864	42.291			3.270	2.616	56.134	44.907	166.400	133.120	34%	21	12,79	26,00	49%
22	UNESCO							-	-	-	-	0%	22	7,00	10,00	70%
23	FLM	45.043	36.034			1.078	863	46.121	36.897	92.500	74.000	50%	23	8,50	15,00	57%
24	MMLHU							-	-	-	-	0%	24	16,00	32,00	50%
		2.039.086	1.631.269	12.000	9.600	144.402	115.522	2.195.488	1.756.391	5.312.501	4.250.001	41%		435,66	883,00	49%





 As soon as the NEF reporting session is opened, we will upload the consolidated version of the periodic report, the financial statements of each beneficiary and the session will be submitted in the shortest time.

Thank you for your attention!