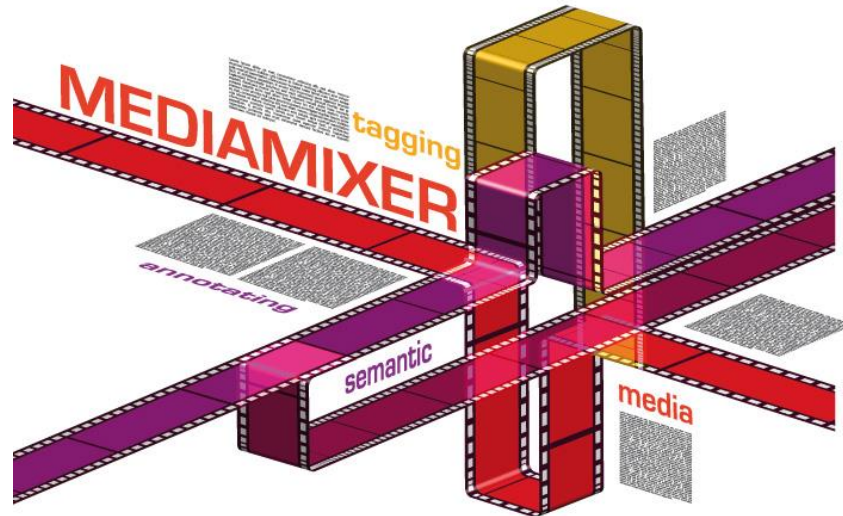


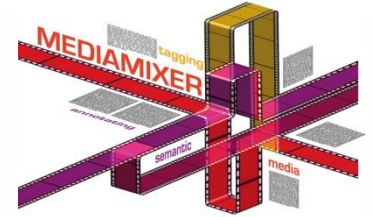
What is Media Mixing?

making media more valuable for its owner and more useful for its consumer



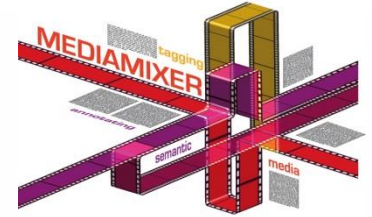
Lyndon Nixon
v1.0: 9-Sept-2013

Structure of the talk

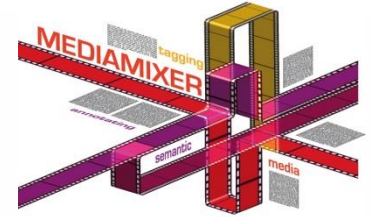


- Introducing: the EU project MediaMixer
- Trends in the enterprise: more creation and re-use of media assets
- The grand vision: a global market of media fragments
- Limitations of current media technology solutions
- The MediaMixer offer to your company

Introducing.. MediaMixer

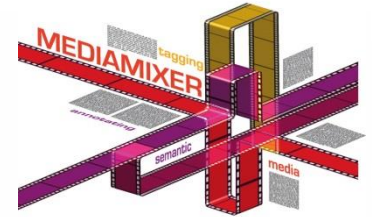


Key aspects of MediaMixer

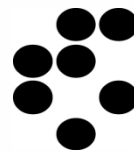


- “set up and sustain a **community** of video producers, hosters and redistributors...”
- “who will be supported in the **adoption** of semantic multimedia technology...”
- “to build an European **market** for media fragment re-purposing and re-selling.”

Expert organisations in MediaMixer



Universitat de Lleida



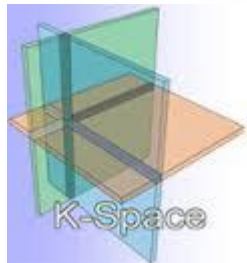
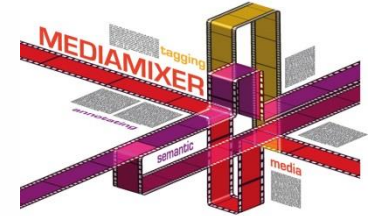
Institut "Jožef Stefan", Ljubljana, Slovenija



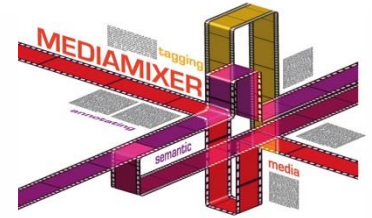
condat®

ACUITY
unlimited

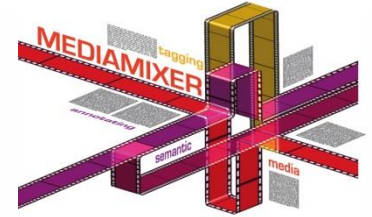
Years of R&D expertise led to this



Trends in the enterprise

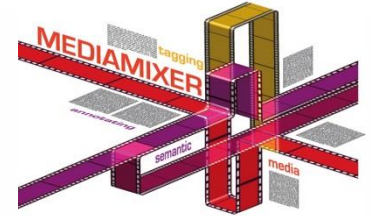


Access to audiovisual material is exploding



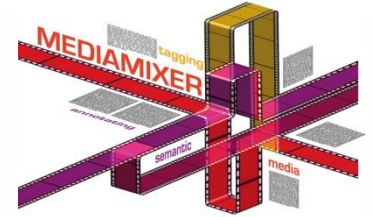
- EU has 2nd highest TV viewing figures, produces more films than any other region, hosts >500 online video platforms
- >42.7m hrs of footage in online archives of broadcasters and producers (61% of archive footage is online)
- 170 000 videos from broadcasters & cultural heritage archives at EUScreen, to be expanded by EUScreenXL (2013-6)
- UGC on the advance: e.g. YouTube receives 48 hrs of video/minute

Media hosting domain



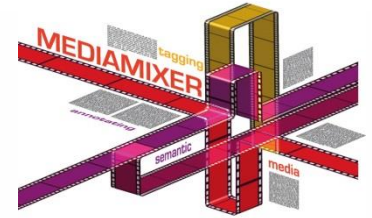
- Media archives sitting on huge amounts of valuable AV material but unable to effectively re-distribute or re-sell it.
- Original media owners would like to continue to benefit from the (online) availability of (older, long tail) content – currently content to make a free distribution (cf. open video) or use ad-supported hosting (eg. YouTube)

Media production domain



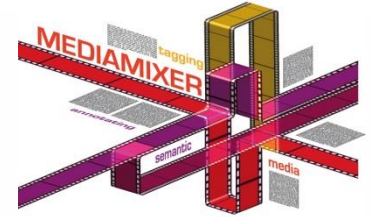
- More archive content being used in productions as substitute for original footage, to lower costs and save effort.
- More online and non-professional media production as tools become more accessible and affordable (media production becomes mass market).

Is online media being monetarized?



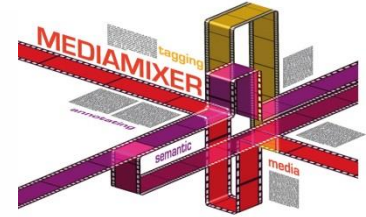
- Cultural industry (incl. AV sector) creates 3% of EU GDP, €500 bil market, 6 mil jobs
- Trade in media archive content had €430 mil revenue in 2009 with ca. 8% CAGR
- Video platforms (redistributing media) foresee \$2.1 bil revenue in 2012
- UGC largely untapped w.r.t. direct resale (revenue via advertising. Online video ad spend in 2011 was ca. \$3 billion)

Media creation & re-use growing in any industry



- Company data is increasingly multimedia: more images & video being produced and used
 - Internally, increased need to find media again, cost savings through re-use
 - Externally, media access and reprovisioning could be a new business channel for the company (whether monetary or promotional)

Media Re-selling



- Wrong: Instagram

Instagram apologizes to users: We won't sell your photos

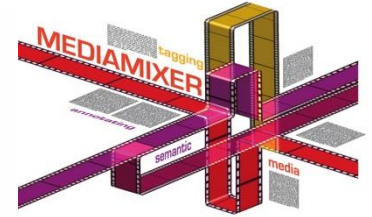
Facebook breaks its silence, pledging to "remove" language that sparked a revolt among Instagram users concerned their photos would be sold for advertising or marketing purposes.

- Right: Getty Images

...While it started out providing expensive images for limited use to a small group of customers, now it also provides cheaper images for broad use to a big group of customers...

<http://www.businessweek.com/articles/2012-08-23/gettys-pics-worth-1-000-words-and-3-dot-3-billion>

Stock footage is a growing market

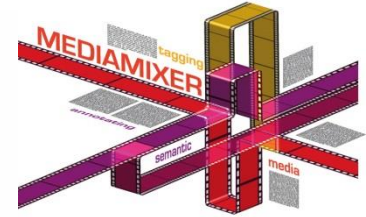


- Stock footage market: \$2.88 billion global revenue
 - 18% is original content (images)
 - 3-11% of the market is video (\$300 mil annually)

„It is growing at more than 20% per annum, fuelled by increased demands for new programming and the huge saving it represents compared with shooting new footage. Interactive technology and the Internet will further contribute to the growth of the market as it makes stock footage cheaper and easier to locate and license.“

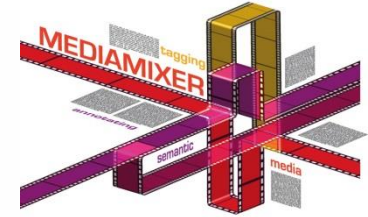
- <http://moneyam.uk-wire.com/cgi-bin/articles/200201020827103514P.html>

Stock footage from anyone for anyone



- UGC reselling in its infancy
 - NewZulu for user-sourced news video
 - ... a citizen journalism platform serving 100,000 photographers in more than 150 countries... the images contributed are licensed via the AFP Image Forum (more than 7000 clients globally)...
 - EyeEm looking to monetarize user photos
 - ... premise is that users can offer their photos for sale through the EyeEm Marketplace, while those looking for a type of image can place a request... has begun working with companies including Lufthansa and RedBull to offer EyeEm users revenue share in exchange for the licensing of their image.

Media Re-purposing



Harlem Shake

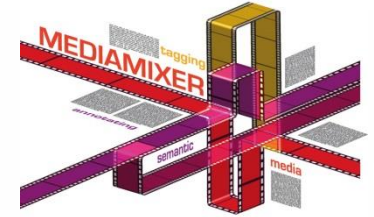
<https://www.youtube.com/watch?v=Bfuh3JOSfSg>

- Originally a free track
- Went viral on YouTube
- >100000 spin off videos with >400mil views (3/13)
- Music owners can „claim“ use of their IP on YouTube videos
- Revenue sharing on every ad click in a video

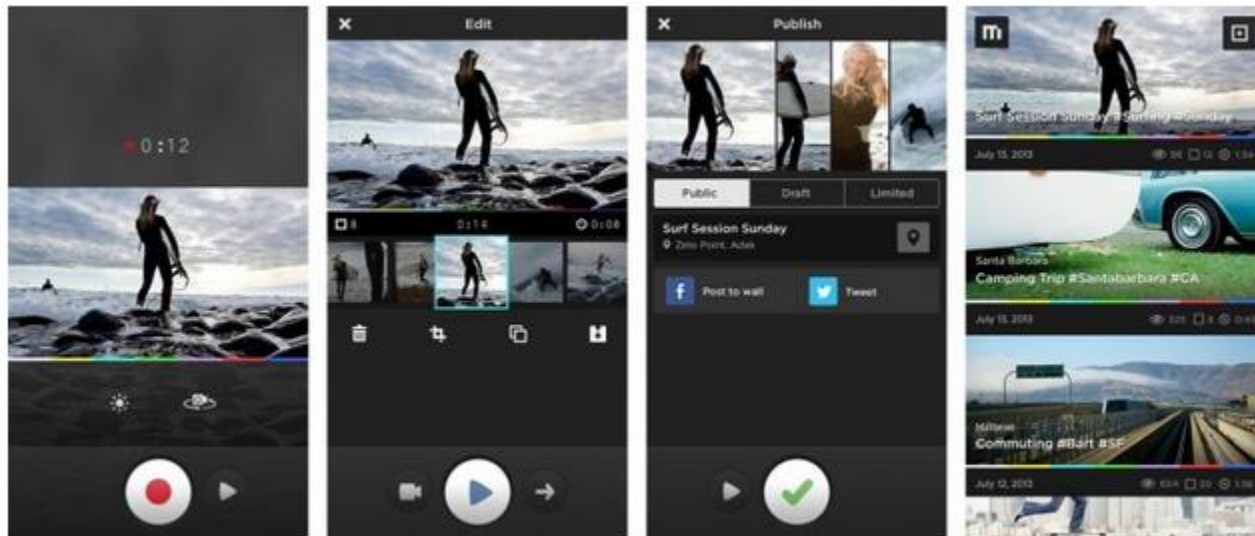


<http://www.thembj.org/2013/05/harnessing-the-harlem-shake/>

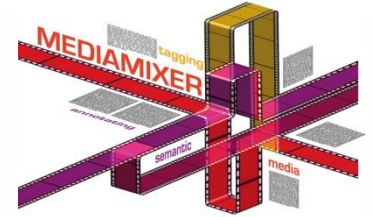
Media re-mixing within social video



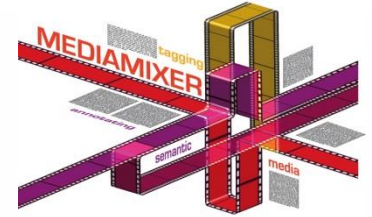
- MixBit encourages remixing & redistribution of user video



The grand vision...



Issues



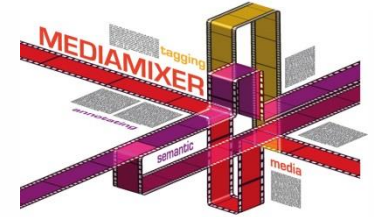
- Media reselling is „all or nothing“

Platforms generally offer all of the hosted media to everyone who wants it – but often a part is of interest rather than the whole → exchange is not made as only the whole is on offer.

Sellers may wish to distinguish between potential buyers. For buyers, finding and using a part of other's media has to be part of the media production process with a low barrier to entry.

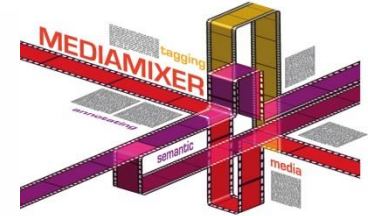
- Media and its (meta)data is now within reselling platforms and each platform is different

MediaMixer wants....



- To make media reselling a case of „all the media owner wants to offer“ to „all the media consumer actually needs“
- To give media owners finer control over WHO can do WHAT with their media
- To let media owners KEEP their media and its metadata and publish as much as they want to whatever third party reseller (or other media management system) when they want to

The MediaMixer hub



AV Content Provider



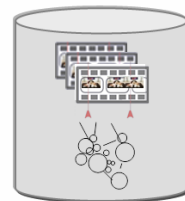
- 1) AV material analysis and annotation
- 2) Fragment Definition
- 3) Rights and Cost Assignment



- 4) Fragment Upload
- 5) Clearing (Sell)



Media Mixer Repository



annotated & linked Media Fragments

AV Content Demander



- 6) Search. Browsing
- 7) Rights and Cost Assessment
- 8) Download

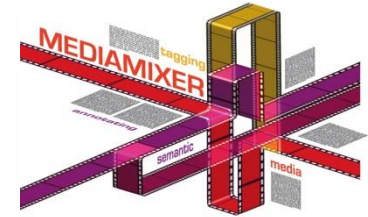


- 9) Composition of new AV materials
- 10) Clearing (Buy)

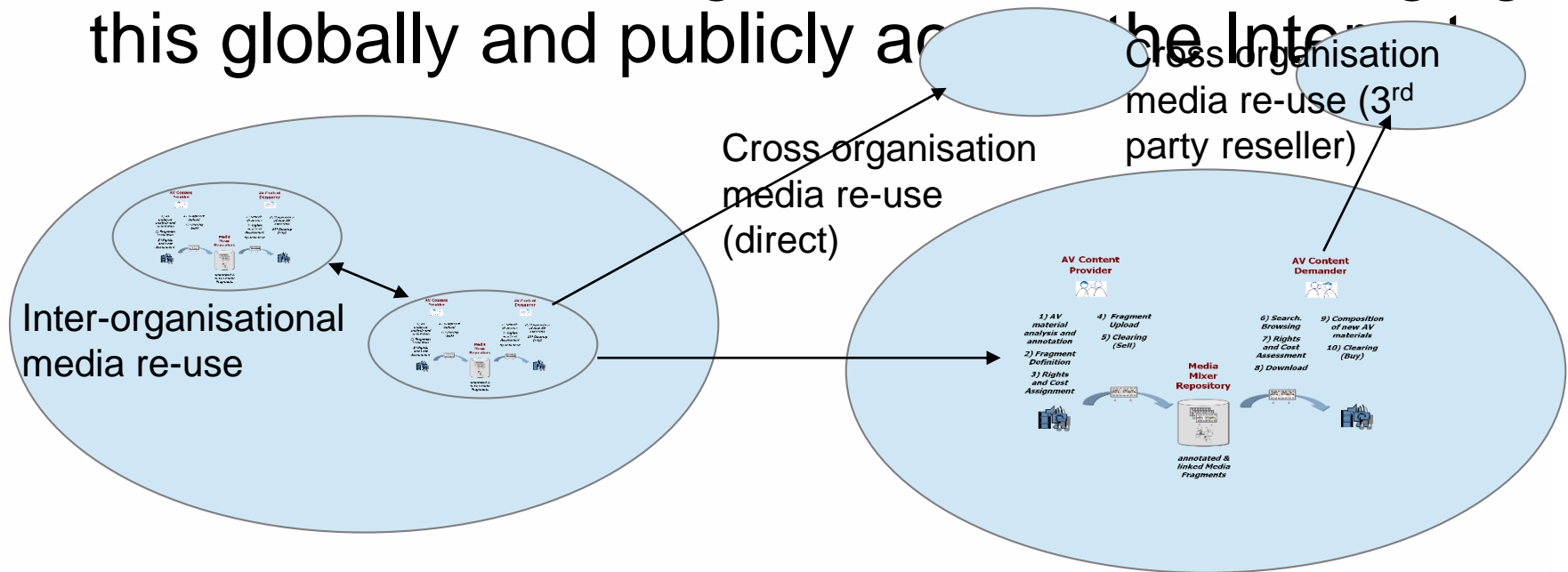


- Video analysis tools
- Video annotation tools
- Video metadata creation and publication
- Digital rights management
- Media search and retrieval
- Media negotiation, purchase and re-use

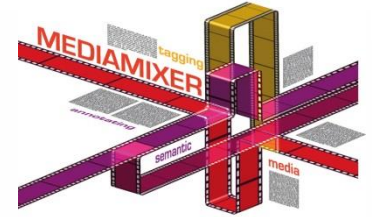
The Hub as Internet or Intranet



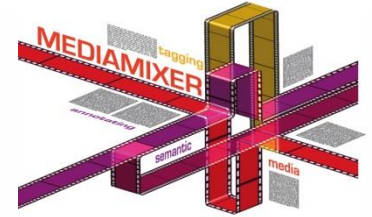
- The same IT solution can be applied to managing the access to and re-use of media assets within the organisation as to managing this globally and publicly across the Internet



Media management today



Media metadata

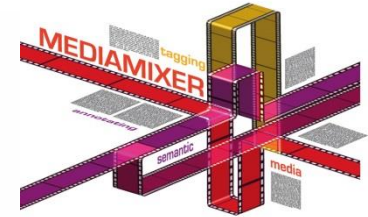


As media collections grow, how to find again a specific media item?

- Computers can only automatically extract low level media features while humans tend to query with high level “concepts” or “events”
 - Query by Example(QBE)
 - Content based Media Retrieval
 - Computer Vision

“Semantic gap” an ongoing research issue!

Media metadata (2)



Google creates neural network, teaches itself to recognize cats

By Rick Burgess

On June 27, 2012, 4:30 PM



Google engineers claim they've designed a computer network capable of analyzing, categorizing and ultimately teaching itself to recognize the content of images. The "neural network" was fed 10 million images from YouTube video thumbnails and -- without being told how -- created its own concept of what a cat is.

In fact, programmers found that the system had created a fuzzy, dream-like image of a cat's face from scratch (pictured to the right) as at least one generic reference used for identifying felines.



"We never told it during the training, 'This is a cat,' " said Dr. Dean, who originally helped Google design the software that lets it easily break programs into many tasks that can be computed simultaneously. "It basically invented the concept of a cat. We probably have other ones that are side views of cats."

Tech Spot on:



tsc travel Customize your experience!

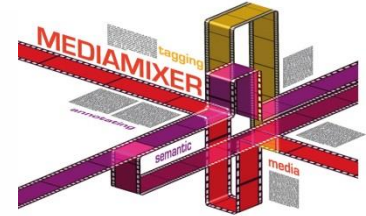
Most Popular

Trending



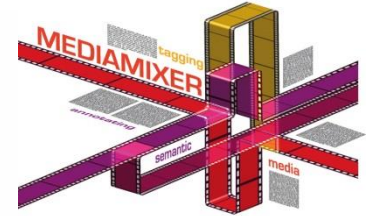
<http://www.techspot.com/news/49172-google-creates-neural-network-teaches-itself-to-recognize-cats.html>

Media metadata (3)



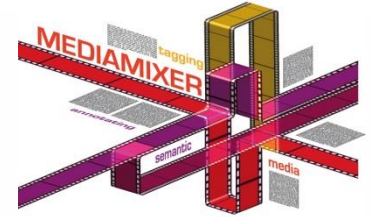
- Textual metadata has long been a key factor in media collections
 - Dublin Core has summarized the main fields for indexing and retrieval; different industries have developed richer metadata models
 - Manual entry by collection experts, varying terminology and interpretation
 - Increasing automated production of metadata from all available input sources (e.g. ASR, OCR, subtitling, transcripts, associated text)

Media metadata (4)



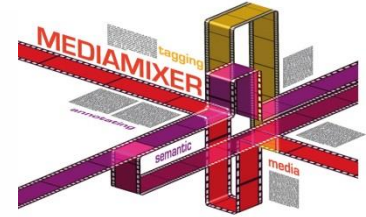
- Effective retrieval needs good query formulation
 - Controlled / known vocabularies
 - System learning, query suggestion or drill-down search
 - Term normalisation / mapping
- „Named entity recognition“ (NER) extracts distinct entities out of natural language text
 - Disambiguation & classification
 - Trend towards global unique identification

Media metadata: trade-off



- More metadata – better retrieval / computer supported re-use
 - More manual curation – more cost
 - More automated creation – less accuracy

Media management

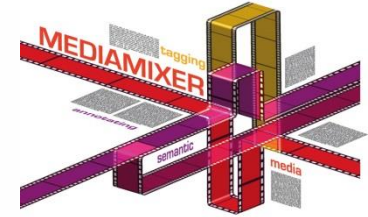


- Media asset = media object + metadata

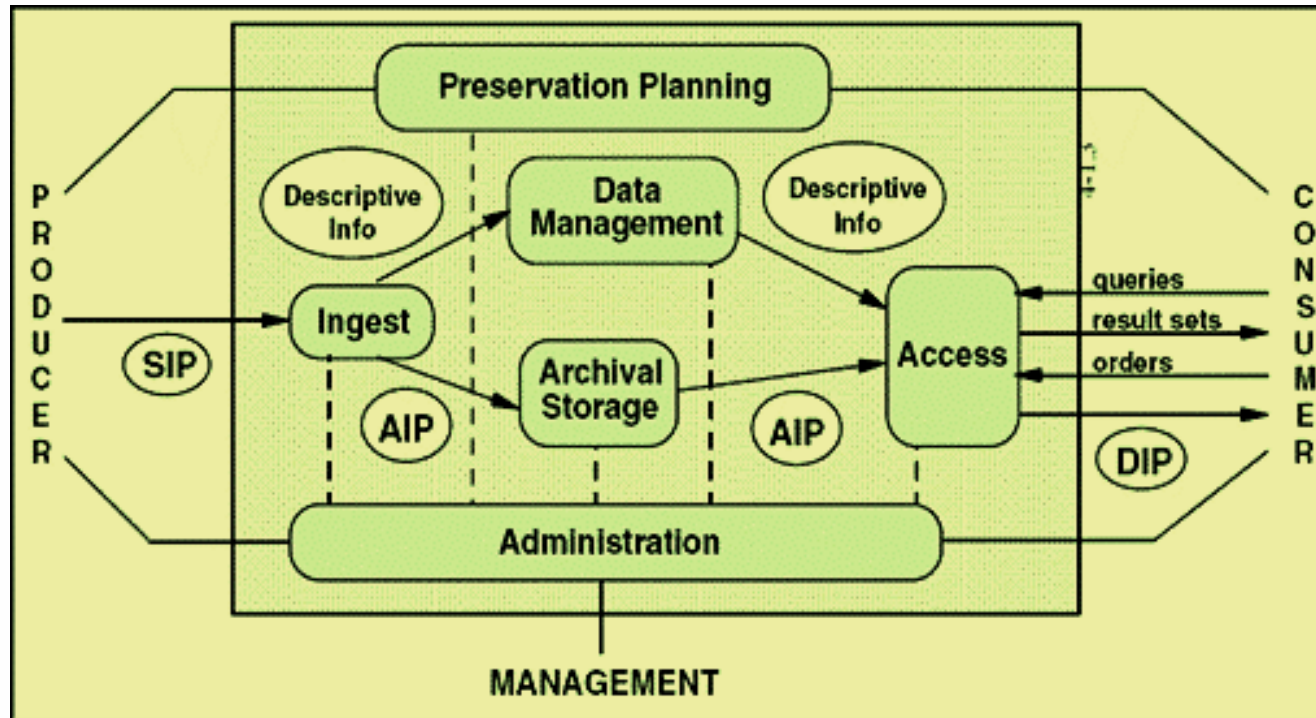
Media asset management system: “addresses the coordination of tasks that manage operations over media lifecycles, such as ingestion, annotation, cataloguing, storage, preservation, discovery, access control, retrieval and distribution of digital video assets.”

- Media asset identification: internal or according to an industry or Web authority
- Media object model: Decouple media assets and their metadata across different formats and target groups

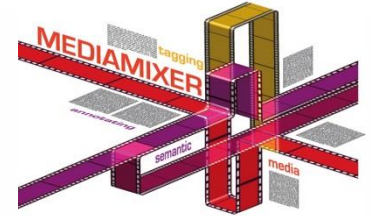
Media management



- OAIS provides a generalised view on digital preservation oriented media workflows

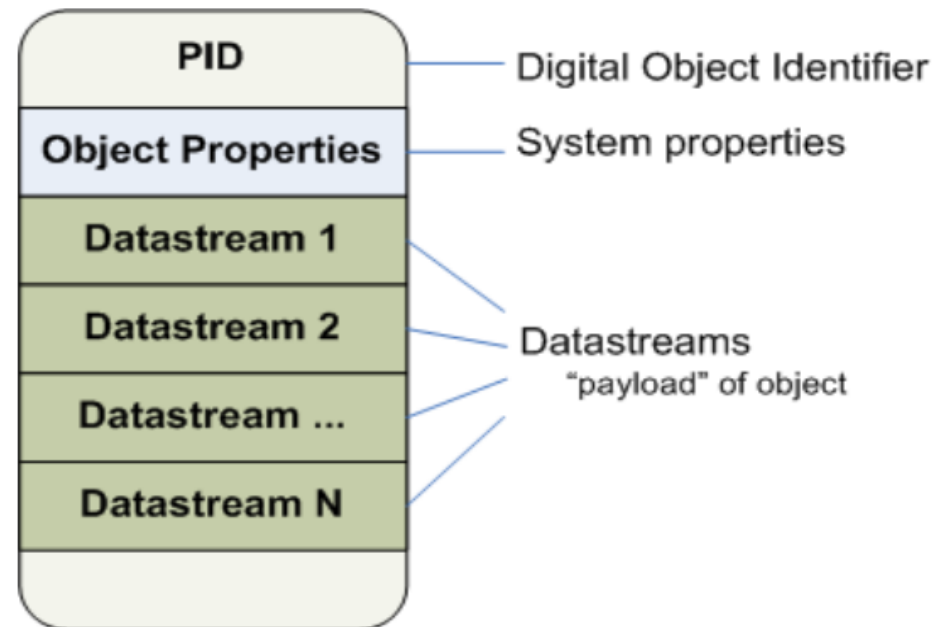


Media management example: Fedora Commons

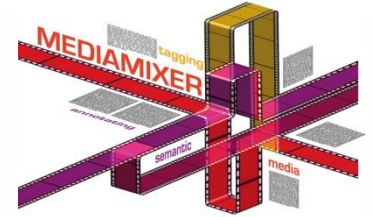


- Open source MAM system supporting OAIS model, and image/video as primary content type

Flexible media object model, distinguishing the object, with its persistent identifier, from its representations (*datastreams*) which are both media bitstreams and the associated metadata

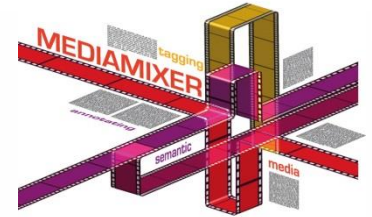


Media going to the cloud



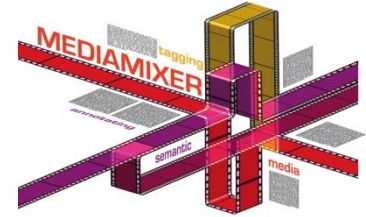
- MAM systems are increasingly **cloud** based
 - + Media owners don't have to install and maintain complex software locally
 - + All system processes run remotely – system updates, back-ups, media transcoding etc.
 - + Storage can be increased on demand
 - Not all organisations are comfortable with their media on remote servers
 - Internet connection dependent!

Issues around media management



- Identifiers are often specific to the MAM system
- Incompatible media rights expression languages (more likely: none used!)
- Incompatible media metadata descriptions (likely: not at a granular or semantic level)
- Systems tend to be monolithic regarding access control, permissions etc.

MediaMixer Core Technology Set



Media Fragment Specification

Media Annotation

Media Analysis

Media Fragment Search & Retrieval

Media Fragment Management

Media Rights Management

Webinar on
2 October

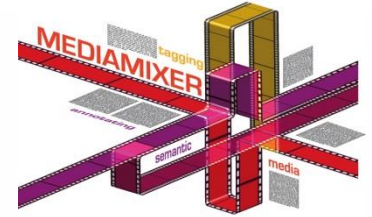
Webinar on
14 November

Webinar on
TBD

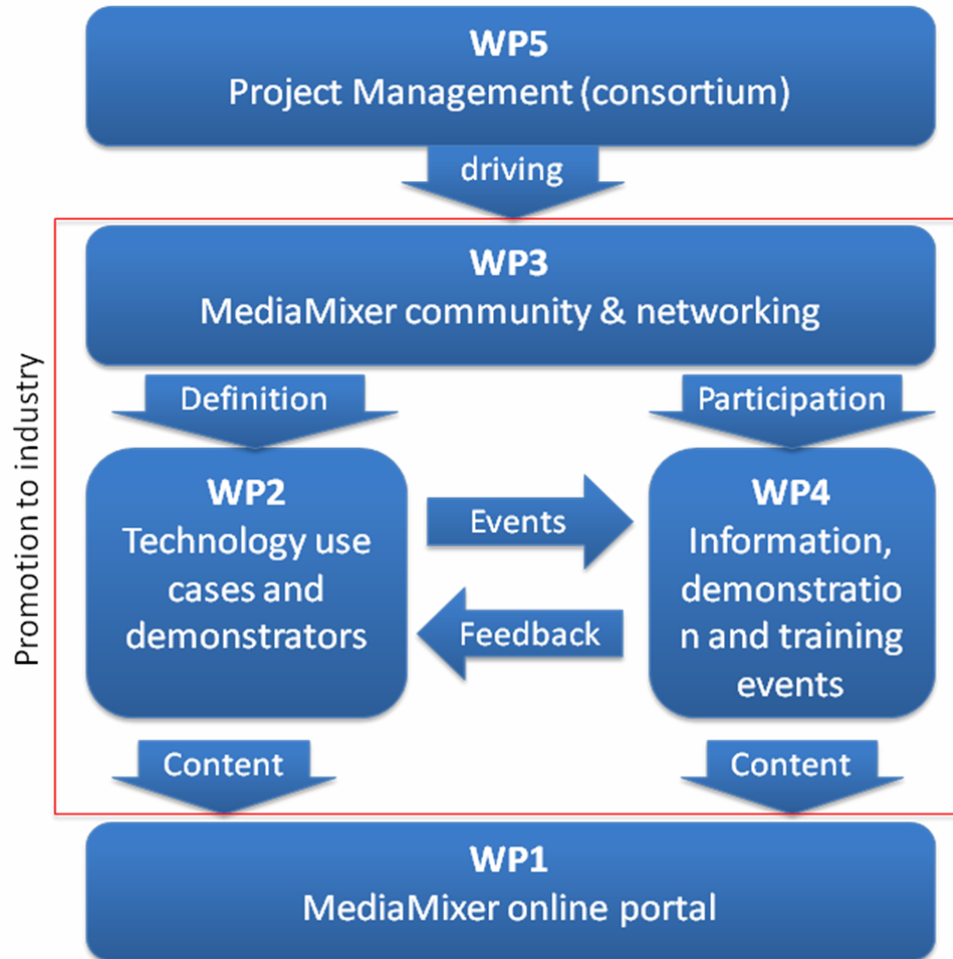
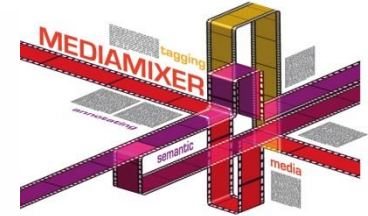
Webinar on
TBD

Download the Technical Report „MediaMixer Core Technology Set“ from
<http://community.mediamixer.eu/materials/tutorials>

The MediaMixer offer



Overview



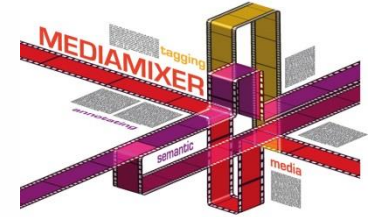
- An online portal (WP1)
 - repository for information
 - interactive forum for the community

- Use cases and demonstrators (WP2)

- Community set-up and maintenance (WP3)
- Industry co-operation (WP3)

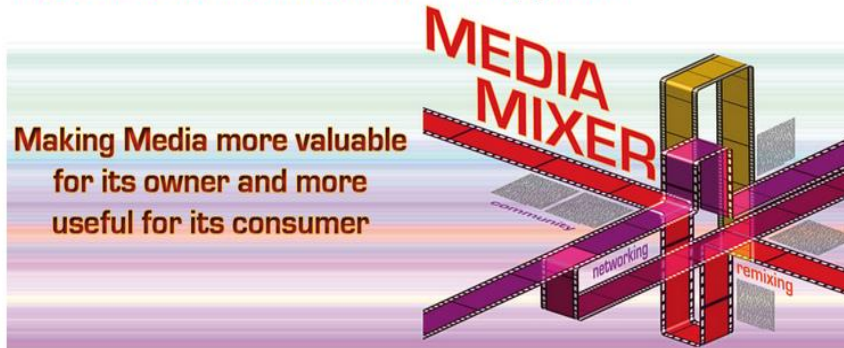
- Hold information, demonstration & training events (WP4)

MediaMixer community portal



You are here: Home

Welcome to the MediaMixer community portal !



<http://community.mediamixer.eu>

Free sign-up

Intro to all technology at community.mediamixer.eu/about

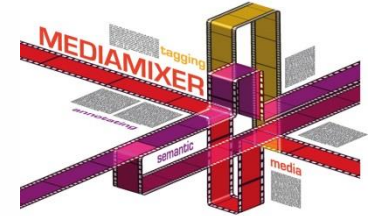
Updated with latest materials on all Media Mixer topics:

- Technology use cases
- Demonstrators
- Tutorials
- Presentations
- Software
- Specifications

Discussion fora for conversations on Media Mixer topics

- Events calendar

MediaMixer use cases & demonstrators



videolectures.net
exchange ideas & share knowledge

Browse lectures... RSS

View order

- Hot
- Popular
- Just published
- Recent
- Top Voted

Type of content

- Event (831)
- Lecture (11981)
- Tutorial (335)
- Keynote (787)
- Interview (223)
- External (71)
- Other... (1958)

Language

- Englisch (13931)
- Slowenisch (1080)
- Französisch (18)
- Deutsch (14)
- Holländisch (20)
- Kroatisch (47)
- Other... (36)

Year

Topics

Architecture (159) Arts (153) Astronomy (87) Biology (605) Business (1242) Chemistry (159) Computer Science (8521) Earth sciences (47) Environment (195) Events (1) Mathematics (887) Medicine (238) Military (33) Philosophy (96) Physics (350) Page 1 of 420

15946 items listed... Page 1 of 420 > Next Last

Learning Representations A Challenge for Learning Theory
Yann LeCun

Complexity Theoretic Lower Bounds for Sparse Principal Component Detection
Quentin Berthet

Is Intractability a Barrier for Machine Learning?
Sanjeev Arora

Honest Compressions and Their Application to

Online Learning for Time Series Prediction

Active and passive learning of linear separators under log-

SmartMediaStudioClient

http://www.media-.../2014/02/12/2014021201.html

Euro-Finanzhilfe billigen Griechenland-Sparplan
Bundrat fordert Gehaltskürzungen und Sanierungsplan

Die Euro-Finanzminister zwängen Griechenland den Sparplan auf. Sie sprachen sich in Brüssel vor dem anderen für Gehaltskürzungen und Arbeitslosenrenten für Griechenland aus, was es die EU-Kommission vorgehen lassen hat.

Unter dem Titel "Griechenland: Sparplan" werden die neuesten Nachrichten und Kommentare zu diesem Thema veröffentlicht.

Die Euro-Länder wollen zudem Instrumente zur Unterstützung Griechenlands in der Schuldenkrise beschließen, darüber aber die Öffentlichkeit nicht informieren. Sie haben ein schriftliches Papier über Griechenland der Öffentlichkeit zu sprechen, sagte der Chef der Euro-Finanzminister, Jean-Claude Juncker, am Montag.

Die Euro-Länder werden sich in den kommenden Tagen über die Sparpläne einig sein, sagte Juncker. Er sagte jedoch ebenfalls, dass die griechische Regierung im Sparplan einen Umsturz vermeiden und sich dem nicht anfertigen werden, was auch zum Einsatz zu bringen. Das Finanzministerium brachten sich, obwohl sie die meisten, dass die Griechenland in die Krise bringen können? sagte Juncker.

Die Finanzminister aus der Euro-Zone greifen sich Griechenland, weil die Euro-Minister, die die griechische Sparpläne nicht akzeptieren. Vorher die Sparpläne sollten kurz vor dem anderen halben Jahr in die Verhandlungen sein, um damit zu vermeiden, dass die Euro-Länder die Kommission um Hilfe vor. Auf diese Weise, selbstkritischen bei den nächsten Entscheidungen, verhindert werden.

Media Fragments

1:11: The Eurozone...
1:11: The Eurozone...
1:11: The Eurozone...
1:11: The Eurozone...
1:11: The Eurozone...
1:11: The Eurozone...
1:11: The Eurozone...
1:11: The Eurozone...

Rights Builder UI

Agree #0

+ Select uses + Delete use

Copy

Restrictions

agent: Class [v] + Add

location: Class [v]

patient: Class [v]

result: Class [v]

theme: Class [v]

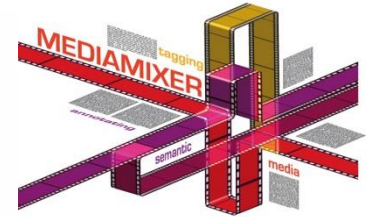
+ Add another right + Delete: agree

Extend e-learning video platform VideoLectures to mash up video fragments for learners to quickly browse across distinct collections on the same topic.

Recommend to newsroom editors video fragments relevant to the news story from heterogeneous content sources, integrating video material directly in the production workflow

Provide intuitive UI for media owners to express richly the media reselling and repurposing license, and enable automated negotiation with customers before closing a media deal

MediaMixer events



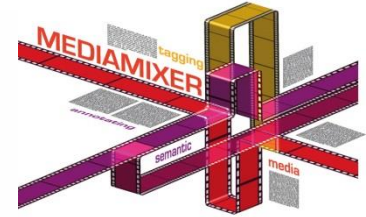
Sept 12-17, 2013	IBC 2013
Oct 6-10, 2013	Joint IASA-BAAC 2013 Conference
Oct 7-8, 2013	Digital Asset Management 2013 Conference
Oct 21-25, 2013	International Semantic Web Conference (ISWC 2013)
Oct 21-25, 2013	ACM Multimedia (ACMMM 2013)
Nov 11-12, 2013	Internet of Education 2013

- Masters and PhD students with a multimedia topic: Winter School co-located with MMM 2014, January 2014, Dublin

<http://winterschool.mediamixer.eu>

- Events calendar at <http://community.mediamixer.eu/events>

MediaMixer community



Community membership is FREE and WITHOUT COMMITMENT

- Just sign up at community.mediamixer.eu and get:

Full access to use cases from the industry;

Full access to materials – documents, presentations and videos;

Full details of appropriate APIs, software, tools and services;

Full access to software and service documentation and training material;

Online demonstrators of small scale prototypes with industry partners;

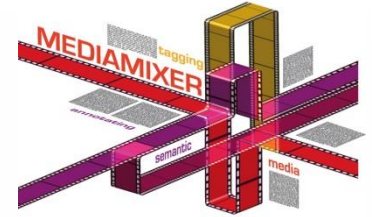
First information about upcoming MediaMixer presentations and partner attendance at events;

Invitations to meetings between research and industry partners for information days, technology presentations, demos, and training;

Preferred registration at MediaMixer organized events such as the summer school for students and professionals;

Direct mails about all of the above so that you are always the first to know.

MediaMixer core members

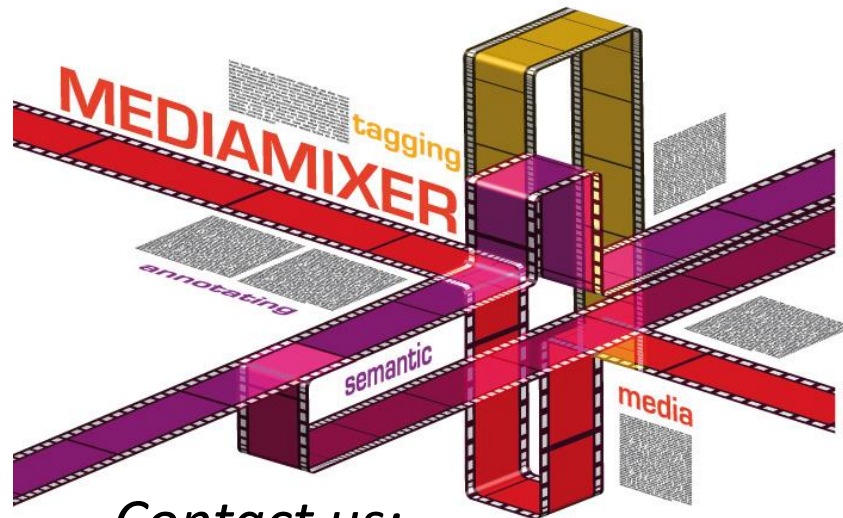


Want more than that!!! Then we have CORE MEMBERSHIP.

Core members fill in a simple acceptance letter and:

- are invited to collaborate with MediaMixer experts on a use case benefitting from MediaMixer technology;
- directly consult with technology experts on the appropriate approach;
- create with MediaMixer a proof of concept demonstrator to evaluate the benefits of the technology for their business;
- access necessary knowledge and technology transfer within the project;
- access financial support to meet with MediaMixer partners or attend MediaMixer events (subject to approval, EU only)

Thank you for your attention!



Contact us:

Membership - <http://community.mediamixer.eu>

Core Membership - email lyndon.nixon@modul.ac.at

Say hello @project_mmixer