

- Content Composition:

- ⊕ creation of content components or objects by a combination of raw assets such as text, images, audio, video, animation, metadata, descriptors, licenses, and other multimedia objects such as MPEG-4, HTML, SCORM, OMA, macromedia tool file, games, etc.;
- ⊕ creation of content as linear or hierarchical combination of content components.

- Content Formatting:

- ⊕ structuring and styling content elements by means of SMIL based templates and applying style-sheets to define the usage interface (format, layout) of the whole collection of content elements and the interested content usage paradigms. For example, karaoke, collection browsing, selection menus, slide presentation, background window with live video, animated text, graphics etc.;
- ⊕ optimising and defining style parameters for layout. For example automated best fit of images for a screen, optimising the amount of text in the page using Genetic Algorithms, best time fitting, etc.

- Content Protection:

- ⊕ protecting digital resources and objects with their complex structure;
- ⊕ creating Protection Information parameters, such as keys, or other features;
- ⊕ applying Protection Information model to content objects, segmenting digital resources, slicing objects,

applying encryption, scrambling, compression, and many other algorithms;

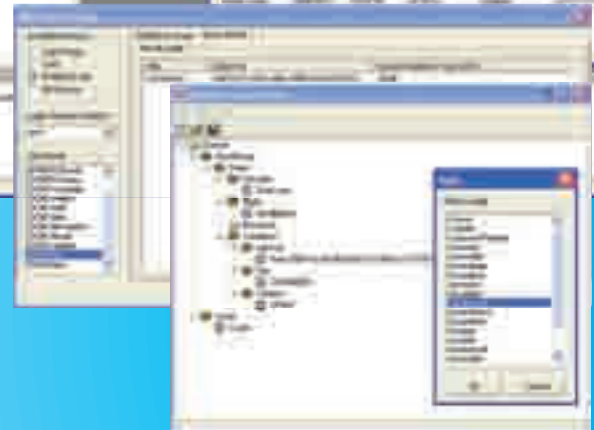
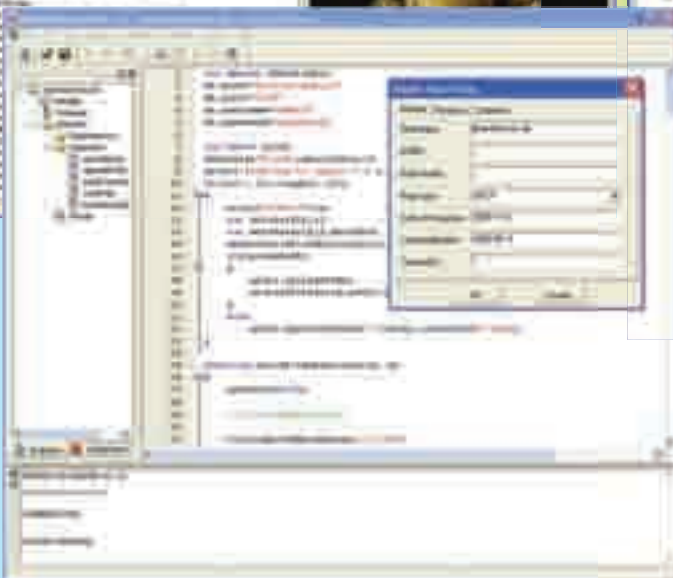
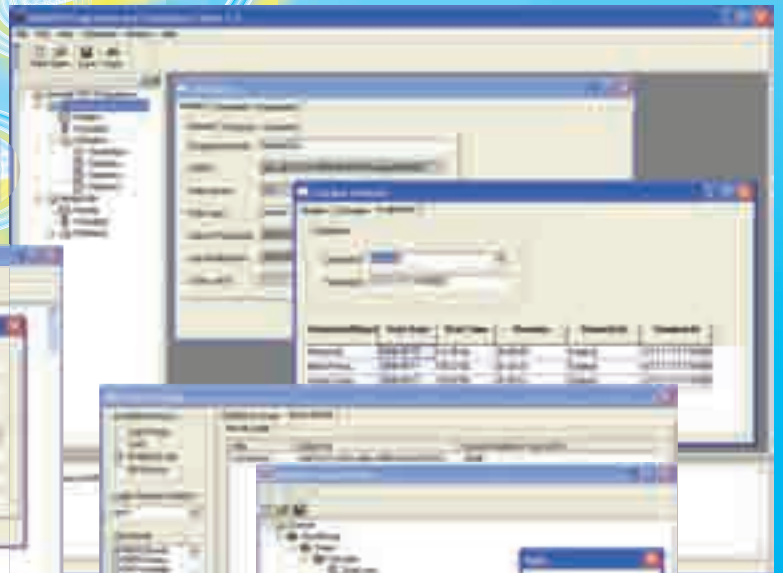
- ⊕ posting specific protection information of a given AXMEDIS object to the AXMEDIS Certifier and Supervisor server;
- ⊕ tracking exploited rights and reporting actions performed to the content owner, distributors, collecting societies, etc.

- Content Licensing:

- ⊕ generating licenses from license models and additional information, storing licenses, and posting to license server automatically;
- ⊕ supporting transcoding/translating licenses (MPEG-21 REL, ODRL);
- ⊕ invoking verification algorithms about licenses and available rights to simulate the usage from the user site.

- Content Publication and Distribution:

- ⊕ supporting distribution towards multiple channels;
- ⊕ producing, monitoring and editing programmes and schedules.



## Access to the AXMEDIS Framework

The AXMEDIS Framework is accessible to all including industries, large or small, who share the interest to exploit new technologies and solutions for automated content production and multi-channel distribution.

The AXMEDIS Framework can be used to setup and build a set of complete applications and services in the area of content production, protection and distribution. With the flexibility of AXMEDIS dynamic plug-in technology, you can customise your applications and processes according to your needs.

AXMEDIS Framework is Open:

- AXMEDIS focuses on interoperability and openness of content model and interoperability of DRM models, including multi-channel distribution;
- AXMEDIS specification is public and accesible from AXMEDIS portal. Its use is royalty free;
- source code of the AXMEDIS Framework is accessible by the AXMEDIS Affiliation programme. The affiliation fee is affordable for all. Alternatively affiliation can also be offered in return for contributions to improve and/or extend the AXMEDIS Framework;
- AXMEDIS plug-in technology is public. The specification and the source code for creating new plug-ins are public and accessible without the need to be affiliated. Any tool can be integrated into the AXMEDIS Content Processing GRID with this technology.
- AXMEDIS partners are open to your needs that may be useful to improve the capabilities of the AXMEDIS framework.

To take advantage of the AXMEDIS framework and technologies, you are invited to apply for the AXMEDIS Affiliation.

## AXMEDIS Affiliation

With the AXMEDIS Affiliation, industrial participants can:

- access the AXMEDIS Framework which can be used to set up and enhance production, protection and distribution facilities/platforms in a simple and cheap manner;
- adopt standard models (e.g. MPEG-21) for content and licenses modelling and hence adding DRM in your content business;
- establish contacts with other business partners interested in exploiting similar technology;
- obtain greater control on the content usage;
- create customised AXMEDIS players for PC, PDA, etc.;
- exploit and trial innovative business models that can be enforced on a distribution channel with management of rights and obtain reports on exploited rights of the multimedia content distributed.

With the AXMEDIS Affiliation, Research institutions can:

- access the AXMEDIS Framework to build different solutions and applications to cover the needs of the value chain actors and tested with low effort;
- improve visibility, promote and produce algorithms and tools that can be used for content processing and modelling, and can be integrated into the framework;
- add new content models and new DRM models, make them interoperable with MPEG-21 and others already in place on the AXMEDIS Framework;
- test algorithms and tools with respect to the state of the art solutions, with ease;
- collaborate with other relevant research institutions and companies within the sector.





For latest information, developments, events and announcements, please visit the AXMEDIS web portal at <http://www.axmedis.org>.

If you have any queries or comments, please email [axmedisinfo@axmedis.org](mailto:axmedisinfo@axmedis.org).

AXMEDIS Partners include:

- Accademia Nazionale di Santa Cecilia Fondazione, Italy
- Advance Concepts for Interactive Technology GmbH, Germany
- AFI, Associazione dei Fonografici Italiani, Italy
- BBC, British Broadcasting Corporation, UK
- DSI, Department of Systems and Informatics, University of Florence, Italy
- Dipartimento di Italianistica, Università degli studi di Firenze, Italy
- EPFL, Ecole Polytechnique Federale de Lousanne, Switzerland
- ETRI, Electronics and Telecommunications Research Institute, Korea
- Elion Enterprises Ltd., Estonia
- EUTELSAT S.A., France
- EXITECH S.r.l., Italy
- Focuseek, Italy
- FHGIGD, Fraunhofer Institute for Computer Graphics, Germany
- GIUNTI Interactive Labs S.r.l., Italy
- HP, Hewlett Packard Italy S.r.l., Italy
- Hexaglobe, France
- Kaunas University of Technology, Lithuania
- MBI S.r.l., Italy
- Peking University, China
- Rigel Engeneering, Italy
- SEJER, Bordas and Nathan, France
- SDAE, Sociedad Digital de Autores y Editores, Spain
- SIAE, Società Italiana degli Autori ed Editori, Italy
- Strategica S.r.l., Italy
- Telecom Italia, Italy
- TEO LT, Lithuania
- TISCALI Services, Italy
- UPC, Universitat Politècnica de Catalunya, Spain
- University of Leeds Interdisciplinary Centre for Scientific Research in Music, UK
- University of Reading Informatics Research Centre, UK
- VRS Grupé, Lithuania
- XIM Ltd., UK

For the full list, please see the AXMEDIS portal.

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