

# SEMEDIA Annual Report

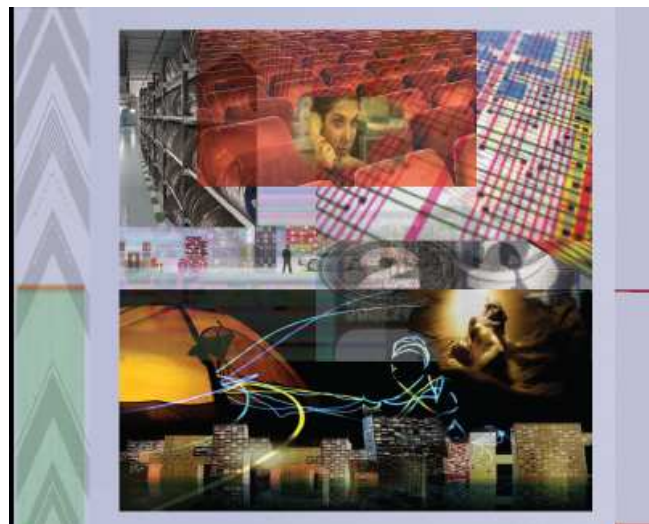


[www.semedia.org](http://www.semedia.org)

## Short project description

The volume of content stored both by large media organisations and across the social web is ever-increasing. Trying to find a specific clip or segment of a clip is a time consuming and unsystematic process. The lack of general purpose indexing and tracking methods, and the fact that current search tools require detailed user input make searching prohibitive.

SEMEDIA's goal is to tackle this problem by developing new search tools for online, post-production and broadcast environments. The project's research and development efforts will produce a group of search tools for video environments, such as audiovisual production and online communications media. The first versions of search tools will be produced early in year two, March 2008 or first quarter 2008 of the project.



## Summary of Activities

The project has been up and running now for one year. Its major achievements so far have been:

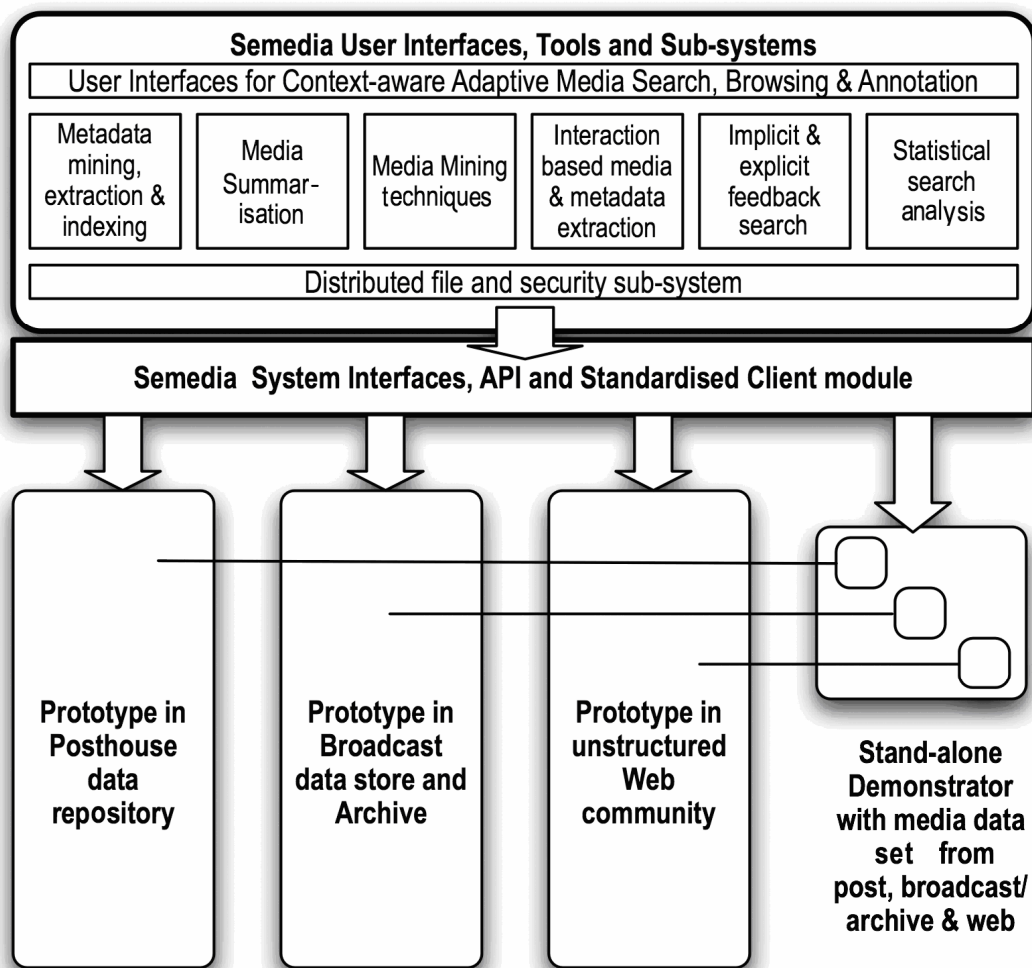
**The definition of user scenarios for Media Access, Search and Retrieval. This report defines the user requirements** for the identification and prediction of current and future user needs and understanding of a wide range of industry practices. In the first quarter of next year, a second round of interviews and questionnaires will help to refine user scenarios and user requirements in the different contexts of broadcast television, postproduction (across film, advertising and new media), and on-line social networking. We envision a merged multimedia environment that draws on TV archives and public sources of data.

**The collection of a test dataset from the post production, broadcast and archive sectors.** The industrial partners deal with large quantities of multimedia content on a daily basis. We created a multimedia corpus consisting of large representative snapshots that cover the different domains. A subset of this corpus will populate the stand-alone demonstrator that will be produced at the end of 2008. Test data sets may be enlarged or refined as part of the prototype integration process, to meet the goals of the toolsets.

**Results of the specialised research in the area of Media Content Analysis and Representation.** Appropriate methods and procedures for analysing, formatting and representing searchable media, including the summarising of sparsely annotated content, low-level indexing for more efficient searching, metadata and relevance feedback features, data architectures and security issues, and media mining techniques have been investigated. In 2008, the research continues and the focus will be on implementing research results (algorithms) as functionality in the prototypes.

**Results of the specialised research in the area User Behaviour and Interaction in Media Search.** New methods and interfaces for interaction based content annotation and metadata extraction, feedback models, context-aware and intent-aware adaptive search, feedback-based search, and models for integrating retrieval and mining methods have been investigated. In 2008, the research continues and the focus will be on implementing research results (algorithms) as functionality in the prototypes.

**The software demonstrator and prototypes design, functional specification and implementation plan,** based on the following open architecture:



In the first year, the prototypes have been defined in detail, based on the user scenarios that have been identified. In the first quarter of 2008, the first versions of the prototypes of modular tools in Broadcast Media, Postproduction, and Web will be built. We will also be hosting workshops to inform invited media industry professionals and gain their feedback on these initial prototypes.

SEMEDIA partners have been actively promoting the project. They have given talks, made project presentations and displayed posters at academic workshops and industrial trade shows. They have published papers and press releases. A project flyer has been widely distributed. Events where SEMEDIA has been or will be publicized are listed below.

## **Research, Innovations, Prototype Toolsets and the Demonstrator**

SEMEDIA builds on **research** in the fields of web semantics, artificial intelligence, content based information retrieval, and interface design. SEMEDIA will create new methods of media labeling, search and retrieval for even the largest media repositories and social networks. The results will be expressed as **innovations** in the form of:

- Algorithms for retrieval, data-mining models and metadata extraction;
- modular plug and play tools that sit on a wide range of media management platforms;
- query options that integrate secure access and rights management; and
- usage based annotation and feedback models for multimedia objects.

The research is based on and directed by Use Scenarios which cover a wide range of industry contexts with a vision for the future. The scenarios were created after detailed analyses of tasks and requirements provided by SEMEDIA's media industry partners.

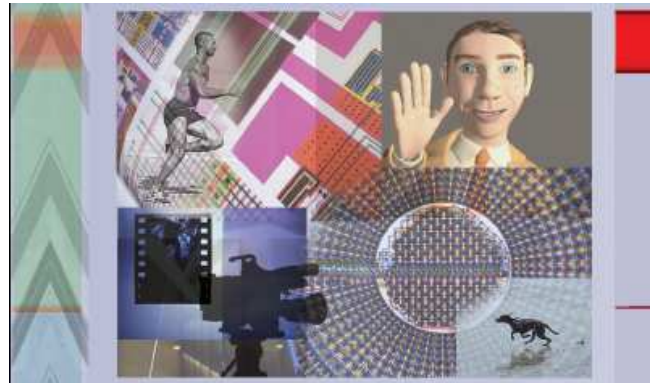
The development of an integrated architecture, practical tools and technologies, which incorporate the research results and can be tested against the Scenarios, is an iterative activity and will employ rapid prototyping methods. **The toolsets (prototypes)** produced for three different professional and end user environments will be evaluated in laboratory benchmark tests and by in-depth usability tests.

## **User Involvement, Promotion and Awareness**

SEMEDIA is heavily focused on user input for the development of relevant, useful and innovative search tools. SEMEDIA's industrial partners help assure that the SEMEDIA retrieval toolsets will be based on real life media content analysis and user behaviour scenarios. In addition, we will measure the toolset acceptance by professionals from the SEMEDIA User group and from on-line community users.

The SEMEDIA User group is made up of professionals from the archive, broadcast and post-production sectors. They will assist in the agreement of standards, comment upon technology developments, and contribute to the user scenarios and liaison for Market Analysis. (A Market Analysis Report will be produced at the end of 2008.)

The SEMEDIA user group held its first meeting in London's Soho district in September 2007. Over 20 professionals from the Broadcast, Post Production, Academic and Service Providers sectors attended. Notably, all the leading London post production companies were represented. Attendees learned of the project's objectives and showed a very good level of interest in participating in SEMEDIA by completing questionnaires, being interviewed, testing prototypes and giving feedback.



SEMEDIA co-operates closely with these projects:

- CHORUS (concertation activities)
- PatExpert
- SALERO
- IP-RACINE
- RUSHES
- K-Space
- Vidi-Video
- VITALAS
- TRECVID
- PrestoSpace
- PHAROS, TRIPOD, SAPIR

Conferences and Tradeshows where SEMEDIA has been promoted and future events to look forward to:

<b>Event</b>	<b>Partner</b>	<b>Date</b>
Invited talk at MMKM (Multimedia and Knowledge Management), Milton Keynes, UK	FBM-UPF(Y!R)	January 2007
Invited talk at FP7 in Motion Event, Luxembourg, Luxembourg	FBM-UPF(Y!R)	January 2007
Invited talk and poster at CHORUS Workshop "Use Cases and New Services for Multimedia Content Search", Rocquencourt, France	FBM-UPF(Y!R)	March 2007
NAB, Las Vegas, USA	DVS, JRS	April 2007
CHORUS practitioners day, Amsterdam, the Netherlands	FBM-UPF (Y!R)	July 2007
MULTIMEDIA INFORMATION RETRIEVAL, SIGIR workshop in Amsterdam, the Netherlands	FBM-UPF(Y!R) (organizer), JRS	July 2007

Multimedia Analysis and Retrieval (MAR 2007)	UG (Organiser)	July 2007
CIVR, Amsterdam, the Netherlands, : Roelof van Zwol	FBM-UPF(Y!R)	July 2007
SIGIR, CIVR, Amsterdam, the Netherlands, : CJ Van Rijsbergen; Joemon Jose Invited talk at CIVR 2007, CJ van Rijsbergen	UG	July 2007
SSMS07, SUMMER SCHOOL on MULTIMEDIA SEMANTICS , Glasgow UK	UG (organizer)	July 2007
Paper presented at ACM MM workshop	UG	August 2007
Paper presented at Europar 2007, Rennes, France	DAMA-UPC	August 2007
Paper presented at Web Intelligence Conference, USA	FBM-UPF (Y!R)	August 2007
IBC 2007, Amsterdam, the Netherlands	DVS, BBC & JRS (via PrestoSpace and Portivity stand), CCRTV (via AMD stand), S&M	September 2007
SEMEDIA User Group Meeting	S&M, BBC, FBM-UPF	September 2007
FIAT/IFTA World Conference Lisbon	<u>BBC</u>	<u>October 2007</u>
Broadcast, International Professional Show of Media Technology, Madrid, Spain	CCRTV ASI (via AMD stand)	November 2007
Poster and presentation at SIMO, annual trade fair in Madrid.	UPC (via DAMA-UPC group stand)	November 2007
SAMT 2007, SEMANTIC and DIGITAL MEDIA TECHNOLOGIES, Genova, Italy	UPF-FBM(Y!Research), UG, JRS	December 2007
Technology Innovation Event – Research & Development Open Days	BBC	January 2008
The third Workshop on the Future of Web Search	FBM-UPF Yahoo!R)	March 2008
MAC (Catalan Media Market), Granollers, Spain	CCRTV ASI (via AMD stand)	April 2008
MILIA, Cannes, France	CCRTV ASI (via AMD stand)	April 2008
NAB, Las Vegas, USA	DVS, JRS	April 2008
Dissemination Events	All partners	April and August 2008

Table of events and tradeshow

## Future Work

The future work will focus on the first prototypes due in the first quarter of 2008. Although, the project has been running for only a year, first concepts / ideas for exploitation are already in place and will include new products on the market, new knowledge, tools and interfaces and new search based services and business.

It is worth highlighting that in March 2008, FBM-UPF Yahoo! (Research) will organize the third Workshop on the Future of Web Search, which is a two-day event. This year there will be a special focus on Multimedia Search. The event is organized in liaison with CHORUS. The event will bring together leading scientists from both the media industry and their academic counterparts.

## **Further Information**

List here whatever you deem appropriate, using in particular Web references.

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## **Consortium Partners**



Centre  
d'Innovació

Fundació Barcelona Media Universitat Pompeu Fabra ( ES )  
<http://www.barcelonamedia.org/>



The British Broadcasting Corporation ( UK )  
<http://www.bbc.co.uk/>



The Catalan Broadcasting Corporation ( ES )  
<http://www.ccrtv.cat/>



DVS Digital Video Systems GmbH ( DE )  
<http://www.dvs.de/>

JOANNEUM



RESEARCH

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Institute of Information Systems & Information Management  
<http://www.joanneum.at/iis/>



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University of Glasgow ( UK )  
<http://www.gla.ac.uk/>



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<http://www.upc.es/>

smoke&mirrors

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<http://www.smoke-mirrors.com/>



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