Automating Production of Cross Media Content for Multi-channel Distribution

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DE11.1.5.1
Project Brochures for Tools/Aspects/Areas

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Abstract:
This report describes the project brochures for tools/aspects/areas (M26). Production of flyer about the most important AXMEDIS tools or areas such as: AXMEDIS CP area, B2B distribution and AXEPTool, AX-MEDIS protection features and model, AXMEDIS Distribution Solution for PC, AXMEDIS distribution for Kiosks, AXMEDIS Factory, AXMEDIS Content, etc.;

Keyword List:
AXMEDIS Framework, Tools, Brochures, Demonstrations, Dissemination

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1 Executive Summary and Report Scope

This report presents the current state of the project brochures for tools/aspects/areas. DE11.1.5.1 concerns the production of flyers about the most important AXMEDIS tools or areas such as: AXMEDIS CP area, B2B distribution and AXEPTool, AXMEDIS protection features and model, AXMEDIS Distribution Solution for PC, AXMEDIS distribution for Kiosks, AXMEDIS Factory, AXMEDIS Content, etc...

The document contains draft of brochures and flyers related to AXMEDIS tools, aspects and areas have been designed based on the fact sheets provided for DE5.1.2.2 AXMEDIS-for-All update and from the specification of WP12 and WP9 activities. The deliverable DE11.1.5.1 report provides the contributions from all partners involved with the demonstration of AXMEDIS tools and areas and can be located at:
http://www.axmedis.org/documenti/view_documenti.php?doc_id=3101

The current flyers presented in DE11.1.5.1 are for the following AXMEDIS areas aligned with AXMEDIS-for-all:

- Core Accounting Manager And Reporting Tool Camart And Administrative Information Integrator [EXITECH]
- Integrated Prototype Of Content Production And Distribution On-Demand For Pc [TISCALI]
- Integrated Prototype Of Distribution On PDAs And Mobiles [ILABS]
- Demonstrator Flyers For Distribution via Satellite Data Broadcast [EUTELSAT, MBI, UNIVLEEDS]
- Content Sharing Among Archives [ANSC]
- Axmedis Integration With HP DMP [HP]
- Content Distribution For TV Recording [BBC, SDAE]
- Domain Management Of Content [BBC, SDAE]
- Content Distribution With Oma, Axmedis Back Office [TI]
- Content Distribution For Video On STB [TEO]
- Content Distribution For Video On-Demand [ELION]

2 Introduction

This report presents the activities on creating flyers and brochures for AXMEDIS tools/aspects/areas. WP11 presents three main related activities which are:

- Dissemination of project results. Additional details about the Dissemination activity can be recovered in Section 6.B (with the description of the dissemination material that will be realised);
- Distribution of services of AXMEDIS portal;
- Exploitation of the project results. Additional details of the Exploitation activity can be recovered Section 6.B.

This report focuses on the flyers and brochures required to disseminate project results related to the demonstration activities performed and is managed by UNIVLEEDS.

2.1 WP11.1 Dissemination and Valorisation

This WP is coordinated by UNIVLEEDS
With the collaboration of: all partners.
Period: M1-48

This activity mainly includes aspects of dissemination implementing the dissemination plan reported. The main goals are dissemination and promotion of benefits received by using the identified models and solutions:

- M5: preparing and maintenance of dissemination material, flyers, posters, demos, CDs, etc.;
- M16: Organising the first AXMEDIS conference and from that a series

- M18: producing a short promotional video of 5 minutes with a sub-contractor;
- M36: producing a more illustrative video of 20 minutes with the project results including demonstrator and take up results;
- attending conferences and fairs and distributing prepared dissemination material;
- organising stands to major fairs on cross media and distribution related aspects;
- producing and organising tutorials and courses in the above mentioned technologies;
- contacting the major organisations, publishers, distributors, for making them aware of the presence of AXMEDIS;
- stimulating the adoption of solutions and guidelines in research and industrial projects with tutorials and demonstrations in collaboration with the demonstrations and training WP;
- disseminating and valorisation work done inside AXMEDIS, by means of papers presented in international conferences of the area and by presenting contributions to the relevant international standardisation groups.

Some activities of dissemination will be concerted with those of training and demonstration in order to optimise effort and travelling costs.
All the partners are actively committed to disseminating their experiences, and have laid out concrete goals in the Objectives and Results. The partners will prepare the dissemination material during the project development. All dissemination activities will be conducted under the co-ordination of the project co-ordinator to ensure the delivery of a consistent message to the outside.
Off line activities will include: distribution of brochures to European cross media publishers, distributors, and consumers; participation in most relevant European events related to content and/or to IST by the relevant partners projects, according to their specific role and activity; Public relations and press agency activities. All the articles will be validated by the project manager before submission for publication on journals, magazines and at conferences. Ensure appropriate participation and spread of information participating in relevant fair. Submitting articles to international conferences and journals and communicating the projects on networks and other actions: MUSICNETWORK, ORION, MINERVA, ACTEN, EMO, Content Village, Cultivate, eContent, eEurope, PULMAN, TrainNet, AMME, e-Learning, etc.
The activity of dissemination will continue after the end of this project with the exploitation phase. Each meeting and each dissemination activity will be monitored in order to measure the effectiveness of the action. The partners that will attend fair and cross media related meeting for other projects will prepare a short report that will be included in the dissemination report of the project. All press releases will be collected and assessed in order to evaluate their effectiveness and their costs in terms of time and direct costs. For the workshops questionnaires will be prepared, collected an analysed in order to improve the quality of presentation and the solutions proposed.

This report documents the past and current flyers and brochures related to WP11.1.

3 Objectives

The objective is to create flyers and brochures for dissemination for the AXMEDIS tools/aspects/areas providing information based on the facts sheets and AXMEDIS-for-All (DE5.1.2.2)

4 Fact Sheets and 1 Page Flyers

4.1 Core Accounting Manager and Reporting Tool CAMART and Administrative Information Integrator [EXITECH]

This section contains the Fact Sheet for integrated prototype for the core accounting manager and reporting tool (CAMART)

Keyword List: Fact Sheet, Administration, CMS, CRM, Collecting Societies, Publishers, Distributors

AXMEDIS Core Accounting Manager and Reporting Tool (CAMART)

Automating Production of Cross Media Content for Multi-channel Distribution

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The Core Accounting Manager and Reporting Tool (CAMART) are bounded to the database for logs provided by AXMEDIS Certifier and Supervisor (AXCS) collecting information regarding the B2B activities and B2C actions. The AXCS stores its logs for a limited time, therefore, it is necessary for CAMART to gather the logs periodically and store locally in the AXMEDIS database (AXDB). Such information will be collected at scheduled time interval and CAMART acts as a client of the AXCS Reporting Web Service.

AXMEDIS system is scalable with installations such as AXDB, AXCS and other supporting tools capable of running on different machines. The core accounting manager is a sort of Client side of the bridge between the AXDB and the AXCS databases to allow the AXCS to be independent. The server side in the AXCS is the AXMEDIS Reporting Web Service. The CAMART can be interpreted as a part of the AXMEDIS Database Interface allowing the writing of data related to Action-Logs into the AXDB.

Administrative Information integrator is a critical part of the AXMEDIS bridging the AXMEDIS environment with a company's CMS and CRM including account administration and legal aspects. The main purpose of this component is to operate in a dual manner: polling information from AXMEDIS system when needed by distributor for example, or pushing information in the CMS as soon as they are available e.g. collecting societies. CAMART can also be remotely managed by a Web Service that offers all the functionalities guaranteed by the web application

Target Market

Companies requiring administrative information by utilising their CMS's and CRM's such as content producers and collecting societies

Partners Involved:

- **DSI:** responsible for AXCS and the data provided from the AXCS
- **EXITECH:** responsible for the CAMART application

Description of Content

The Core Accounting manager and Reporting Tool (CAMART) for Statistics produces database logs provided by the AXMEDIS Certifier and Supervisor (AXCS). The AXCS gathers information from Action Log and provide them to the user via web page or web service interface.

Final Users/Clients

During testing the Media club web site will be accessible for about 100 users. The web site will be open to everybody but AXMEDIS object will be accessible only under web site subscription. In the early stage of the trial web site subscription implies the subscription to the AXMEDIS network too.

Business Model Description

The operating mode is determined by accounting people during the installation/configuration of the system including which data has to be exported from the Database to the Content Management System (CMS) and the frequency of exporting. When a frequency is set, the Administrative Information Integrator will work in push mode, pushing information in the CMS import area, otherwise it operates in polling mode by starting the update in the CMS by a link to a web page

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4.2 Integrated Prototype of Content Production and Distribution on-demand for PC [TISCALI]

This section contains the Fact Sheet for integrated prototype for content production and distribution via Internet as defined in the WP9.4.

Keyword List: Fact Sheet, Demonstrator, Distribution channel, Content

DISTRIBUTION ON THE INTERNET

Automating Production of Cross Media Content for Multi-channel Distribution

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The main goal was to transform XAURA and the Media Center into a stable, documented and fully featured AXMEDIS compliant service devoted to the handling of multimedia premium content. The architecture, fully with all the AXMEDIS components, provides a complete and easy to use environment for the publication and up-selling of content over the Internet. Access to the multimedia content available on the AXMEDIS P2P network will be offered interfacing the system with the AXEPTool.

The current implementation of the Media Center has been integrated with the AXMEDIS framework to obtain an end-to-end solution for acquiring, importing, publishing, up selling and delivering the broadband content that will be available on the AXMEDIS network. The system is designed to support all main business models for content delivery, like free-to-air, subscription, Pay per view, etc.

Partners Involved:

- **TISCALI:** responsible for XAURA and the MediaClub website
- **DSI:** responsible for the P2P network (AXEPTool)
- **EXITECH:** responsible for the AXMEDIS Database (AXDB)

Final Users/Clients

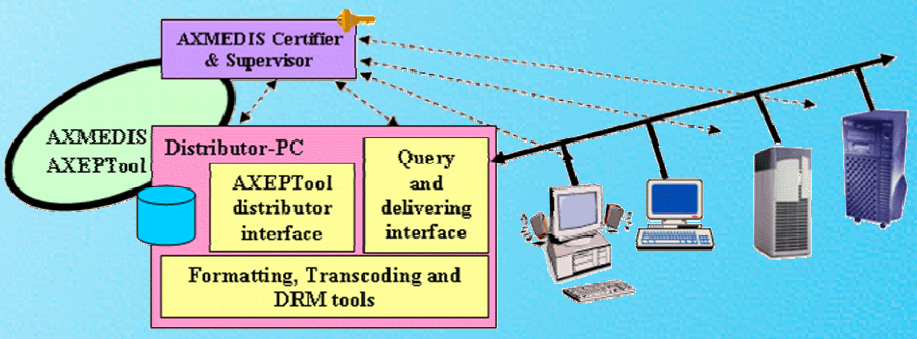
During experimental, the Media club website is accessible for 100 users. The web site will be open to everybody but AXMEDIS object are available only by subscription. In the early stage of the trial web site, subscription implies the subscription to the AXMEDIS network too.

Description of Content

Mainly two categories of content will be provided during the first stage of the trial:

- short movies (approximately 7 content)
- music video clips (approximately 7 content)

Video will be provided in windows media format in MBR (multiple bit rate), duration are variable and strictly dependent of content type



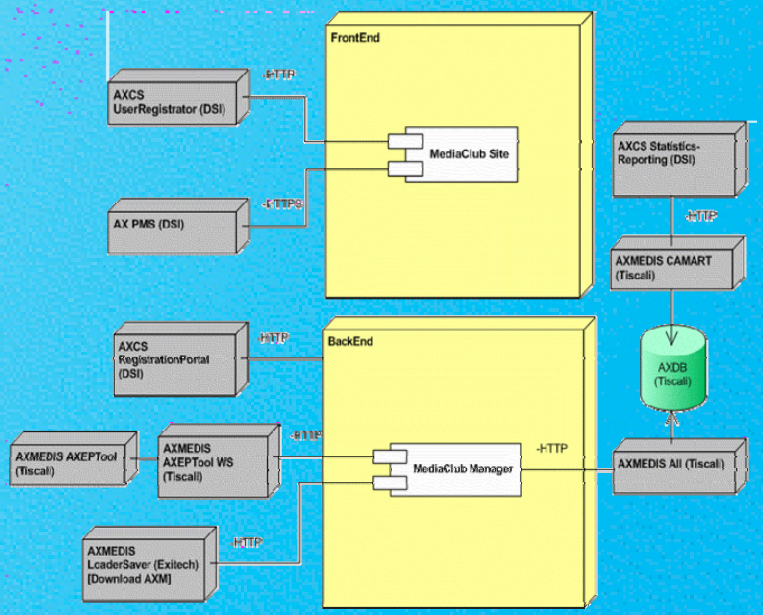
AXMEDIS Distribution towards PC and Archive Servers

Business Model Description

During the experimental phase the following business model will be presented:

Pay per play: AXMEDIS object (video) licence will be released to the end user to play/watch the con-tent for a defined number of times.

Pay per view: AXMEDIS object license will be released to watch/access to the object for a certain period of time (i.e. 48 hour)



Target Market

Target market for the internet distribution prototype is young people that consume video content on the web.

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4.3 Integrated Prototype of Distribution on PDAs and Mobiles [ILABS]

This section contains the flyer based on the Fact Sheet for integrated prototype for distribution on PDAs and Mobiles as defined in the WP9.5.

Keyword List: Fact Sheet, Demonstrator, Distribution channel, PDAs, Mobiles, Content

DISTRIBUTION ON PDAS AND MOBILES

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Within AXMEDIS the mobile demonstrator has a specific role and aim, demonstrating the benefits coming from the combination of several technologies in a well established, yet rather new environment. Usually when referring to mobile distribution, users are biased towards "voice", "text" or MMS content, but actually there is much more from music (MP3) to games and recently also Digital Television In AXMEDIS, the mobile channel demonstrates how content can be combined and complemented by the interaction with personalised adaptation services and interoperable DRM.

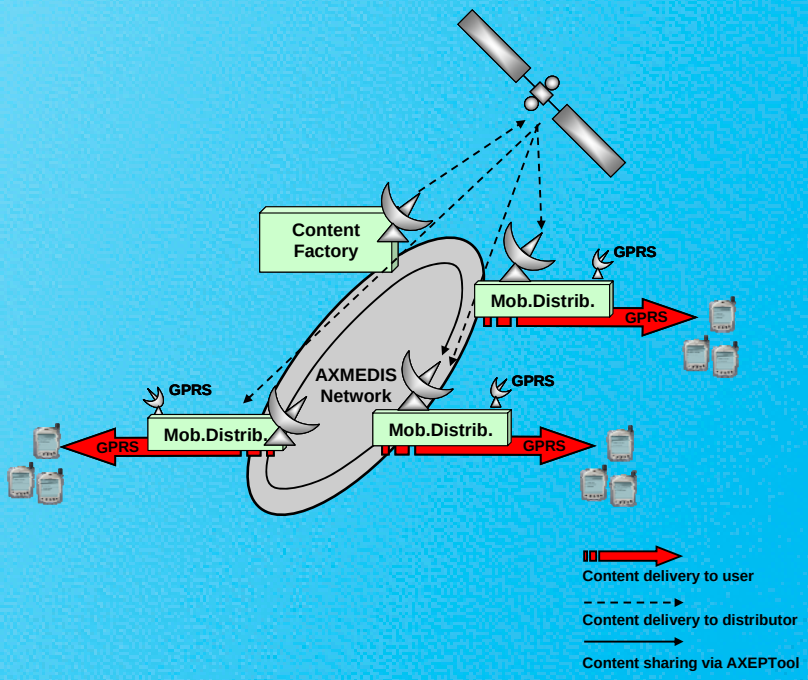
The mobile within AXMEDIS Architecture is divided in two components: the "factory" where content are produced and the "mobile distributor" where users have access to services and content. Distribution from the factory to mobile distributor is achieved via satellite to optimise bandwidth and data transfer rate when up-dating (in broadcast) distribution servers that may be geographically dispersed on the territory, while content access, selection, acquisition and fruition will be performed by mobile terminals (true points of service) represented by new generation of mobiles or PDA based smartphones. See the diagram which provides a better view of the involved components and their relations.

Partners Involved:

- **ILABS:** responsible for the application, the service provision and part of the content
- **ANSC:** responsible for the other part of the content, the event planning

Business Model Description

The end-users will need to register (including their tools) to the service (for free) and will have to use pre-paid activation codes to require and access to content. The codes will be delivered to the customer at the time of the payment that will be per-formed at specific service points located in the museum or park location.



Target Market

Museums and other similar institutions for service provision to visitors

Final Users/Clients

Visitors of museums, archaeological sites or natural parks. Visitors of other publicly or privately managed cultural heritage institution granting access to collection of objects or other valuable cultural or natural heritage.

Description of Content

Content used will be based on ILABS and ANSC collections. The first related to art, the second related to music. The connection will be the context and period (for example the XX century) in direct relation to the planned calendar of events of ANSC and Parco della Musica, thus with a monthly base and a subdivision in weeks. Content will be adapted to the need of the event calendar and organised consequently.

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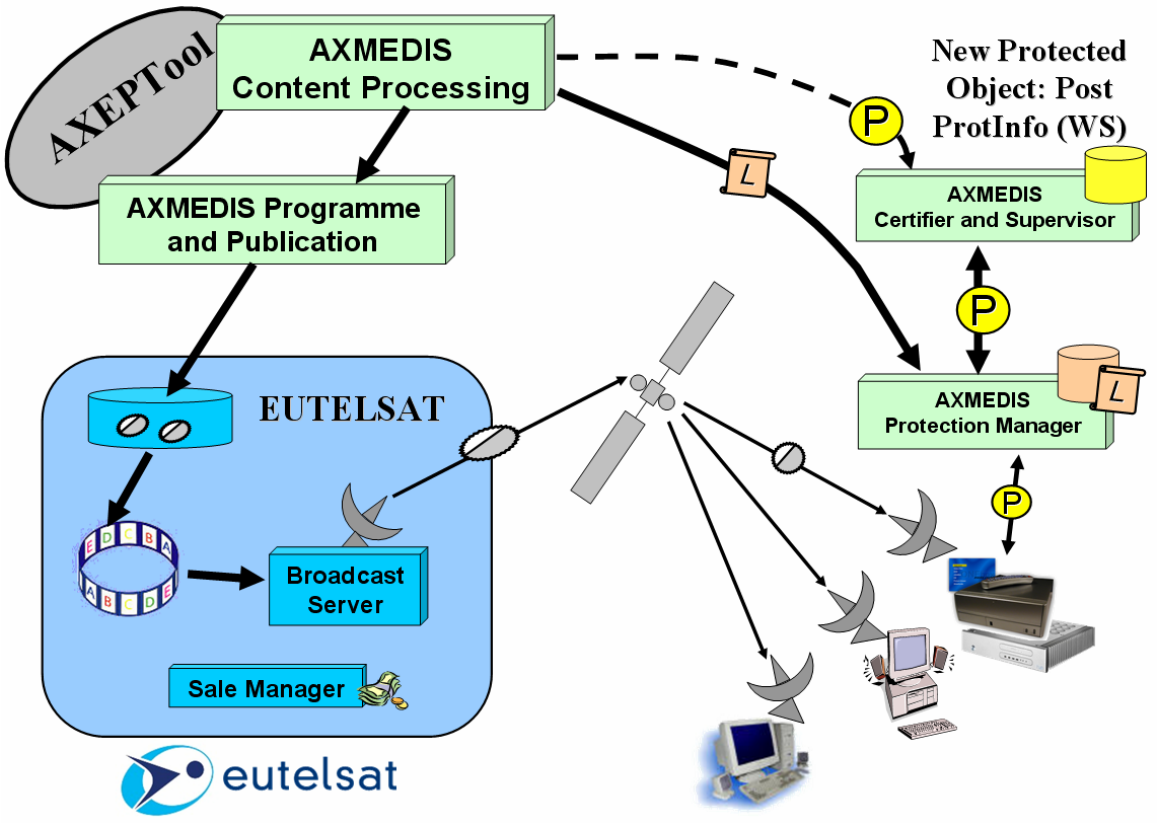
4.4 Demonstrator Flyers for Distribution via Satellite data broadcast [EUTELSAT, MBI, UNIVLEEDS]

This section defines the information from the Fact Sheet for the Satellite Demonstrator (WP9.3, DE9.3.4) to be used in the flyers and on the website.

Keyword List: Fact Sheet, Demonstrator, satellite, i-TV, PC, STB, Programme & Publication



- **Main purpose**

  The demonstrator aims at validating the distribution of content via Satellite Data Broadcast. The use of satellite for data distribution has the incontestable advantage of reaching any geographical area with minimal infrastructure, and the possibility to broadcast data to many users at the same time. Content produced with AXMEDIS content production tools is scheduled for satellite transmission via Programme&Publication, adding it in the carousel and broadcast to defined group of users. Distribution via satellite targets Local Distributor (B2B) or final users with PC or STB.

  - **Review of the architecture integration with AXMEDIS**
    - Content distribution operated via Programme&Publication Tool:
      Programme&Publication connected with the AXEPTool P2P network and configured to access the satellite distribution channel: it retrieves content from P2P area and puts it in distribution on the satellite carousel.
      Scenario for Satellite distribution:
      1. P&P programme to be activated from the P&P Editor
      2. The Engine parses and checks if the P&P Programme is already running

2.1 Engine searches active programmes
2.2 The matching programme is removed if found
3 if AXCP rule is associated with the AXMEDIS Object
3.1 send request to AXCP with Object ID and AXCP Rule ID (Rule must be in the Rule Scheduler of the AXCP area)
3.2 receive new object ID from the AXCP area
3.3 update the programme with new object ID
4 calculate distribution time based on distribution schedule and distribution server profile and the programme is scheduled for distribution
5 at their scheduled distribution time
5.1 request Objects from AXDB, local file or AXEPTool
5.2 Receive objects
5.3 Send to Distribution Servers

- **Description of the effective installation**
  - EUTELSAT Satellite Data Broadcast platform:
    Transport via Push Protocol operated by EUTELSAT through its satellite ATLANTIC BIRD™ 1 positioned at 12.5°West, transponder C11 (short AB1-C11).
    Two channels of 512kbps 24/7, one for distribution to final users with PC or STBs, the other dedicated to local distributors (B2B).
  - Content Distribution Nodes (P&P Engines):
    One or more Programme&Publication Engines connected with the AXEPTool P2P network and configured to access the satellite distribution channel. Content is taken from the P2P network and added in the EUTELSAT Carousel by querying and adding AXMEDIS objects to a P&P Programme using the P&P Editor tool and selecting one of the Eutelsat distribution channels. The P&P Programme is then activated into the P&P Engine to process and distribute the objects to the specified distribution channel.
    Communication between P&P Engines and satellite platform is via FTP and HTTPS protocols. Access to the satellite platform is restricted to authorized users. P&P Engines must be authorized by EUTELSAT.
  - Distribution infrastructure for PC/STB clients:
    Satellite reception from ATLANTIC BIRD™ 1 positioned at 12.5°West, transponder C11 (short AB1-C11).
  - Streaming/downloads:
    No streaming; Content downloaded via Push Transport over DVB/IP.
  - Players needed: AXMEDIS Player for PC or AXMEDIS compliant STB.

- **AXMEDIS tools**
  - AXMEDIS P2P usage optional, for content retrieval with P&P
  - AXCP usage optional, for content adaptation when required
  - Workflow tools usage NO
  - Programme& Publication usage Programme&Publication Engines configured to access the satellite distribution channels
  - PMS/AXCS usage NO
  - AXMEDIS database usage optional

- **Target Market**

- First phase of the validation is limited to a restricted group of users, mainly partners of the project for validation and promotion.
  The set up of a distribution channel opened to all the users will be considered later on.
- Satellite broadcast can reach number and number of users with a single transmission, so the targeted market is a Mass market, but it is also suitable for large communities like branches of a corporate company for a business-tv type of service.

- **Description of the business model**
  - EUTELSAT does not distribute the content directly, but provide the distribution channel to other producers/distributors. License kind and topology is thus left to these distributors.

- **Description of content**
  - Content size limited to 1GByte for single file, in order to optimize the distribution reducing the risk of lost packets.
  - STB Format: any MPEG2 and MPEG4 audio/video content, with a single embedded media resource for AXMEDIS object.
  - Kiosk Format: HTML, PDF, Text, SMIL and possibly Video and Flash embedded into AX-MEDIS objects.
  - Type of Content: any kind of content, from educational to recreational; to open the distribution to a mass market, audio and video content is suggested, to attract the potential users.

- **Final Users/Clients**
  - First phase: between 5 and 10 users for PC + STB; 1 Kiosk.
  - They are partners of the project and promotional users for dissemination.
  - Registration of the user is optional: content reception does not require any registration, but registration is needed for full fruition of the content.

- **Partners involved and roles**
  - EUTELSAT:
    responsible of the distribution channels, from satellite capacity reservation to operations on its platform.
  - UNIVLEEDS:
    responsible of the P&P tools (P&P Engine and P&P Editor) and its interface with the EU-TELSAT platform (Eutelsat distribution plugin);
    manage one of the P&P Engines to access the distribution channel.
  - MBI:
    responsible for the AXMEDIS compliant STB for satellite reception.
  - EUTELSAT, MBI, ILABS/ANSC, ANY:
    equipped for satellite reception can validate the distribution channel.
  - XIM, ANSC, AFI, BBC, ANY Content Partner:
    provide content for satellite distribution, with respect of the constraints of the satellite channel (see above).

DISTRIBUTION VIA SATELLITE DATA BROADCAST

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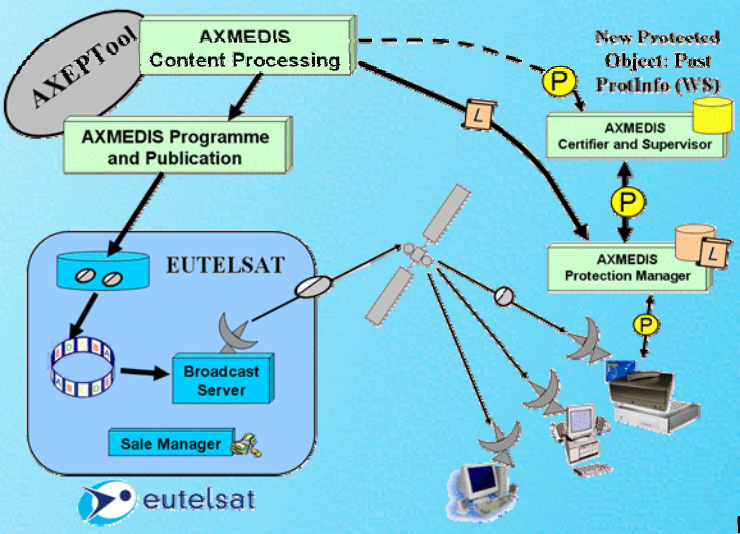
The use of satellite for data distribution has the incontestable advantage of reaching any geographical area with minimal infrastructure, and the possibility to broadcast data to many users at the same time.

Content produced with AXMEDIS Content Production tools (AXCP) is scheduled for satellite transmission via the Programme & Publication Area (P&P), adding it in the carousel and broadcast to defined group of users. Distribution via satellite targets Local Distributor Kiosk (B2B) or final users with PC or STB.

Partners Involved:

- **EUTELSAT:** Distribution channels (satellite capacity reservation to platform operation
- **UNIVLEEDS:** P&P Tools and its interface with the satellite platform and AxTools.
- **MBI:** AXMEDIS compliant STB for satellite reception
- **EUTELSAT, MBI, ILABS/ANSC: Equipped** for satellite reception
- **XIM, ANSC,BBC:** Content Partners providing content for satellite distribution



Target Market

The first phase is limited to a restricted group of users for validation, promotion and the set up of a distribution channel opened to the general public will be considered later on.
Satellite broadcast can reach number and number of users with a s-ingle transmission, so the targeted market is a Mass market, but it is also suitable for large communities like branches of a corporate company for a business-TV type of service.

Description of Content

STB Format: any MPEG2 and MPEG4 audio/video content, with a single embedded media resource for AXMEDIS object.
Kiosk Format: HTML, PDF, Text, SMIL and possibly Video and Flash embedded into AXMEDIS objects.
Type of Content: any kind of content, from educational to recreational; to open the distribution to a mass market, audio and video content is suggested, to attract the potential users.

Final Users/Clients

- First phase: between 5 and 10 users for PC + STB; 1 Kiosk
- They are partners of the project and promotional users for dissemination
- Registration of the user is optional: content reception does not require any registration, but registration is needed for full fruition of the content

Business Model Description

EUTELSAT provide the distribution channel for other producers/distributors. License kind (pay-per-view, pay-per-play, ...) is left to the content producers and/or distributors.

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4.5 Content Sharing Among Archives [ANSC]

This section defines the information based on the Fact Sheet for the demonstration of Content Sharing and Archives as defined in the WP9.2.

Keyword List: Fact Sheet, Demonstrator, Content Sharing. Archives, museums, cultural institutions, libraies, multimedia libraries, educational institutions

CONTENT SHARING AMONG ARCHIVES

Automating Production of Cross Media Content for Multi-channel Distribution

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With the new possibilities opened by the AXMEDIS framework, (multimedia) libraries, Archives, museums and in general cultural institutions will be able to promote, manage and distribute their content on a global scale with less effort. One of the key benefits offered by the AXMEDIS framework are the functionalities and capabilities to process and manage and aggregate combinations of diverse contents and create complex digital multimedia objects.

Depending on the ownership, each institution has the right to produce licenses which are modelled as profiles for the use of the content (i.e., print, play, save, time limited use, etc., to control the access and proper usage). On the basis of this profile, each library or archive will be able to issue licenses and establish relevant fees to manage the usage of the content in certain specific locations for certain uses, such as in other archives, or educational contexts.

Institutions will also benefit by easily creating adaptable, multilingual, multi-target and multi-device content or virtual content collections. With AXMEDIS, users can go through the whole process online and receive the contents requested in real time. Library staff would only need to check the results of the process without the need to manually perform the time-consuming individual sub-tasks of searching, binding and delivering media

Description of Content

Sample content from the Accademia Nazionale di Santa Cecilia heritage and from Giunti ILABS collections have been used for automatic content packaging and CMS crawling trials (images, archival documents, audio). Multi-device trials will be performed within the upcoming instruments museum at ANSC with the collection's content.

Final Users/Clients

- Schools and universities
- Researchers, students, teachers related to the archives/libraries
- General public
- Other archives, museums and institutions

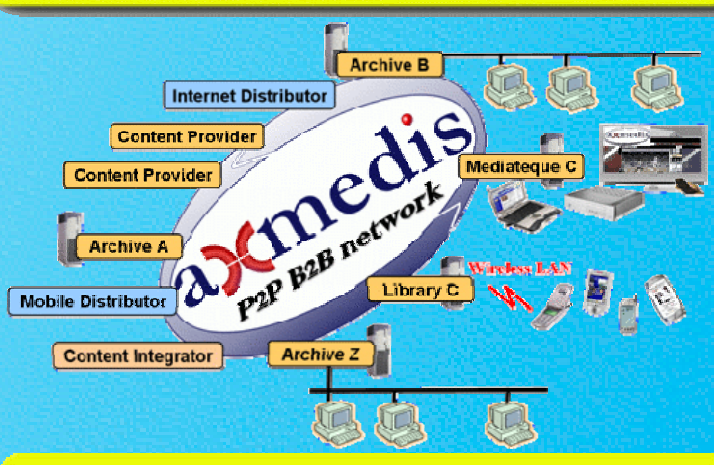
Partners Involved:

- **ANSC:** providing content, scripts for the automatiation of the creation, aggregation, adaptation and templating of such content.
- **ILABS:** content production and set-up of the kiosk trials. The development of automatic content creation and adaptation and content production

Business Model Description

B2B: Although most archives and libraries are not strictly "business" institutions, a B2B is intended as that in which a network of archives, libraries, museums and other cultural institutions share their content.

B2C. In this case the institution will provide users with content on demand in various forms and with different possible licensing models.



Target Market

Archives and libraries: Most archives are becoming digital both by digitizing their heritage, and acquiring digitally-bourn content. Many libraries are also becoming digital. For both the aggregation and presentation of content is often resource consuming. Furthermore archives are often interested to share content with other institutions, but find it difficult because of the use of different standards and formats

Museums: museums are opening to the internet more and more, furthermore they often create online-accessible content. These institutions are interested in the possibility to automate the creation, aggregation and distribution of content (also on different platforms such as PDA).

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4.6 Content Distribution for TV Recording [BBC, SDAE]

This document is based derived from the Fact Sheet for Content Distribution via Broadcasting and Domain Management as defined in the WP12.1.

Keyword List: Fact Sheet, Demonstrator, Content Distribution , Broadcasting, Domain Management, Content, IP Entities, Ontology

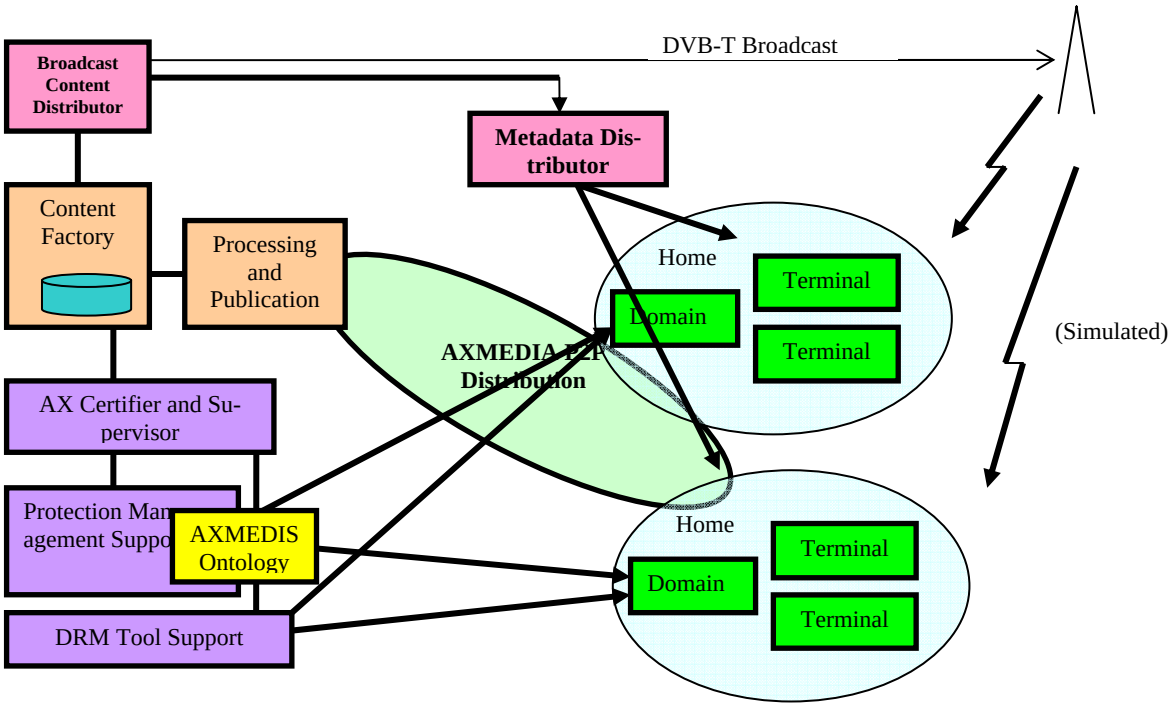
4HOME Demonstrator fact sheet: Content Distribution via Broadcasting and Domain Management

- **Main purpose:**

This aspect of the AXMEDIS 4HOME demonstrator shows how the AXMEDIS framework can be deployed to support the distribution of content over internet and broadcast channels to a rights-managed platform within the home.

The 4HOME demonstrator uses the rights management aspects of the AXMEDIS Framework on both source and client side to enable the rightful use of content distributed over the Internet, or on content derived from Free to Air broadcast content in the home and supplemented with other services over the Internet.

The 4HOME demonstrator uses downloadable tools on the home PC to give the Service Provider flexibility. The demonstrator incorporates License authoring and validation based upon the rules governing the Intellectual Property Entities within the composite content expressed through the AXMEDIS Ontology, such as 'Work' and 'Manifestation', Instance (Performance) etc.



- **Review of the architecture integration with AXMEDIS:**
  - **Acquisition / providing of content, where and how**
    - Content is uploaded to the central 4HOME AXMEDIS content factory by participating partners. This is then adapted to form licensed, registered AXMEDIS objects for distribution over IP or mobile. Similar content is also made available over DVB-T transport, unprotected.
  - **Production of content, where and how:**
    - Content is produced using the AXMEDIS Editor at each 4HOME partner site and then stored (and shared) in the distributed database provided by the AXEPTool. It can be registered with the 4HOME public content factory for distribution over the AXMEDIA P2P.
    - number of content items produced per day - 1
    - number of content items produced at the same time - 1
  - **Processing content, where and how**
    - number of content items processed per day -1
    - number of content items processed at the same time -1
  - **Protecting content, where and how**
    - Content is protected and registered within the central content factory.
    - Content packaged for the user into enhanced presentations on the user client are bound to the user's home domain or given an AXMEDIS license from the content factory and registration facility.
  - **Mother licenses are produced, where and how**
    - Mother licenses are produced using the AXMEDIS Editor and associated to the AXMEDIS Object.
    - The AXMEDIS Ontology will be used to check that the creation of licenses is allowed to the corresponding AXMEDIS user and AXMEDIS Object.
  - **Final licenses are produced, where and how**
    - The final licenses will be produced in the central content factory for the demonstrator. The AXMEDIS Editor should be also used for this purpose and the AXMEDIS Ontology should check if the license creation is permitted. A similar process will be undertaken when a license is derived from a contract.
  - **Registration of user and devices, where and how**
    - The 4HOME demonstrator uses the AXMEDIS home domain concept to license content to any device within a user home domain. Both users and devices are registered in the AXMEDIS PMS Domain Home and AXCS.
  - **Distributing content, where and how**
    - Content is made available over IP in AXMEDIS format , selectable by the end user from an appropriate user interface. In addition, new AXMEDIS objects can be made on the home client from a combination of the Free to Air broadcast content and further enhancements delivered over the protected IP channel.
    - The Free to Air content can be selected for capture and enhancement through the AXMEDIS viewer
- **Description of the effective installation**
  - **Servers**
    - For the broadcast transport stream integration, the delivery of the transport stream to the end user client is through pre assembled MPEG streams served from a PC with DVB Asynchronous Streaming Interface (ASI interface) through a DVB-T modulator and fed by coax cable to the receiver set top box client.
    - The distribution of AXMEDIS content over the internet to the home users is achieved over the AXMEDIS AXMEDIA P2P tool for P2P distribution of protected content to the home.

  - **Portals**
    - The AXMEDIS client can retrieve programme description metadata from a metadata server using a simple protocol and delivering metadata in the TV-Anytime format.
  - **Distribution infrastructure needed if any;**
    - . The broadcast infrastructure is local and over coax. The Protected content and access to metadata is over the public internet using the AXMEDIS P2P tool and simple HTTP respectively.
  - **Streaming/downloads:**
    - The broadcast demo will be a pre-prepared MPEG2 transport stream with broadcast style programmes.
    - Some of these, and others, will be available for download over P2P as protected objects
  - **Players needed:**
    - The 4HOME demonstrator uses PCs to show access to AXMEDIS content by the home user In some cases some PC's will be able to receive DVB-T content for rendering on the PC through the AXMEDIS player.
- **AXMEDIS tools**
  - **List of major AXMEDIS tools:**
    - Broadcast Streaming Interface
    - PMS – Server
    - PMS – Domain Home
    - PMS – Client
    - Domain Manager
    - Domain Registration Manager
    - AXMEDIA client and network support including publication tool
    - Protection Tool Server
    - Protection Processor,
    - DRM Editor and Viewer,
    - AXMEDIS Editor and Viewer
    - AXMEDIS Content Processing (AXCP) – to adapt content to different formats
    - AXEPTool
    - AXMEDIS Programme and Publication Engine
  - **AXMEDIS P2P .**
    - The 4HOME demonstrator content factory will be connected to other content factories through the AXMEDIS P2P network. In addition the home user can access 4HOME content from the content factory as licensed AXMEDIS objects over the AXMEDIA P2P Tool
  - **AXCP usage, yes/no, where and how:**
    - The Content Factory, including the AXCP will be set up at the Telecom Italia laboratory in Turin
  - **Workflow tools usage, yes/no, where and how**: TBD
  - **Programme and publication usage, yes/no, where and how: TBD**
  - **PMS/AXCS usage, yes or no, where and how:**
    - The 4HOME demonstrator will utilize a tool server that in turn will register tools on the AXCS.
    - The 4HOME demonstrator will demonstrate the rights managed use of content in the home and within a home domain. This requires the functionality of the PMS modules.
  - **AXMEDIS database usage, yes or no, where and how:**
    - A local instance of the AXMEDIS db in the 4HOME Content Factory will be used in order to store customized rules and content, though this may be a central provision.
- **Target Market**:
  - **Broadcasters:** The internet provides a low cost content distribution network with the possibility to support traditional broadcast services in a user friendly way. Additionally, new audiences based

on mobile terminals is emerging and a common solution for managing these services from a common technological source is attractive.

- **Collecting societies** – or other media organisations wishing to encourage and draw-in talent from a distributed artistic community with minimum technological and business thresholds of entry. Such a task can be made efficient through distributing artistic works in a rights managed form over the internet for use by various value change players. The key enabling mechanisms here are security of attribution, articulation of IP Entity being encapsulated and low cost distribution.

- **Description of the business model**
  - The capture of free to air broadcast content for use within the home domain in a rights managed way. Such content will be managed on the home domain through enhancements utilizing the P2P network and permit sharing between homes through the referencing and delivery from the P2P back office of similar items
  - The provision of a P2P 'catch up' service in which users can choose content previously broadcast from a P2P catalogue and access fully protected AXMEDIS objects directly.
- **Description of content**:
  - **How many content AXMEDIS objects will be distributed**
    - **TBD**
  - **Who is going to provide digital resources with the needed clearance of rights:**
    - Currently sDae, BBC and TI are considering ways in which content can be made available for the demonstrator.
  - **Content description**.
    - BBC -A number of audio video clips.
    - TI - a limited number of music tracks, and videos.
    - sDae - around 50 videos of differing lengths and in the order of 1000 music tracks.
  - **Kind of resources:**
    - BBC – Typical audio video programme material for the end user.
    - TI – music (audio only), news and entertaining (audiovisual)
    - sDae – video and music
  - **Typical Content size for each content type: Audio……., video,**
    - These will be typical audio –visual presentations
- **Final Users/Clients:**
  - **How many final users will be reached.**
    - There will be at least 2 mobile clients shown receiving the content from the AXMEDIS factory and a number of PC clients constituting clients within the home domain (say 1-2 for each partner involved in the home domain aspect, so between 5 -10)
    - There will be a usability testing trial to gain feedback on the utility (usefulness) and ease of use of the system as perceived by end users in conjunction with the newly implemented home domain concept. This will involve observing and tracking how users use the technology and identify parts which do not work well and parts that are well aligned with the user expectation. The tests will be structured to obtain the most meaningful results and try to take into account the short and long term response as the user becomes more expert in the system under test. The test will be carried out on between 12-20 volunteers drawn from within the BBC, schools and possibly other outside volunteers. They may take place within a user testing laboratory within the BBC, or alternatively at the home, work desk or school of the volunteer, depending on the nature of the trial design. In addition, where possible, other value chain users within the BBC will be solicited to help evaluate parts of the system functionality that are not typically exposed to the end user, but more concerned with issues of content or archive re-purposing. Due to the nature of

their specialist position within the value chain these are likely to be much fewer in number and cannot be solicited until the time of the trial.

- **Their description**:
  - Members of the public, school children, co-workers.
- **Their registration is needed**:
  - The registration procedure will be incorporated as part of the usability trial. It will be advantageous for uses to be registered such that they can be given access to more content material that cannot be cleared for all territories or general use.

- **Partners involved and roles:**
  - BBC/ETRI: to provide the Broadcast Interface from DVB-T and metadata service.
  - ETRI: to provide the DRM Tool server for download by the home ETRI contractor will lead the work for distributing protection tools and accessing AXMEDIS DRM tools in AXMEDIS player.
  - Telecom Italia: to setup a content factory source and gateway with the mobile OMA platform
  - PKU: to implement and integrate the Home Domain architecture
  - sDae: to establish the Licence authoring and validation based on IP Entities

CONTENT DISTRIBUTION FOR TV RECORDING

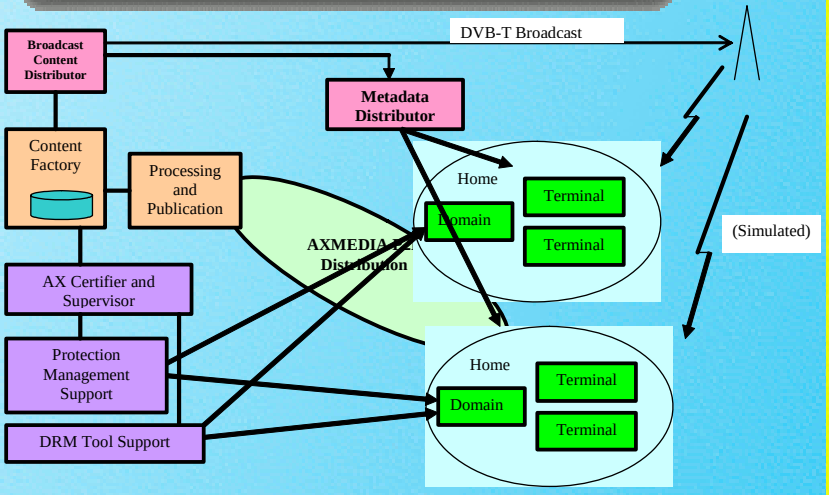
Automating Production of Cross Media Content for Multi-channel Distribution

www.axmedis.org

This aspect of the AXMEDIS 4HOME demonstrator shows how the AXMEDIS framework can be deployed to support the distribution of content over internet and broadcast channels to a rights-managed platform within the home. The 4HOME demonstrator uses the rights management aspects of the AXMEDIS Framework on both source and client side to enable the rightful use of content distributed over the Internet, or on content de-rived from Free to Air broadcast content in the home and supplemented with other services over the Internet. The 4HOME demonstrator uses downloadable tools on the home PC to give the Service Provider flexibility. The demonstrator incorporates License authoring and validation based upon the rules governing the Intellectual Property Entities within the composite content, such as 'Work' and 'Manifestation'.

Partners Involved:

- **BBC/ETRI:** provide the Broadcast Interface from DVB-T and metadata service.
- **ETRI:** provide the DRM Tool server including distributing protection tools and accessing AXMEDIS DRM tools in AXMEDIS player.
- **Telecom Italia:** setup a content factory source and gateway with the mobile OMA platform.
- **PKU:** implement and integrate the Home Domain architecture
- **sDae:** establish the Licence authoring and validation based on IP Entities



Target Market

Broadcasters: The internet provides a low cost content distribution network with the possibility to support traditional broadcast services in a user friendly way. Additionally, new audiences based on mobile terminals are emerging and a common solution for managing these services from a common technological source is attractive.

Collecting societies – or other media organisations wishing to encourage and draw-in talent from a distributed artistic community with minimum technological and business thresholds of entry. Such a task can be made efficient through distributing artistic works in a rights managed form over the internet for use by various value change players. The key enabling mechanisms are security of attribution, encapsulated articulation of IP Entity and low cost distribution.

Description of Content

Content is currently still to be decided. Current tests include audio video clips and music tracks.

Final Users/Clients

- Mobile clients and PC clients (within the home domain)
- Members of the public, school children, co-workers
- Further users from usability testing trials from within the BBC, schools and possible outside volunteers

A registration procedure for users to gain access to more content material that cannot be cleared for all territories or general use

Business Model Description

The capture of free to air broadcast content for use within the home domain in a rights managed way. Such content will be managed on the home domain through enhancements utilizing the P2P network and permit sharing between homes through the referencing and delivery from the P2P back office of similar items

The provision of a P2P 'catch up' service in which users can choose content previously broadcast from a P2P catalogue and access fully protected AXMEDIS objects directly

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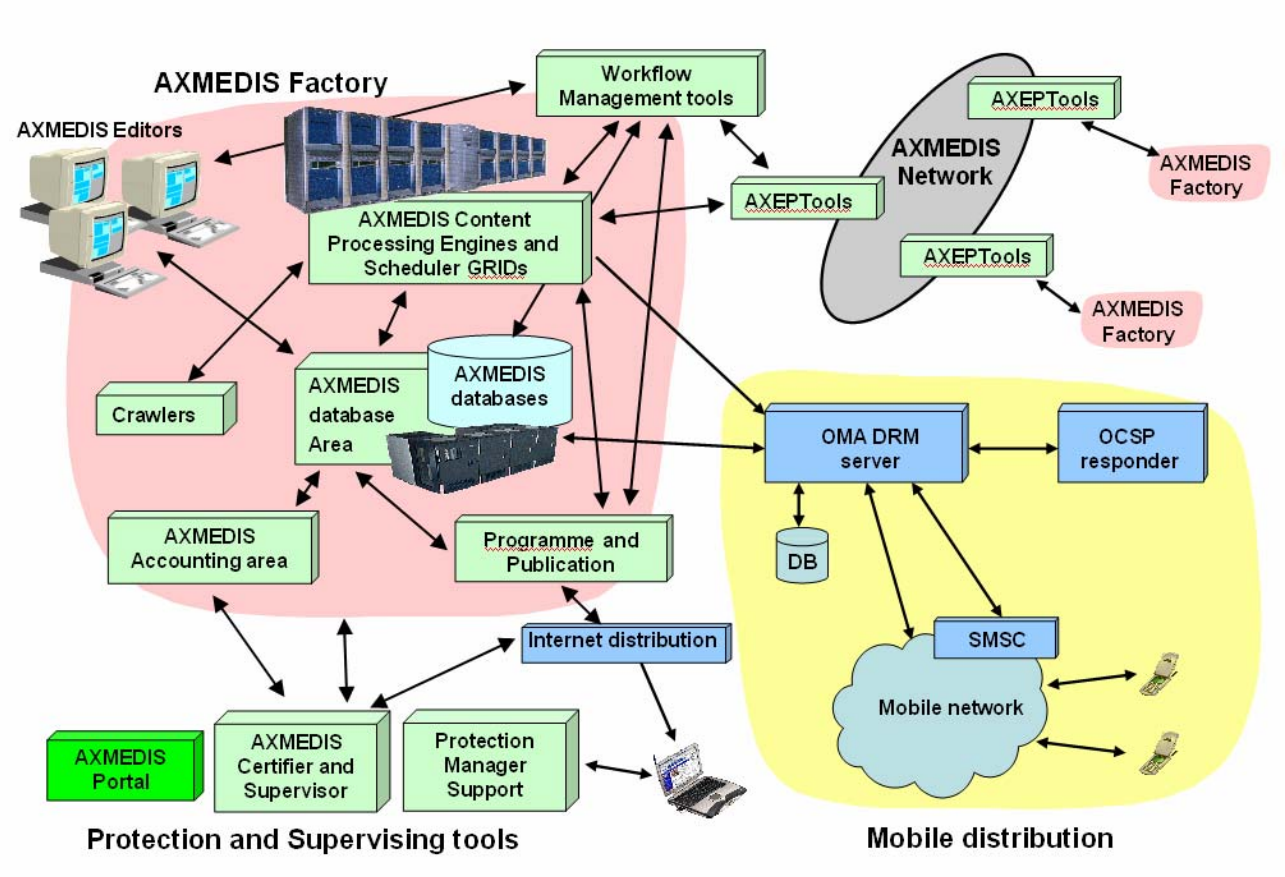
4.7 Content Distribution with OMA, AXMEDIS Back Office [TI]

This document contains the Fact Sheet for integrated prototype for distribution on PDAs and Mobiles as defined in the WP12.1.

Keyword List: Fact Sheet, Demonstrator, Distribution channel, PDAs, Mobiles, Content

4HOME Demonstrator fact sheet: Mobile distribution



- **Main purpose:**

The AXMEDIS 4HOME demonstrator shows how the AXMEDIS framework can be deployed to support the distribution of content over the mobile distribution channel. At the same time, it shows that the same content is made available in the native AXMEDIS format for download and use on PCs under the same conditions.

The 4HOME demonstrator uses the rights management aspects of the AXMEDIS Framework on the server side and the OMA DRM v2 corresponding features on the client side. To enable this scenario, an OMA gateway is introduced in the AXMEDIS architecture, which translates AXMEDIS Objects and the corresponding licenses from the source format into an OMA compatible format.

- **Review of the architecture integration with AXMEDIS:**
  - **Acquisition / providing of content, where and how**

- Content is uploaded to the central 4HOME AXMEDIS content factory by participating partners. This is then adapted to form licensed, registered AXMEDIS objects for distribution over Internet and translated into OMA DRM v2 format for mobile distribution.
- The format of content delivered to the final users over mobile will be OMA DCF 2.0 (based on ISO Base Media File Format).
- The format of content delivered to the final users over Internet will be the AXMEDIS format (based on MPEG-21).
- At least one content for each of the following types will be tested:
  - Still pictures
  - digital music
  - digital video

- **Production of content, where and how:**
  - Content is produced using the AXMEDIS Editor at each 4HOME partner site and then stored (and shared) in the distributed database provided by the AXEPTool.
  - number of content items produced per day - 1
  - number of content items produced at the same time - 1
- **Processing content, where and how**
  - Content is processed in the AXCP in order to adapt it to distribution on mobile devices. This adaptation includes translating the license from MPEG-21 REL to OMA DRM REL v2, and converting the content from MPEG-21 format to OMA DRM DCF v2.
  - number of content items processed per day -1
  - number of content items processed at the same time -1
- **Protecting content, where and how**
  - Content is protected and registered within the central content factory.
  - Content packaged for the user into enhanced presentations on the user client are bound to the user's home domain or given an AXMEDIS license from the content factory and registration facility.
  - Content adapted to mobile distribution is exported from the AXMEDIS Content Factory and imported into an OMA DRM server. The entity taking care of the protection of the adapted object is the OMA DRM Rights issuer, not the AXMEDIS PMS. At the same time, the original AXMEDIS Object remains under control of the AXMEDIS PMS.
- **Mother licenses are produced, where and how**
  - The content owner generates the AXMEDIS Object and the corresponding mother license using the AXMEDIS Editor, then distributes the protected AXMEDIS Object over the B2B peer to peer using the AXEPTool. The license is stored in the PMS located at DSI premises.
- **Final licenses are produced, where and how**
  - when an end user buys a protected content on the service provider portal, a final license is generated for him/her in AXMEDIS format for usage over the Internet;
  - subsequently, the rule to convert the license from AXMEDIS to OMA DRM REL is fired and the new license is sent to the OMA DRM server; the license is further processed by the OMA DRM server before delivery of the Rights Object to the mobile device, in order to provide the necessary protection information in the RO, as required by the OMA DRM v2 specification.
- **Registration of user and devices, where and how**
  - The 4HOME demonstrator uses the AXMEDIS home domain concept to license content to any device within a user home domain. Both users and devices are registered in the AXMEDIS PMS Domain Home and AXCS.
  - In the special case of mobile distribution, devices are registered in the OMA DRM Rights Issuer server by performing a 4-pass ROAP protocol. Users are not registered since OMA DRM binds content to each single device (or to a group of devices) owned by the end user. However, for purposes like charging and billing, the identity of the user can be ob-

tained from the SIM card that is inserted in the mobile device. This is out of scope of OMA DRM.

- **Distributing content, where and how**
  - Content is made available over IP in AXMEDIS format and on the mobile distribution channel in OMA DRM format, selectable by the end user from an appropriate user interface.
- **Accounting collection and action monitoring, where and how**
  - metering is not supported in OMA DRM v 2.0; it will be introduced in OMA DRM v 2.1 which is not yet a published specification.

- **Description of the effective installation**
  - **Servers**
    - The mobile demo will utilize an OMA DRM 2.0 Server which will be adapted to operate as an OMA Gateway in order to be able to receive content from the AXMEDIS platform. The server is composed by an OMA DRM Rights Issuer which implements the ROAP protocol; an OCSP responder which checks and validates the certificates; a root Certification Authority issuing certificates for devices, Rights Issues and OCSP responder.
    - The distribution of AXMEDIS content over the internet to the home users is achieved over the AXMEDIS AXMEDIA P2P tool for P2P distribution of protected content to the home.
  - **Portals**
    - a simple portal for experimental access to OMA protected content will be setup. This will be based on Web or Wap technology.
  - **Distribution infrastructure needed if any;**
    - The OMA distribution infrastructure is provided locally by Telecom Italia.
  - **Streaming/downloads:**
    - The mobile demo is based on a download and play model. Streaming is not supported.
  - **Players needed:**
    - The 4HOME demonstrator uses PCs to show access to AXMEDIS content by the home user and 2 mobile Nokia hand terminals.
    - The mobile demo will use two Nokia N91 commercial terminals equipped with certificates issued by the above mentioned root Certification Authority. Details on the Nokia N91 features are available at http://forum.nokia.com/devices/N91

- **AXMEDIS tools**
  - **List of major AXMEDIS tools:**
    - PMS – Domain Home
    - PMS – Client
    - Domain Manager
    - Domain Registration Manager
    - AXMEDIA client and network support including publication tool
    - Protection Tool Server
    - Protection Processor,
    - DRM Editor and Viewer,
    - AXMEDIS Editor and Viewer
    - AXMEDIS Content Processing (AXCP) – to adapt content to different formats
    - AXEPTool
    - AXMEDIS Programme and Publication Engine
  - **AXMEDIS P2P .**
    - The 4HOME demonstrator content factory will be connected to other content factories through the AXMEDIS P2P network. In addition the home user can access 4HOME content from the content factory as licensed AXMEDIS objects over the AXMEDIA P2P Tool. Mobile users cannot access the AXMEDIS P2P and will get protected content via GPRS or UMTS.

  - **AXCP usage, yes/no, where and how:**
    - The Content Factory, including the AXCP will be set up at the Telecom Italia laboratory in Turin, and will be used to adapt AXMEDIS contents and licenses for distribution over the mobile channel based on OMA technology.
  - **Workflow tools usage, yes/no, where and how**:
    - Possibly used for content production and translation to OMA, in the 4HOME Content Factory
  - **Programme and publication usage, yes/no, where and how:**
    - Possibly used for content production and translation to OMA, in the 4HOME Content Factory
  - **PMS/AXCS usage, yes or no, where and how:**
    - The 4HOME demonstrator will demonstrate the export of content from AXMEDIS to OMA. Content initially under control of the PMS will be translated by the AXCP into OMA format and exported on TI OMA DRM server.
  - **AXMEDIS database usage, yes or no, where and how:**
    - A local instance of the AXMEDIS db will be installed in the 4HOME Content Factory in order to store customized rules and content adapted to mobile distribution. Initially a central provision may be used.
- **Target Market**:
  - **Mobile content service providers.** The OMA standard provides a basis for the provision and sale of high value content over the mobile platform. This requires a robust back end for the appropriate pre-processing of content.
- **Description of the business model**
  - simple sell of music tracks: unlimited licenses, each track is sold individually.
  - "all you can eat" model: the user pays a monthly fee, which entitles him/her to play whatever music track he/she likes, for one month. The license expires at the end of the month.
- **Description of content**:
  - **How many content AXMEDIS objects will be distributed:**
    - 10-20 content objects will be selected and translated from the AXMEDIS Format to OMA DRM format and will be available both on the mobile distribution channel as OMA DRM objects and on the Internet as AXMEDIS Objects.
    - More objects will be available on the Internet distribution channel in AXMEDIS format only.
    - **Who is going to provide digital resources with the needed clearance of rights:**
    - Currently sDae, BBC and TI are considering ways in which content can be made available for the demonstrator.
  - **Content description**.
    - BBC -A number of audio video clips.
    - TI - a limited number of music tracks, and videos.
    - sDae - around 50 videos of differing lengths and in the order of 1000 music tracks.
  - **Kind of resources:**
    - BBC – Typical audio video programme material for the end user.
    - TI – music (audio only), news and entertaining (audiovisual)
    - sDae – video and music
  - **Typical Content size for each content type:**
    - short clips that can be stored on mobile devices without requiring memory expansions. Typically 3-4 MB music tracks, 6-8 MB video clips. Bigger files may require unfeasible download time.
- **Final Users/Clients:**
  - **How many final users will be reached.**

        - There will be 2 mobile clients shown receiving the content from the AXMEDIS factory and a number of PC clients constituting clients within the home domain (say 1-2 for each partner involved in the home domain aspect, so between 5 -10)
    - **Their description**:
        - skilled users, members of the technical staff.
    - **Their registration is needed**:
        - Registration of mobile devices on the OMA Rights Issuer is automatically performed via the 4-pass ROAP protocol.
        - Registration of SIM cards authenticating the identity of the end user is performed by the mobile operator as a normal commercial procedure.
- **Partners involved and roles:**
    - BBC/sDae/TI: to provide test content in AXMEDIS Format
    - Telecom Italia: to setup a content factory source and gateway with the mobile OMA platform
    - PKU: to implement and integrate the Home Domain architecture

CONTENT DISTRIBUTION WITH OMA AXMEDIS BACK OFFICE

Automating Production of Cross Media Content for Multi-channel Distribution

www.axmedis.org

The AXMEDIS 4HOME demonstrator shows how the AXMEDIS framework can be deployed to support the distribution of content over the mobile distribution channel. At the same time, it shows that the same content is made available in the native AXMEDIS format for download and use on PCs under the same conditions.

The 4HOME demonstrator uses the rights management aspects of the AXMEDIS Framework on the server side and the OMA DRM v2 corresponding features on the client side. To enable this scenario, an OMA gate-way is introduced in the AXMEDIS architecture, which translates AXMEDIS Objects and the corresponding licenses from the source format into an OMA compatible format.

The mobile demo uses as client devices two Nokia N91 commercial terminals equipped with certificates issued by the above mentioned root Certification Authority. The distribution of AXMEDIS content over the internet to the home users is achieved using a PC client where the AXMEDIS AXMEDIA P2P tool is installed.

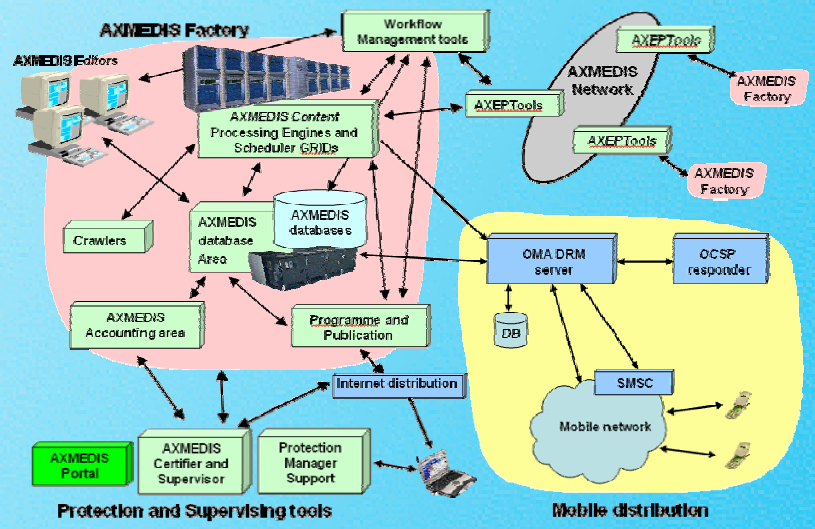
Partners Involved:

- **BBC/ETRI:** provide the Broadcast Interface from DVB-T and meta-data service.
- **ETRI:** provide the DRM Tool server for including distributing protection tools and accessing AXMEDIS DRM tools in AXMEDIS player.
- **Telecom Italia:** setup a content factory source and gateway with the mobile OMA platform.
- **PKU:** implement and integrate the Home Domain architecture
- **sDae:** establish the Licence authoring and validation based on IP Entities

Description of Content

10-20 content objects will be selected and translated from the AXMEDIS Format to OMA DRM format and will be available both on the mobile distribution channel as OMA DRM objects and on the Internet as AXMEDIS Objects.

Content type: short clips that can be stored on mobile devices without requiring memory expansions.



Final Users/Clients

- Mobile clients and PC clients (within the home domain)
- Members of the public, school children, co-workers
- Further users from usability testing trials from within the BBC, schools and possible outside volunteers

A registration procedure for users to gain access to more content material that cannot be cleared for all territories or general use

Target Market

Mobile content service providers. The OMA standard provides a basis for the provision and sale of high value content over the mobile platform.

Business Model Description

- **Simple sell of music tracks**: unlimited licenses, each track is sold individually.
- **"all you can eat" model**: the user pays a monthly fee, which entitles him/her to play whatever music track he/she likes, for one month. The license expires at the end of the month.

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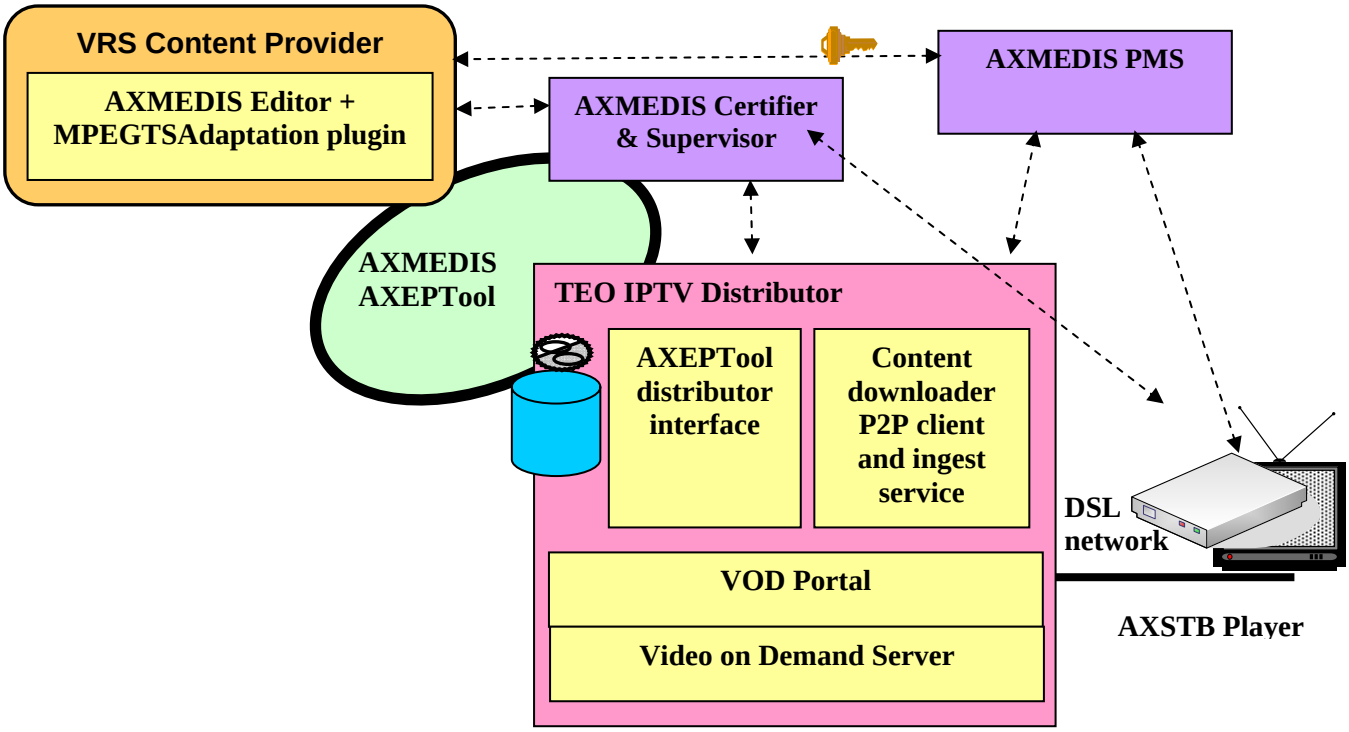
4.8 Content Distribution for Video on STB [TEO]

This document contains the Fact Sheet for content distribution for video on IPTV STB as defined in the WP12.2.3.1

Keyword List: Fact Sheet, Demonstrator, Distribution channel, STBs, IPTV, Content



- **Main purpose:**
  - To stream protected AXMEDIS content to IPTV STB
- **Review of the architecture integration with AXMEDIS:**
  - **Acquisition / providing of content, where and how**
    - Content is provided by VRS (20 video clips, some of them with trailers)
  - **Production of content, where and how:**
    - Content is provided by VRS (MPEG-2)
    - number of content items produced: 20 Video Clips
  - **Processing content, where and how**
    - In the Distribution site, using the AXMEDIS Editor to adapt content ready for streaming. The MPEG2TSAdaptation plug-in will be developed. This plug-in will be used in editor to adapt existing MPEG-2 TS stream resource into AXMEDIS-ready streaming resources – scrambled video/audio MPEG-2TS and AxMPEGStreamInfo resource.
  - **Protecting content, where and how:**
    - Signal protection level:
      - The transmitted video signal resource is encapsulated into MPEG-2 Transport Stream (TS) resource and scrambled using DVB-CSA algorithm. The signal can

be unprotected if and only if AxStreamResource information is deprotected from AXMEDIS object.

- Content license protection level:
    a. At production (VRS Factory) level, using AXMEDIS Editor or AXCP, with newly developed AXCP MPEGTSAdaptationPlugin for scrambling MPEG-2 Transport Stream (TS) resource using DVB-CSA algorithm.
    b. At Distributor (TEO) and end user level, upon AxSTBPlayer trying to access AxStreamResource in AXMEDIS object, AXOM protection processor is executed to deprotect the object according to the issued license. If the user has bought the object and has valid license, AxStreamResource is decoded from object and AxSTBPlayer.

- **mother licenses are produced, where and how**
    - content provider (VRS) provides mother licenses for distribution using its DRM editor or AXCP tools or directly the PMS Web Services. The PMS client will be employed to upload the license to PMS server which will be deployed at TEO site.
- **final licenses are produced, where and how**
    - produced by VOD access service using AXCP rule editor/scheduler+executor. When user chooses to view protected content, the payment has to be confirmed. Having received the payment, the VOD access service issues the license to end user using AXCP rule script. The issued license is sent to PMS server.
- **registration of user and devices, where and how**
    - The end user is registered to TEO database before providing the service. If TEO IPTV administrator checks AXMEDIS option in registration form, the standard registration process is extended and the user is registered to AXCS which is deployed at TEO site.
    - When user buys STB hardware it is registered automatically upon first usage. The standard STB registration process will be extended to register end-user STB to AXCS.
- **distributing content, where and how**
    - from TEO/KTU joint distribution site using streaming server
    - At first stage the custom VOD streaming server prototype will be built using open source components. The VOD streaming server will be adapted to stream protected AXMEDIS object resources.
    - migration to EXITECH streaming server when it is available.
- **accounting collection and action monitoring, where and how**
    - from TEO distribution site, using CAMART

- **Description of the effective installation**
    - **Servers**
        - Present at KTU/TEO joint site (TEO responsible)
        - Intel x64 CPU 4x server. RAM 4GB. 140GB SCSI RAID-10 disk array. Windows Server 2003 x64 OS. Initially up to 25% of server HW resources will be allocated to AXMEDIS services:
            - AXMEDIS Database
            - AXMEDIS AXEPTool
            - AXMEDIS Streaming server
            - Streaming server prototype
            - AXCS
            - PMS server

          Microsoft IIS HTTP server with ASP.NET 2.0 extensions Microsoft SQL server 2005 x64Microsoft .NET framework 2.0 x64

- **Portals**
  - AXMEDIS VOD Portal (http://mdwclust/Kreatel/AxVOD internal URL, available to STBs in IPTV VLAN)
  - VOD Portal (http://mdwclust/Kreatel/VOD internal URL, available to STBs in IPTV VLAN)
  - IPTV content management portal with newly developed AXMEDIS Management Module (http://mdwclust/iptv)
- **Distribution infrastructure needed if any**: The AXMEDIS content ready for distribution is stored in streaming server at TEO site. The content is downloaded from AXMEDIS network using P2P client. Then the content is prepared at Content downloader P2P client module and uploaded to streaming server using FTP service. After STB requests streaming of content, the streaming server starts UDP streaming of video content. The content is transmitted through headend switches to backbone network and finally it reaches the home gateway which is connected to STB.
- **Streaming/downloads**: streaming to end-user
- **Players needed**: PC/ PDA/ STB: PC for management, STB for end-user

- **AXMEDIS tools**
  - **List of major AXMEDIS tools:**
    - AXMEDIS Query User Interface and Query on-Demand
    - AXMEDIS Certifier and Supervisor (AXCS)
    - AXEPTool and AXMEDIA tool
    - AXMEDIS Object Model
    - AXMEDIS Content Production & Processing tools
    - Content Adaptation facilities
    - AXMEDIS Protection Tools
    - AXMEDIS Players, AXMEDIS Object Manager
    - AXMEDIS Accounting and Reporting Tool
  - **AXMEDIS P2P usage, yes or no, where and how:**
    - yes, on the TEO Distribution site
  - **AXCP usage, yes/no, where and how**
    - yes if needed for content adaptation
  - **Workflow tools usage, yes/no, where and how:**
    - no
  - **Programme and publication usage, yes/no, where and how:**
    - no
  - **PMS/AXCS usage, yes or no, where and how**:
    - yes, for demonstrator an AXCS and PMS will be installed in TEO site. The AXCS services will be used by IPTV Content Management portal and AXMEDIS Content Management module in end-user and STB registration process. AXCS will be also used for content usage reporting. PMS will be used in license issue and validation processes.
  - **AXMEDIS database usage, yes or no, where and how:**
    - yes, in TEO site
- **Target Market:**
  - The demonstrator will be a mock-up of value added video on demand (VoD) service to TEO IPTV service (Gala TV, www.galatv.lt) subscribers. At the end of 2006, there were over 5,000 IPTV subs subscribing to Gala TV.
- **Description of the business model**

- **Conceptual revenue model:**
  - Revenue from content distribution to consumers could be earned based on three basic models:
    - Advertiser pays to the distributor for ads shown to consumers;
    - Consumer pays to the distributor for paid content; or
    - A combination of the two.
  - TEO demonstrator pricing model for consumer:
    - watch for free, but also view 5' non-skippable ads embedded into a piece
    - Pay EUR 1 but watch 2' non-skippable ads before the start of the programme
    - Pay EUR 2 and watch the movie with no ads.
    - Buy a "special" version of a programme (such as the director's cut of a movie) by agreeing to watch non skippable adverts.

  Note: the above model is conceptual and developed for demonstration purposes only, and does not represent the real-life value for money pricing situations, which may or may not be used in real business environment.
- **Licenses kind, please describe the model**
  - Free of charge licenses for trailers and pay per view licenses for AXMEDIS objects.
  - End user licenses allow to play, stop, pause and skip video stream from VOD server:
    - Ads inserted into clips cannot be skipped using seek operation;
    - End user can skip forward only.
  - temporal limitations for duration of the project
  - territory limitations: Lithuania

- **Description of content:**
  - **How many content AXMEDIS objects will be distributed**: 20 video clips:
  - **Who is going to provide digital resources with the needed clearance of rights**: VRS
  - **Content description**: funny videos from VRS Kamera
    - 5 unique Funny home video blocks of approx. 10 minutes each, containing between 2-3 episodes, with 5 ad inserts
    - Above five unique Funny home video blocks of approx. 10 minutes each, containing between 2-3 episodes, with 2 ad inserts
    - Above five unique Funny home video blocks of approx. 10 minutes each, containing between 2-3 episodes, with no ads
    - Above five unique Funny home video blocks of approx. 10 minutes each, with episodes arranged in a different manner
  - **Kind of resources**: trial video clips of VRS authored funny home videos with embedded video ads
  - **Typical Content size for each content type**: size of video clips approx. 600 MB
- **Final Users/Clients:**
  - **How many final users will be reached**: 4-8 trial users
  - **Their description**: TEO Gala TV trial Users
  - **Their registration is needed**: no, registered upon subscription to Gala TV service and full client setup
- **Partners involved and roles:**
  - TEO: to contribute to development, provide distribution site and trial end users
  - VRS: to provide content, model it as AXMEDIS objects and make available for demonstrators in required formats
  - KTU: to develop and integrate missing components

CONTENT DISTRIBUTION FOR VIDEO ON IPTV STB

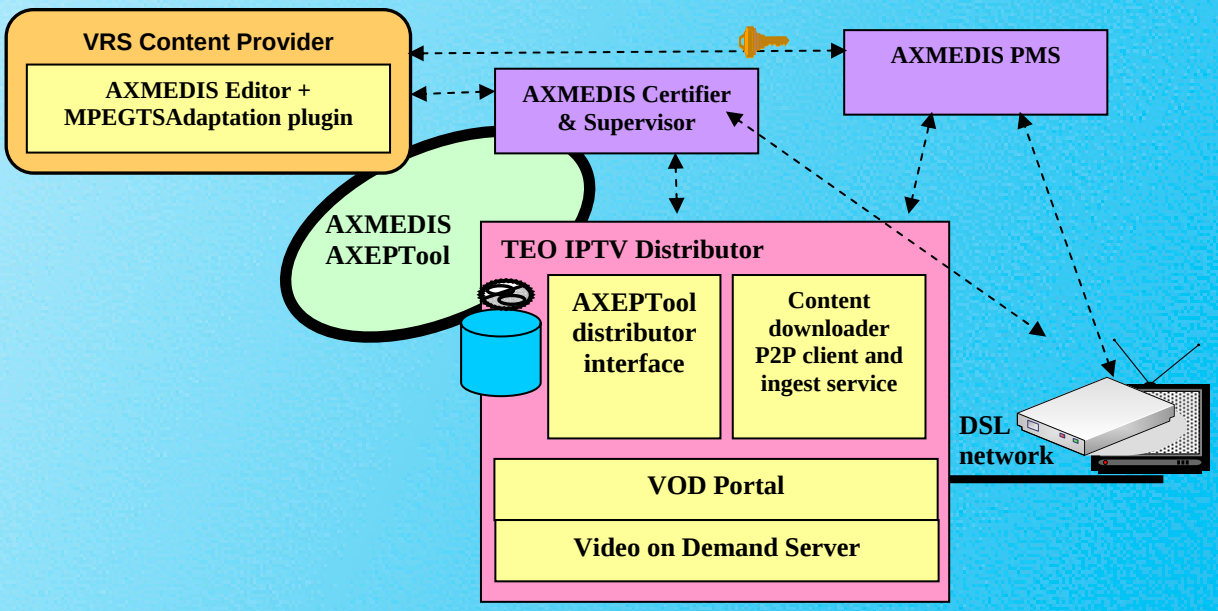
This demonstrator for the exploitation of AXMEDIS tools in TEO (Lithuania) IPTV platform demonstrates B2C distribution of video on demand (VOD) via IP network by means of MPEG-2 Transport Stream (TS) feeding an AXMEDIS compliant Set Top Box (STB) for viewing video on TV. AXMEDIS objects with MPEG 2 video content, specially processed for MPEG TS with accompanying information are streamed from a IPTV provider's VOD server to the client's STB, where it is played by an AXSTB player. The content is protected at two levels: at transport level by scrambling algorithms and at content license level by using AXMEDIS protection tools

Partners Involved:

- **TEO:** development, provides distribution site and trial end users
- **VRS:** provides content, models it as AXMEDIS objects and makes available for demonstrators in required formats
- **KTU:** development and integration of missing components

Target Market

Video on demand (VoD) service to closed network IPTV service sub-scribers.



Final Users/Clients

The content will be viewed by final users of Gala TV IPTV service registered and fully set up with STB upon subscription to Gala TV [www.galatv.lt]

Description of Content

Trial video clips of VRS authored funny home videos with embedded video ads will streamed to trial IPTV service user's STB's. The size of each video clip is approximately 600 MB

Business Model Description

Revenue from content distribution to consumers could be earned based on three basic models:

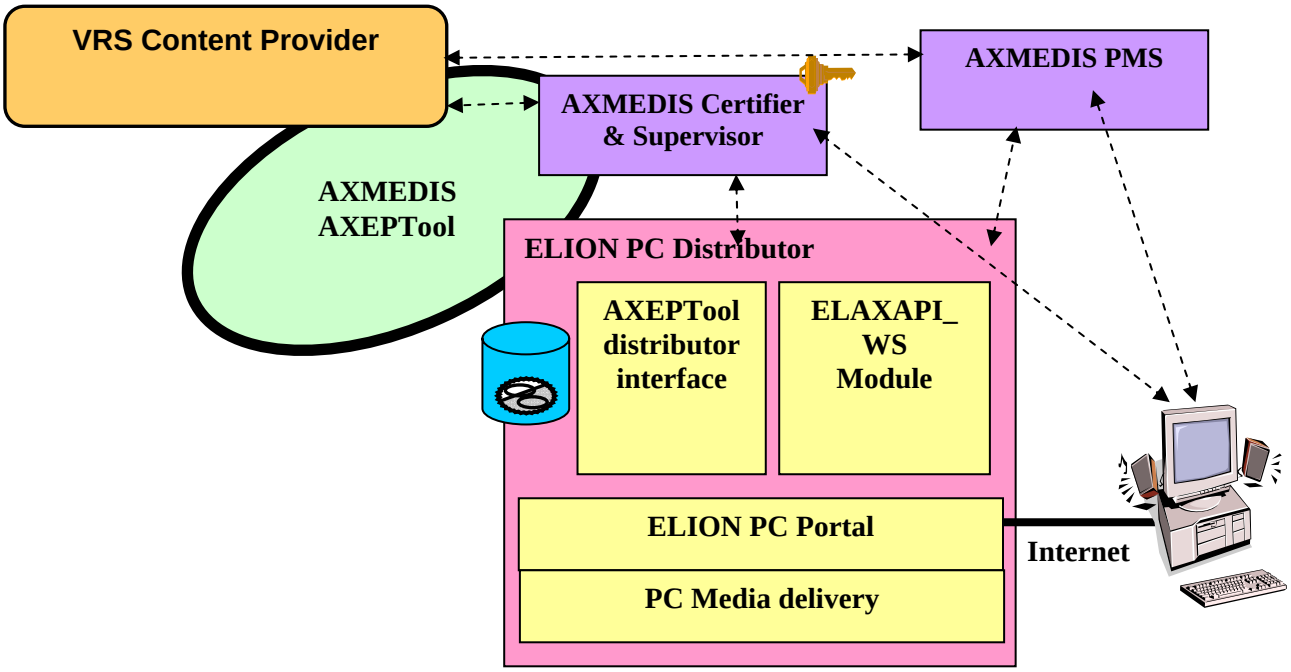
- Advertiser pays to the distributor for ads shown to consumers;
- Consumer pays to the distributor for paid con-tent; or
- A combination of the two.

4.9 Content Distribution for Video On-demand [ELION]

This document contains the Fact Sheet for integrated prototype for distribution on PDAs and Mobiles as defined in the WP9.5.

Keyword List: Fact Sheet, Demonstrator, Distribution channel, PDAs, Mobiles, Content

- **Main purpose:**
  - To stream/download protected AXMEDIS content to PC



AXELTEO Elion demonstrator via PC

- **Review of the architecture integration with AXMEDIS:**
  - **Acquisition / providing of content, where and how**
    - Content is provided by VRS (20 video clips, some of them with trailers)
  - **Production of content, where and how:**
    - Content is provided by VRS (MPEG-2 or MPEG-4)
    - number of content items produced: 20 Video Clips
    - number of content items produced at the same time
  - **processing content, where and how**
    - In the Distribution site, using the AXMEDIS editor to adapt content ready for downloading
  - **protecting content, where and how**
    - At production (VRS Factory) level, using AXMEDIS Editor or AXCP
    - At distributor (ELION) and client level when End user is accessing protected object.
  - **mother licenses are produced, where and how**

        - Content provider (VRS) provides mother licenses for distribution using its DRM editor or AXCP tools or directly the PMS Web Services. The PMS client will be employed to upload the license to PMS server which will be deployed at TEO site.
    - **final licenses are produced, where and how**
        - Produced by access service using AXCP rule editor/scheduler + executor. When user chooses to view protected content, the payment has to be confirmed. Having received the payment, the access service issues the license to end user using AXCP rule script. The issued license is sent to PMS server.
    - **registration of user and devices, where and how**
        - performed before giving the Player to end user and allow also self-registration
    - **distributing content, where and how**
        - from ELION distribution site using http server for download
    - **accounting collection and action monitoring, where and how**
        - from ELION distribution site using Camart

- **Description of the effective installation**
    - **Servers**
        - where are present: ELION site
        - who is responsible for server: Elion
        - which kind of server: Virtual Server with Windows 2003 R2
            - AXMEDIS AXEPTool
            - IIS http server (IIS 6, ASP.NET 2, SQL 2005)
    - **Portals**
        - Hot.ee community portal (www.hot.ee) – for end user distribution
        - E-pass (epass.elion.ee) – payment and user management system
        - Axmedis.neti.tv – ELION axmedis tool & distribution site
    - **Distribution infrastructure needed if any**: The AXMEDIS content ready for distribution is stored in delivery server at ELION site. The content is downloaded from AXMEDIS network using P2P client. Then the content is prepared with AXMEIDS Editor for distribution. After content is prepared it will be made available for download over web server using public networks.
    - **Streaming/downloads**: Download from distribution site.
    - **Players needed**: PC/ PDA/ STB: PC for end-user and for management

- **AXMEDIS tools**
    - **List of major AXMEDIS tools**:
        - AXMEDIS AXEPTool
        - AXMEDIS Certifier and Supervisor (AXCS) (TEO)
        - AXMEDIS Editor
        - AXMEDIS Object Model
        - AXMEDIS Content Production & Processing tools
        - AXMEDIS Protection Tools
        - AXMEDIS Players, AXMEDIS Object Manager
        - AXMEDIS Accounting and Reporting Tool
    - **AXMEDIS P2P usage, yes or no, where and how**:
        - yes, on the ELION Distribution site
    - **AXCP usage, yes/no, where and how**
        - yes if needed for content licensing

  - **Workflow tools usage, yes/no, where and how**:
    - no
  - **Programme and publication usage, yes/no, where and how**:
    - no
  - **PMS/AXCS usage, yes or no, where and how**:
    - yes, for demonstrator an AXCS and PMS will be installed in TEO site. The AXCS services will be used by Elion demonstrator in end-user registration and PC player certification process. AXCS will be also used for content usage reporting. PMS will be used in license issue and validation processes.
  - **AXMEDIS database usage, yes or no, where and how**:
    - no
- **Target Market:**
  - Prototype of AXMEDIS distributor.
  - Service to Elion internet service subscribers using the media rental. At the end of 2006, there were over 150,000 internet subs subscribing to Elion internet service with 5000 using existing VOD services.
- **Description of the business model**
  - **Conceptual revenue model:**
    - Revenue from content distribution to consumers could be earned based on two basic models:
      - Consumer pays to the distributor for paid content; or
      - Free of charge content.
    - Elion demonstrator pricing model for consumer:
      - Flat rate from 0 to x EEK, price is integral number, freely definable by administrator and depending on licensing and content type.
    - 24 hour playback license on purchase, play count is not limited.
  - **Licenses kind, please describe the model**
    - Free of charge licenses for trailers and pay per view licenses for AXMEDIS objects.
    - End user licenses allow to play, stop, pause and skip downloaded video
      - Ads inserted into clips cannot be skipped using seek operation;
      - End user can skip forward only.
    - temporal limitations for duration of the project
    - territory limitations: Estonia
- **Description of content:**
  - **How many content AXMEDIS objects will be distributed**: 20 video clips
  - **Who is going to provide digital resources with the needed clearance of rights**: VRS
  - **Content description**: Funny videos from VRS Camera:
    - 5 unique Funny home video blocks of approx. 10 minutes each, containing between 2-3 episodes, with 5 ad inserts,
    - Above five unique Funny home video blocks of approx. 10 minutes each, containing between 2-3 episodes, with 2 ad inserts
    - Above five unique Funny home video blocks of approx. 10 minutes each, containing between 2-3 episodes, with no ads
    - Above five unique Funny home video blocks of approx. 10 minutes each, with episodes arranged in a different manner;
  - **Kind of resources**: trial video clips of VRS authored funny home videos with embedded video ads
  - **Typical Content size for each content type**: video, 10 Mb

- **Final Users/Clients:**
  - **How many final users will be reached**: no less than 30
  - **Their description**: E-PASS users
    - E-PASS is Elion own version of Microsoft Passport, providing Elion with a single unified account system and generic payment channels. E-PASS currently has integrated payment channels using bank transfer and mobile phone. In case of bank payment user is directed to bank's internet site for payment, supported banks are HANSA, SEB and SAMPO. To pay with mobile a call number is show, user then dials the number making the payment. Integration of credit card's is planned for 2007/2008
  - **Their registration is needed**: no for private testing, (registered when giving them the Player), yes for public testing
- **Partners involved and roles:**
  - ELION: provide distribution site
  - TEO: to provide PMS and AXCS
  - VRS: to provide content
  - KTU: to develop the missing components if needed

This demonstrator for the exploitation of AXMEDIS tools presents the following features:

- B2C video on demand distribution on IP network by:
  - downloading video content into PC using http server
- AXMEDIS objects with
  - Any kind of content, all types mentioned in the other examples
  - Video, images, document, audio, animations, etc.
- Protection information not in the object:
  - produced with the AXCP with an automatic massive processing of objects,
  - with the protection tool, automatically Posted in the AXCS by the Protection Tool
- License:
  - produced on the fly when an AXMEDIS object is bought by:
  - using internet bank transfer payment or
  - calling the mobile phone number provided for toll payment.
- License allows
  - Free of charge view of trailers and pay per view for AXMEDIS objects.
  - Play, stop, pause and skip video stream from VOD server (ads inserted into clips cannot be skipped using seek operation; end user can skip forward only).
  - Other rights according to content type and business model
- The AXMEDIS Objects may be
  - Displayed/played on AXMEDIS PC player (free downloaded)
- The users operate a PC. The user has to perform the registration of
  - themselves as users (on an AXMEDIS portal)

    any AXMEDIS player tool they would use

CONTENT DISTRIBUTION FOR VIDEO ON-DEMAND

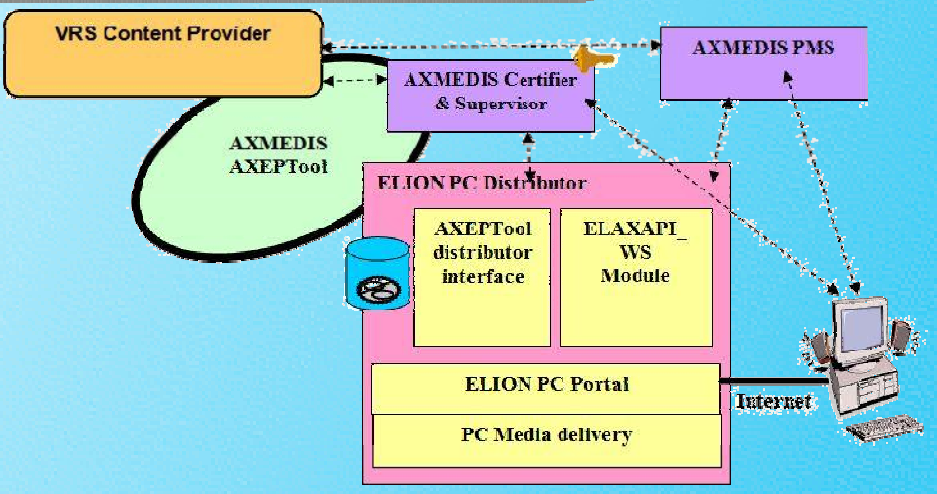
Automating Production of Cross Media Content for Multi-channel Distribution

www.axmedis.org

The Elion demonstrator for the exploitation AXMEDIS Framework shows B2C video on demand distribution on an IP network by downloading media content onto PC using an http server. The content will consist of AXMEDIS objects with any kind of content: video, images, document, audio, animations, etc. with protection of the object implemented on a content producer level with the AXMEDIS Content Processing (AXCP), massive automatic processing of objects. Licenses will be produced on the fly when an AXMEDIS object is bought. The licence allows free of charge view of trailers and pay per view for AXMEDIS objects.

Partners Involved:

- **ELION:** Integrates AXMEDIS tools into Elion environment and set up a working demonstrator
- **VRS:** Produce and adapt content
- **TEO:** Provide PMS & AXCS



Target Market

The demonstrator is a mock-up of value added video on demand (VoD) service to Elion internet service sub-scribers using the media rental. At the end of 2006, there were over 150,000 internet subs subscribing to Elion internet service.

Final Users/Clients

- Mobile clients and PC clients (within the home domain)
- Members of the public, school children, co-workers
- Further users from usability testing trials from within the BBC, schools and possible outside volunteers

A registration procedure for users to gain access to more content material that cannot be cleared for all territories or general use

Description of Content

The demonstrator will show video content processed for distribution to PC, and any other kinds of content available on AXMEDIS P2P network.

Business Model Description

Conceptual revenue model:

- Revenue from content distribution to consumers could be earned based on two basic models: Consumer pays to the distributor for paid content; or Free of charge content.
- Elion demonstrator pricing model for consumer: Flat rate from 0 to x EEK, price is integral number, freely definable by administrator and depending on licensing and content type.
- 24 hour playback license on purchase, play count is not limited.

Licenses kind

- Free of charge licenses for trailers and pay per view licenses for AXMEDIS objects.
- End user licenses allow to play, stop, pause and skip downloaded video
  - Ads inserted into clips cannot be skipped using seek operation;
  - End user can skip forward only.
- temporal limitations for duration of the project
- territory limitations: Estonia

4.10 AXMEDIS Integration with HP DMP [HP]

This document is based derived from the Fact Sheet for HP-DMP integration as defined in the WP9.2. NB. In DE5.1.2.2 AXMEDIS-for-All, this section has been removed; however the first draft of the flyer has been retained.

Keyword List: Digital Media Platform, ingestion, content distribution

AXMEDIS INTEGRATION WITH HP DMP

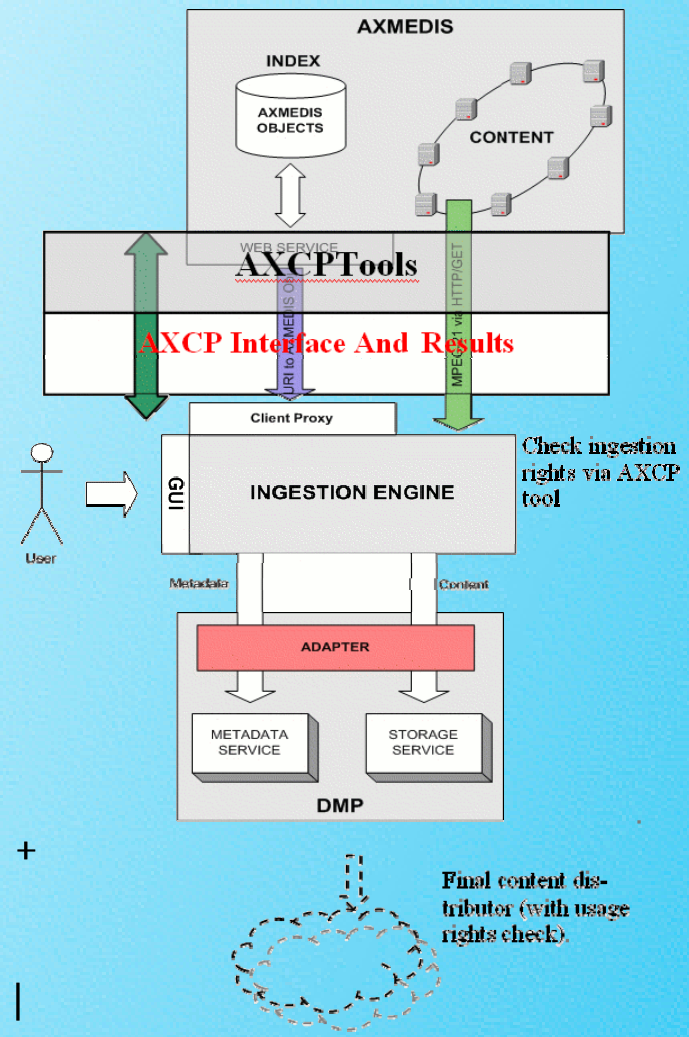
Automating Production of Cross Media Content for Multi-channel Distribution

www.axmedis.org

The main purpose of this demonstrator is to show the possibility to integrate the HP Digital Media Platform with the AXMEDIS framework and tools. The demonstrator will show how users query the AXMEDIS Database in order to find the content they need, download the content, separate the metadata from the actual content, if they have rights to do so, and store the two in the appropriate repositories.

Partners Involved:

≈ **AXMEDIS Content Partners:** All content production partners for the ingestion to use the content saved in the AXDB.



Target Market

The target market is the content distributors market. Each content distributor can retrieve AXMEDIS objects, ingest them with their metadata (and rights in the future), work on the con-tent and then distribute (for streaming, download or other) it to the final users.

Description of Content

The content topics can be of any kind, from films, to TV shows, music videos, sport events, etc., either recorded or live streamed.

Typical content size for each content type:

≈ Audio: circa 1MB/min.

≈ Video: circa 8MB/min depending on the bitrate encoding.

Digital resources and rights will be provided by the actual distributor with the DMP can ingest and distribute any kind of content, but it mainly used with streamed content such as audio or video.

Business Model Description

Each content distributor can implement its own business model, choosing when and how and to whom distribute the content. The distributor can also decide everything about the rights to impose to the content regarding the final user.

Final Users/Clients

Users are of various kinds ranging from children to grown-ups, male and female, who have the capabilities to access the content provided by the DMP (or better by the actual content distributor).

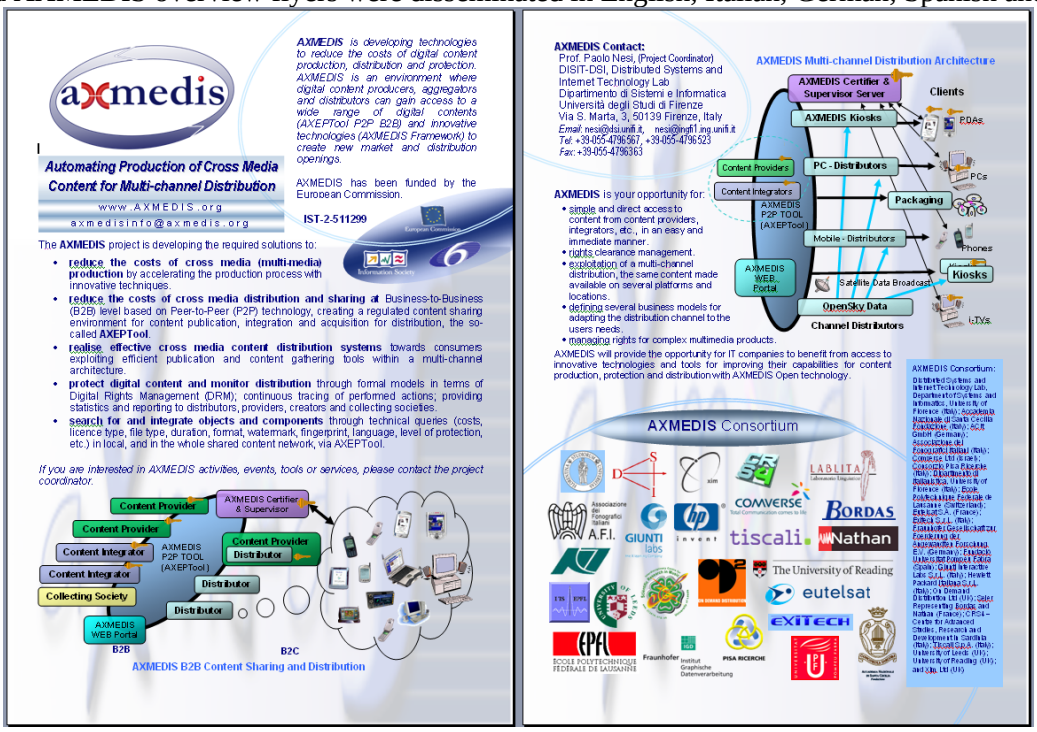
Their registration is needed: User registration is controlled

European Commission Information Society

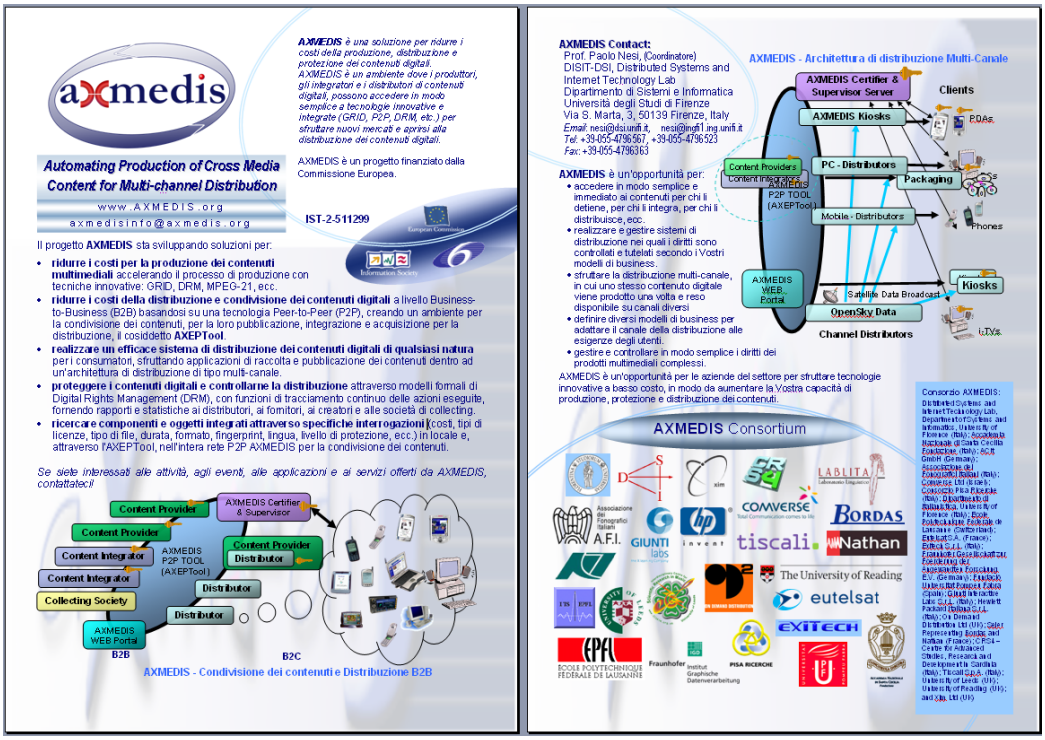
5 Flyers

5.1 Overview Flyers

The revised AXMEDIS overview flyers were disseminated in English, Italian, German, Spanish and French.



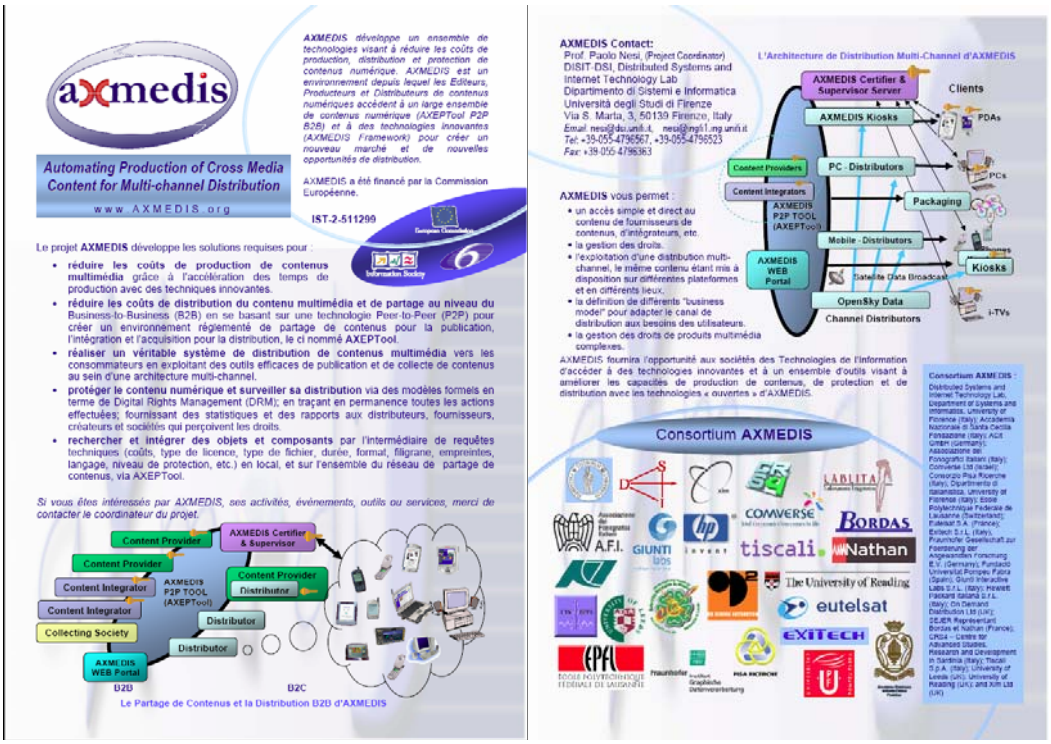
English Flyer



Italian Flyer

German Version

Spanish version



French version

5.2 Flyers for Tools and Areas

First drafts for flyers related to AXMEDIS Tools and Areas including the Protection model, Content processing and Distribution.

5.2.1 Flyer for AXMEDIS Protection Model

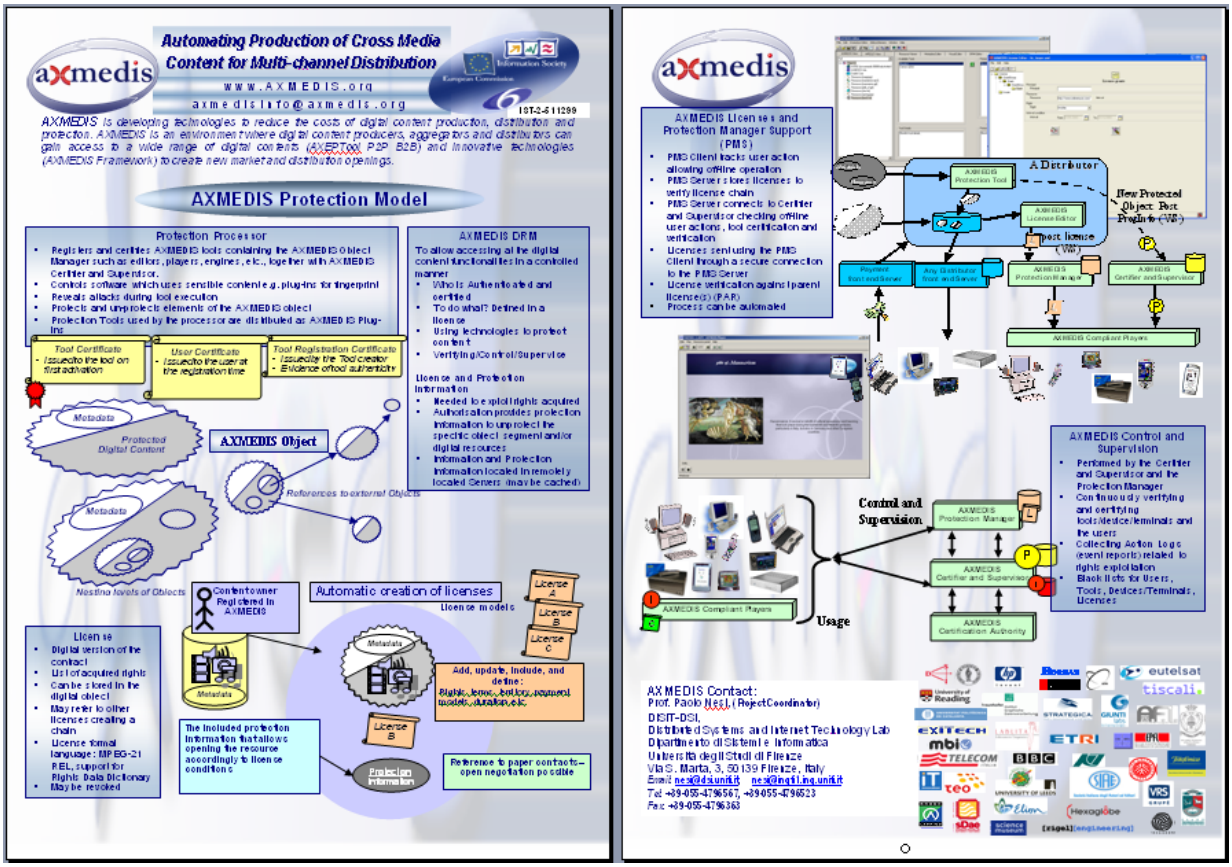


Figure: Flyer for AXMEDIS Protection Model

- Link to download the actual flyer: http://www.axmedis.org/documenti/view_documenti.php?doc_id=2685
- AXMEDIS Protection Models provide Digital Rights Management (DRM) and active protection models supporting different business and transaction models
- This will allow users to process digital rights automatically on the basis of contracts. Protection models take into account encryption, finger print and water marking technologies. They can support the distribution via P2P network or via traditional B2C transaction models.
- The Protection Models increase the security of digital content distribution and individual rights by researching and realising protection and identification algorithms and models, DRM solutions, transaction models and sustainable business models.
- A protection model includes two main components: (i) AXMEDIS Certifier and Supervisor which controls the DRM and supervises the traffic on the AXEPTool; (ii) other tools such as DRM/Protection solutions, DRM Engines, guidelines for licensing and contract definition, protection tools, monitoring tools, fingerprint estimation, enforcing and readers as developed in WP4.

5.2.2 Flyer for the Distribution to Kiosks

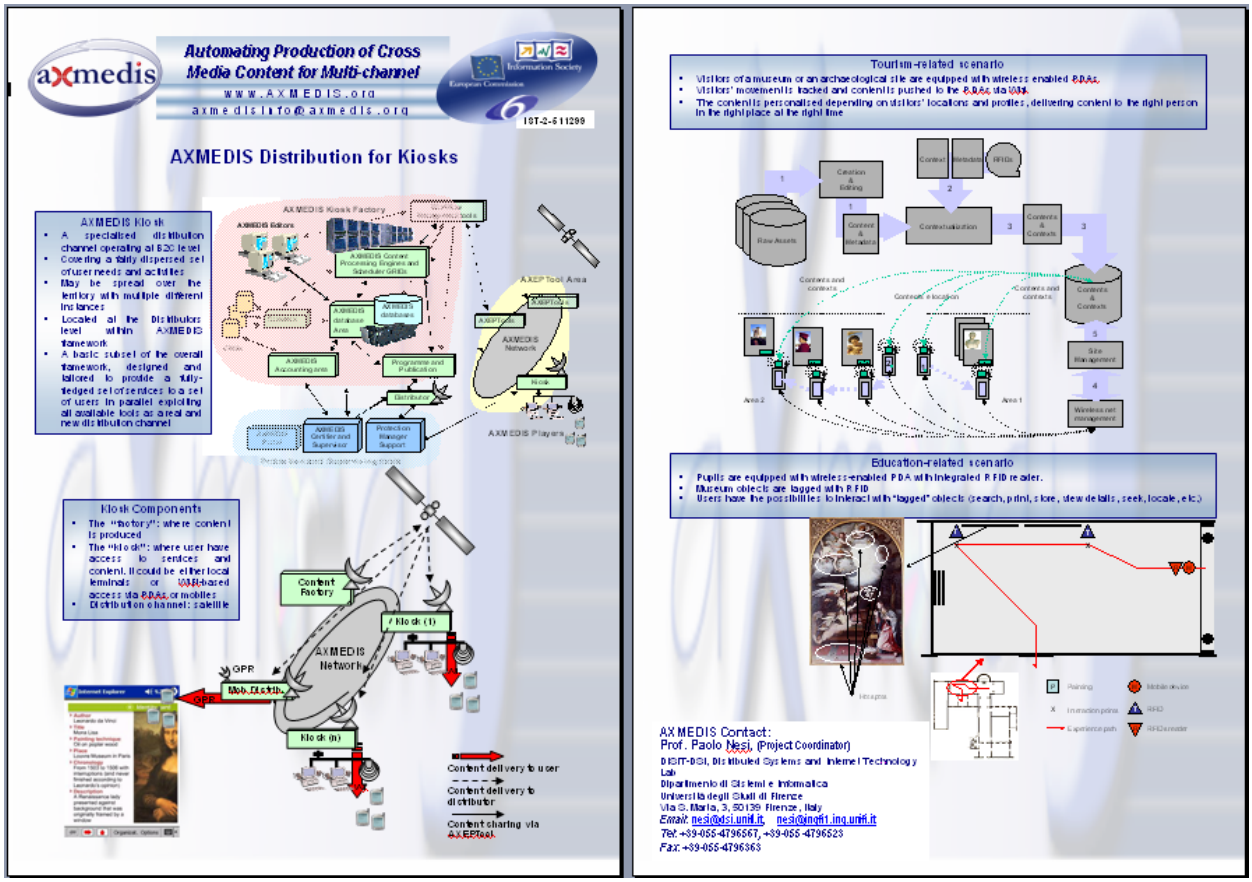


Figure: Flyer for the Distribution to Kiosk

- Link to download the actual flyer: http://www.axmedis.org/documenti/view_documenti.php?doc_id=2688
- In AXMEDIS a kiosk is specialised distribution channel operating at B2C level. It is a subset of the overall framework, designed and tailored to provide a fully-fledged set of services exploiting all available tools. Within AXMEDIS the kiosk demonstrator has a specific role and aim to demonstrate the benefits coming from the combination of several technologies in a totally new environment
- The Kiosk within AXMEDIS Architecture is divided in two components: the “factory” where content are produced and the “kiosk” where users have access to services and contents. Distribution from the factory to kiosks is achieved via satellite so as to optimise bandwidth when updating (in broadcast) units which may be geographically distributed, while content access, selection, acquisition and fruition at the kiosk is achieved via exploiting either local terminals (true points of service) or a WiFi based PDA or mobiles.

5.2.3 Flyer for AXMEDIS B2B and AXEPTool

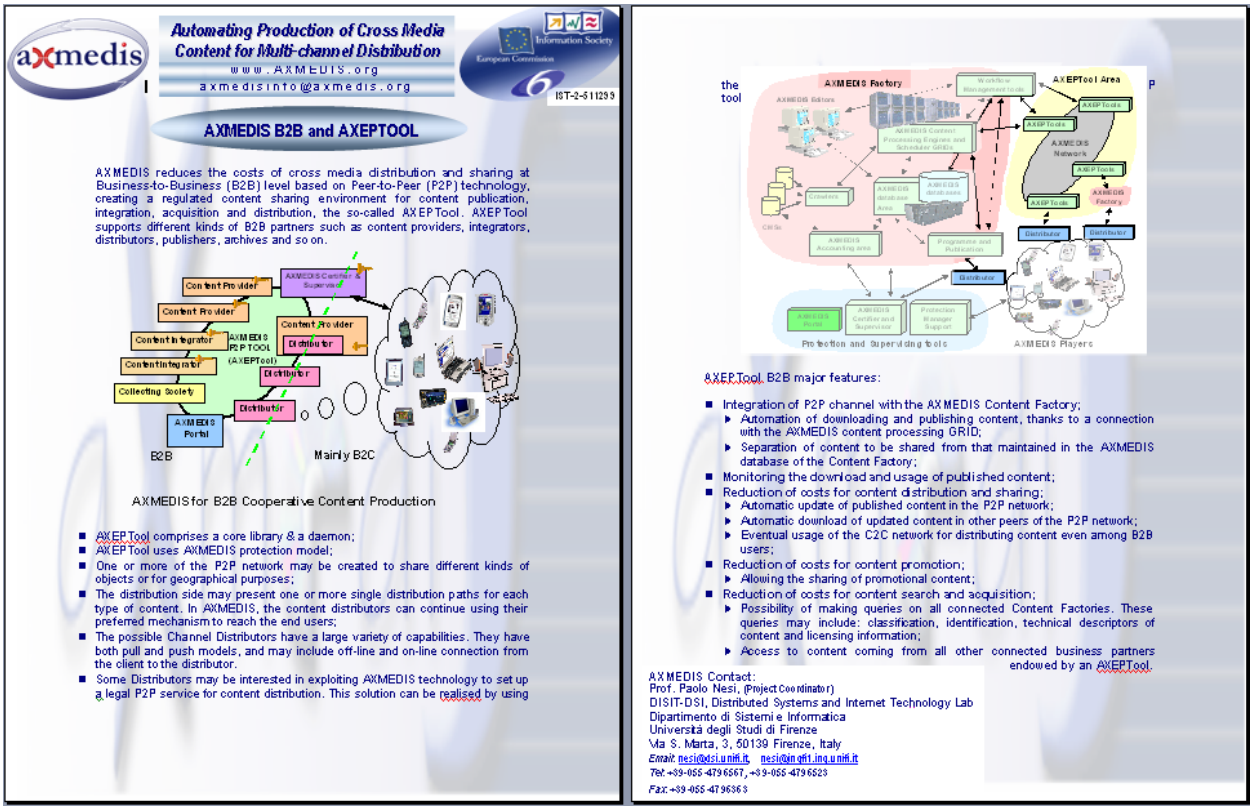


Figure: Flyer for AXMEDIS B2B and AXEPTool

- Link to download the actual flyer: http://www.axmedis.org/documenti/view_documenti.php?doc_id=2670
- AXEPTool reduces the costs of cross media distribution and sharing at Business-to-Business (B2B) level based on Peer-to-Peer (P2P) technology, creating a regulated content sharing environment for content publication, integration, acquisition and distribution, the so-called AXEPTool.
- AXEPTool supports different kinds of B2B partners such as content providers, integrators, distributors, publishers, archives, and so on.
- Its major features are (i) integration with the AXMEDIS Content Factory for automation of downloading publishing content; (ii) monitoring the download and usage of published content; (iii) reduction of costs for content distribution, sharing, promotion, search, and acquisition.
- The AXEPTool for P2P activities of content production also provides a specific user interface for technical queries including business aspects (costs, DRM rules, etc.)
- The AXEPTool in conjunction with AXMEDIS Certifier and Supervisor is capable of managing digital rights.

5.2.4 Flyer for AXMEDIS P&P Area

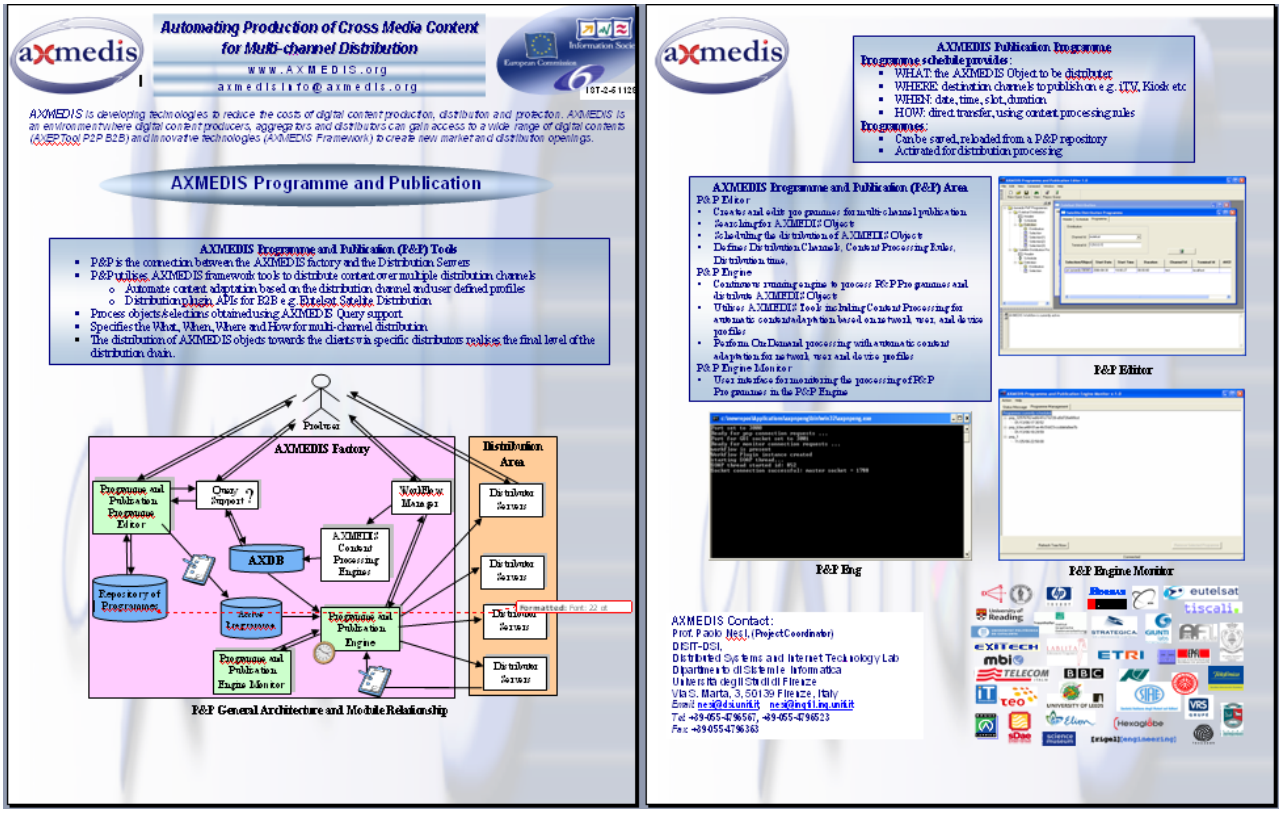


Figure: Flyer for AXMEDIS P&P Area

- Link to download the actual flyer: http://www.axmedis.org/documenti/view_documenti.php?doc_id=2674
- Programme and Publication (P&P) Area is the connection between the AXMEDIS Content Factory and the Distribution Servers. It helps specifying the What (the objects to be distributed), When (date and time), Where (the distribution channels such as satellite, kiosks, etc.) and How (direct transfer, using processing rules, etc.) for multi-channel distribution. It interacts with the AXCP for formatting objects and utilises AXMEDIS framework tools to distribute content over multiple distribution channels.
- It includes three components: (i) the P&P Engine which handles the scheduled distribution; (ii) the P&P Editor for creating and editing programmes for multi-channel distribution; (iii) the P&P Engine Monitor which monitors and controls the P&P Engine.

5.2.5 Flyer for AXMEDIS Content Processing (AXCP)

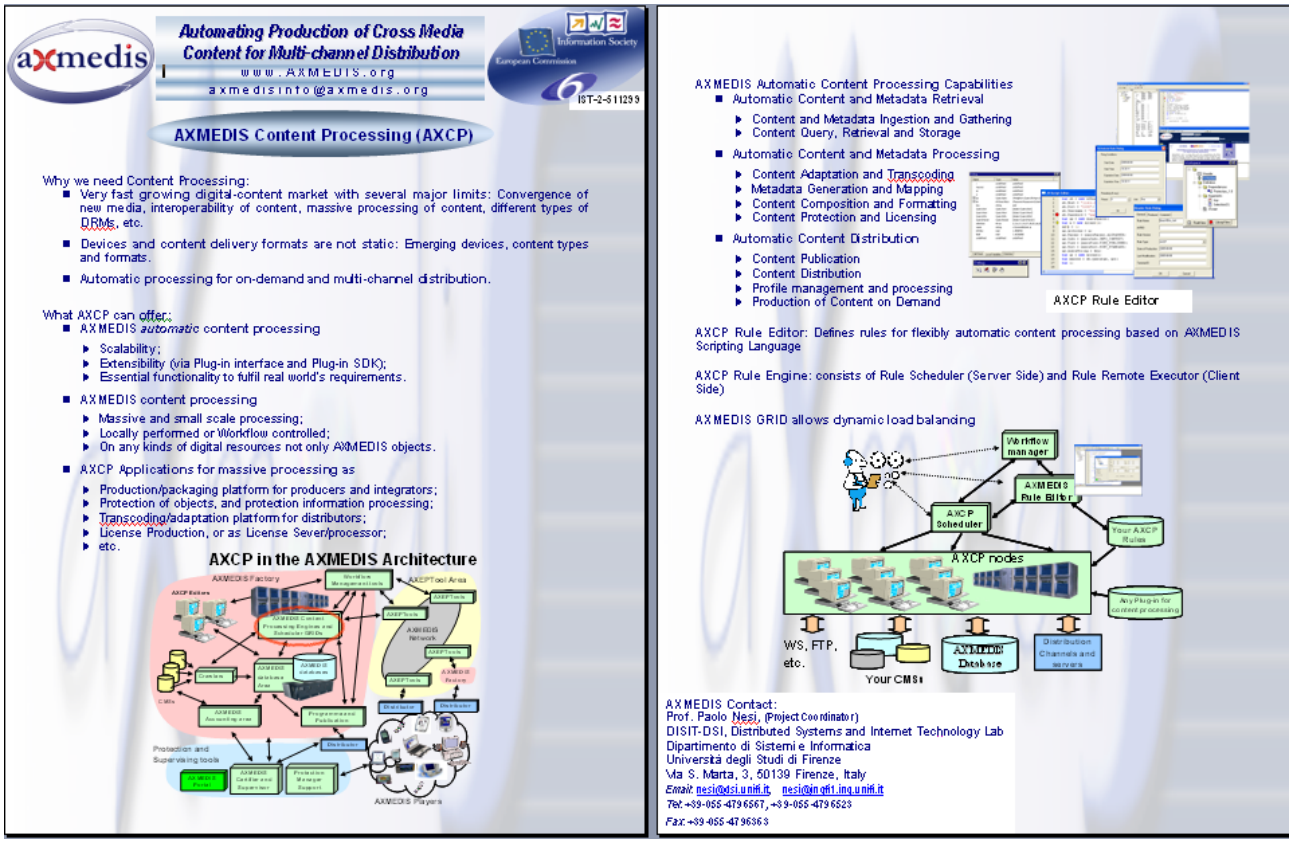


Figure: Flyer for AXMEDIS Content Processing (AXCP)

- Link to download the actual flyer: http://www.axmedis.org/documenti/view_documenti.php?doc_id=2672
- The AXMEDIS Content Processing AXCP provides scalable and automatic content processing for on-demand and multi-channel distribution based on GRID technology which allows dynamic load balancing.
- It is scalable and extensible which can process small to massive digital resources making it suitable for production/packaging, protection, transcoding/adaptation, etc. The main capabilities are automatic content and metadata retrieval, automatic content and metadata processing, and automatic content distribution.
- It consists of three components: (i) AXCP Rule Editor defining rules for flexibly automatic processing using AXMEDIS Scripting Language; (ii) AXCP Rule Engine consisting of Rule Scheduler (Server) and Rule Remote Executor (Client); (iii) AXCP GRID.

5.2.6 Flyer for the Distribution to PC

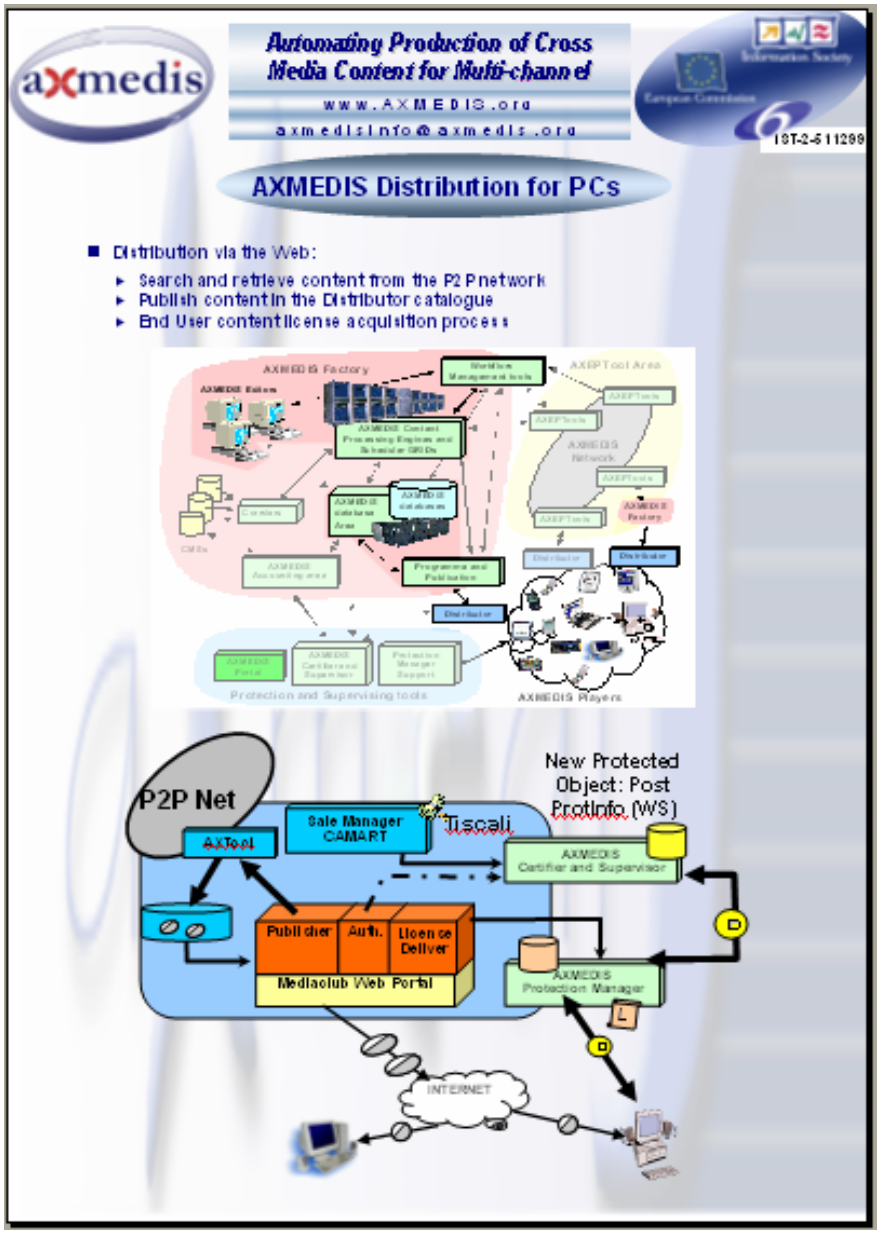
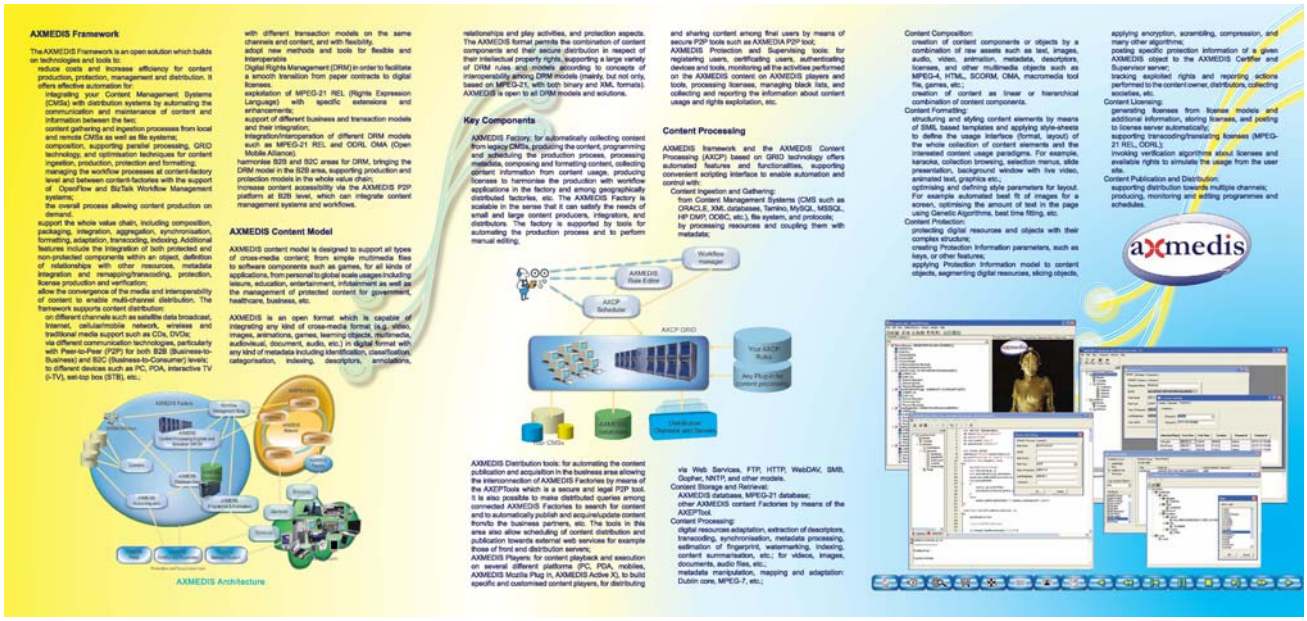


Figure: Flyer for the Distribution to PC

- Link to download the actual flyer: http://www.axmedis.org/documenti/view_documenti.php?doc_id=2675
- In AXMEDIS, PC is one of the distribution channel supported by the AXMEDIS framework. AXMEDIS supports distribution to PCs via the Web. Major features include searching and retrieving content from the P2P network, publishing content in the Distributor catalogue, and end user license acquisition process.

6 Brochures, new version with all partners involved

Brochure Exterior



Brochure Interior

7 Posters

7.1 Vertical Posters/Banners

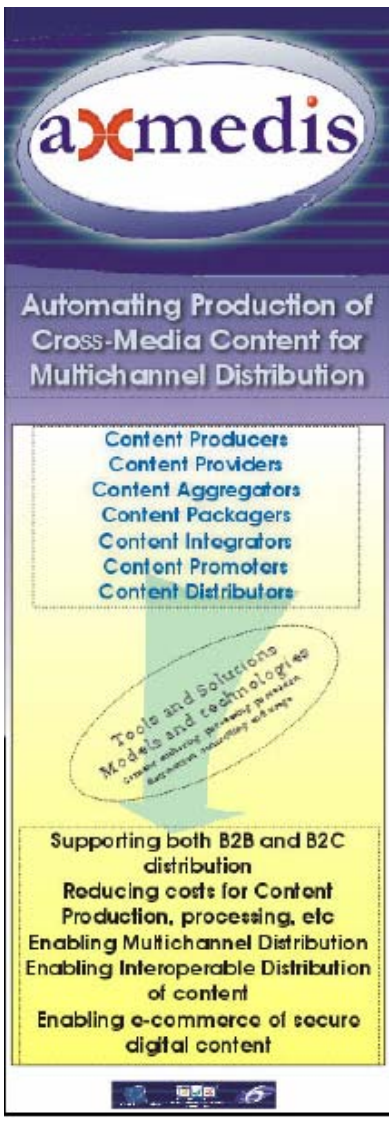
AXMEDIS Banner

All Partners (AX2007)

All Partners (AX2006)

All partners (April 2007)

(AXMEDIS banner)



(AXMEDIS banner)

8 Bibliography

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- AXMEDIS DE3.1.3 AXMEDIS Content Aspects Specification and Specification of Training and Demonstration http://www.axmedis.org/documenti/view_documenti.php?doc_id=764
- AXMEDIS Poster Design v0.2 http://www.axmedis.org/documenti/view_documenti.php?doc_id=1120
- AXMEDIS Dissemination Report and Plan M12, working draft, http://www.axmedis.org/documenti/view_documenti.php?doc_id=1161
- AXMEDIS Overview and General Solutions, http://www.axmedis.org/documenti/view_documenti.php?doc_id=1582
- AXMEDIS Tutorial on Content Production, http://www.axmedis.org/documenti/view_documenti.php?doc_id=1559
- AXMEDIS Tutorial on Distribution, http://www.axmedis.org/documenti/view_documenti.php?doc_id=1555
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- AXMEDIS DE7-2-1 Training Materials, http://www.axmedis.org/documenti/view_documenti.php?doc_id=1455
- AXMEDIS DE7-2-1 template resource – Training Manual blueprint, http://www.axmedis.org/documenti/view_documenti.php?doc_id=1183
- AXMEDIS DE7-2-1 template resource – Training Slides, http://www.axmedis.org/documenti/view_documenti.php?doc_id=1184
- AXMEDIS DE7-2-1 template resource – Training Event Questionnaire, http://www.axmedis.org/documenti/view_documenti.php?doc_id=1185
- AXMEDIS DE7-2-1 template resource – Training Attendance sheet, http://www.axmedis.org/documenti/view_documenti.php?doc_id=1186
- AXMEDIS DE1.7.1 Project Presentation, http://www.axmedis.org/documenti/view_documenti.php?doc_id=1440
- AXMEDIS2.1.1 User Requirements, http://www.axmedis.org/documenti/view_documenti.php?doc_id=570
- AXMEDIS DE2.3.2 User Group Maintenance, http://www.axmedis.org/documenti/view_documenti.php?doc_id=1358
- AXMEDIS DE4.7.1 Distribution to Mobile, http://www.axmedis.org/documenti/view_documenti.php?doc_id=1453
- AXMEDIS DE4.4.1 Content Sharing and Production on P2P, http://www.axmedis.org/documenti/view_documenti.php?doc_id=1451
- AXMEDIS DE4.5.1 Content Protection and Supervision, http://www.axmedis.org/documenti/view_documenti.php?doc_id=1430
- AXMEDIS DE5.1.1 AXMEDIS Framework Infrastructure, http://www.axmedis.org/documenti/view_documenti.php?doc_id=1201
- AXMEDIS DE4.1.1 Content Modelling and Management, http://www.axmedis.org/documenti/view_documenti.php?doc_id=1426
- AXMEDIS DE4.3.1 Content Composition and Formatting, http://www.axmedis.org/documenti/view_documenti.php?doc_id=1359
- AXMEDIS DE4.6.1 Content Distribution via Internet, http://www.axmedis.org/documenti/view_documenti.php?doc_id=1335
- AXMEDIS DE4.9.1 Usability Issues for the AXMEDIS Production Tools, http://www.axmedis.org/documenti/view_documenti.php?doc_id=1280
- AXMEDIS DE5.2.1 AXMEDIS Framework Validation, http://www.axmedis.org/documenti/view_documenti.php?doc_id=1267
- AXMEDIS DE9.1.1 Specification of CMS Integration and Feedback, http://www.axmedis.org/documenti/view_documenti.php?doc_id=1269
- AXMEDIS DE9.2.1 Specification of Automating Content Production and Formatting into CMSs of Integrators, http://www.axmedis.org/documenti/view_documenti.php?doc_id=1418
- AXMEDIS DE9.4.1 Specification of content production and distribution on-demand for PC, http://www.axmedis.org/documenti/view_documenti.php?doc_id=1365
- AXMEDIS DE9.6.1 Specification of Content Production and Distribution to Kiosks and local PDAs, http://www.axmedis.org/documenti/view_documenti.php?doc_id=1262
- AXMEDIS DE9.3.1 Specification of Content Production and Distribution in Push and for i-TV, http://www.axmedis.org/documenti/view_documenti.php?doc_id=1292

9 References and links

9.1 AXMEDIS Tutorials

- General Tutorial and Overview (December 2006, Leeds, UK)
  - PPT: http://www.axmedis.org/documenti/view_documenti.php?doc_id=2659
  - Video on part 1 - torrent

- Video on part 2 - torrent
- Video on part 3 - torrent
- Video on part 4 - torrent
- Video on part 5 - torrent
- Video on part 6 - torrent

- Content Production Tutorial http://www.axmedis.org/documenti/view_documenti.php?doc_id=2667
- Content Distribution Tutorial http://www.axmedis.org/documenti/view_documenti.php?doc_id=2666
- Content Processing Tutorial http://www.axmedis.org/documenti/view_documenti.php?doc_id=2655
- Workflow Tutorial http://www.axmedis.org/documenti/view_documenti.php?doc_id=2652

9.2 AXMEDIS tools for free download

- General download page: http://www.axmedis.org/documenti/documenti.php?area_id=1
- AXMEDIS tools (AXTOOLS) which include http://www.axmedis.org/documenti/view_documenti.php?doc_id=2885
  - AXMEDIS players described in the next point;
  - AXMEDIS Editor;
  - AXMEDIS Content Processing GRID tools: AXCP Scheduler, AXCP Rule Editor, AXCP GRID node, etc.;
  - DRM editor: License Editor, examples of licenses;
  - AXMEDIS plug ins for video, audio, document, images, processing, etc.
  - Examples of AXMEDIS objects in several type; http://www.axmedis.org/tiki/tiki-index.php?page=AXMEDIS+Cross+Media+Content%3A+Examples
  - Examples of AXCP scripts for content processing of several kind; http://www.axmedis.org/tiki/tiki-index.php?page=AXMEDIS+Content+Processing+Scripts
  - etc.
- AXMEDIS players: http://www.axmedis.org/documenti/view_documenti.php?doc_id=2884 including (all these players are included into the above mentioned package):
  - PC players,
  - PC player with Skin,
  - Bordas and Nathan Player for PC,
  - AXMEDIS Active X player for PC
  - Content Examples etc.
- AXEPTools: P2P client tool for establishing connection with the AXMEDIS P2P B2B network as Business User: http://www.axmedis.org/documenti/view_documenti.php?doc_id=3102
- AXMEDIA: P2P client tool for establishing connection with the AXMEDIS P2P B2B network as final users: http://www.axmedis.org/documenti/view_documenti.php?doc_id=3103
- AXMEDIS PDA player for Windows Mobiles 5: It is capable to play AXMEDIS objects based on SMIL, HTML, video, audio, MPEG-4 files, etc. AXMEDIS PDA player for AXMEDIS MPEG-21 content including resources with presentations layer based on MPEG-4, HTML and SMIL Unzip the file, copy the CAB file and execute it on the PDA
  - http://www.axmedis.org/documenti/view_documenti.php?doc_id=3107

9.3 AXMEDIS Framework Specification

- AXMEDIS Framework General aspects, Editor and Model http://www.axmedis.org/documenti/view_documenti.php?doc_id=1891
- AXMEDIS Command Manager http://www.axmedis.org/documenti/view_documenti.php?doc_id=2686
- AXMEDIS Object Manager and Protection Processor: http://www.axmedis.org/documenti/view_documenti.php?doc_id=1972
- AXMEDIS Editor and Viewers: http://www.axmedis.org/documenti/view_documenti.php?doc_id=2213
- AXMEDIS External Editors, Viewers and Players: http://www.axmedis.org/documenti/view_documenti.php?doc_id=2211
- AXMEDIS Content Processing Area: http://www.axmedis.org/documenti/view_documenti.php?doc_id=1958

- AXMEDIS External Processing Algorithms: http://www.axmedis.org/documenti/view_documenti.php?doc_id=2017
- AXMEDIS CMS Crawling capabilities: http://www.axmedis.org/documenti/view_documenti.php?doc_id=1907
- AXMEDIS Database and query support: http://www.axmedis.org/documenti/view_documenti.php?doc_id=1932
- AXMEDIS AXEPTool and AXMedia Tools: http://www.axmedis.org/documenti/view_documenti.php?doc_id=2718
- AXMEDIS Programme and Publication Tools: http://www.axmedis.org/documenti/view_documenti.php?doc_id=1885
- AXMEDIS Workflow Tools: http://www.axmedis.org/documenti/view_documenti.php?doc_id=1883
- AXMEDIS Certifier and Supervisor and networks of AXCS http://www.axmedis.org/documenti/view_documenti.php?doc_id=1952
- AXMEDIS Protection Support http://www.axmedis.org/documenti/view_documenti.php?doc_id=1882
- AXMEDIS Accounting and Reporting : http://www.axmedis.org/documenti/view_documenti.php?doc_id=1887
- Definitions Terms tables links http://www.axmedis.org/documenti/view_documenti.php?doc_id=1388

AXMEDIS reports on basic enabling technologies

- Content Model and Managing, MPEG-21, authoring, etc. http://www.axmedis.org/documenti/view_documenti.php?doc_id=2324
- Content indexing and querying: http://www.axmedis.org/documenti/view_documenti.php?doc_id=2436
- Content processing, Composition and Formatting http://www.axmedis.org/documenti/view_documenti.php?doc_id=2374
- Content sharing and Production on P2P: http://www.axmedis.org/documenti/view_documenti.php?doc_id=2454
- Content Protection and Supervision http://www.axmedis.org/documenti/view_documenti.php?doc_id=2371
- Content Distribution via Internet http://www.axmedis.org/documenti/view_documenti.php?doc_id=2451
- Content Distribution via Mobile http://www.axmedis.org/documenti/view_documenti.php?doc_id=2442
- Content Distribution via Satellite data broadcast http://www.axmedis.org/documenti/view_documenti.php?doc_id=2313
- Usability issues http://www.axmedis.org/documenti/view_documenti.php?doc_id=2339
- AXMEDIS vs DMP MPEG21 Analysis http://www.axmedis.org/documenti/view_documenti.php?doc_id=1063
- AXMEDIS Framework Infrastructure, guidelines and some tools http://www.axmedis.org/documenti/view_documenti.php?doc_id=1391
- AXMEDIS Framework Validation and integration http://www.axmedis.org/documenti/view_documenti.php?doc_id=2445

Basic knowledge reports

- User requirements http://www.axmedis.org/documenti/view_documenti.php?doc_id=1712
- Use Cases http://www.axmedis.org/documenti/view_documenti.php?doc_id=1824
- Test Case http://www.axmedis.org/documenti/view_documenti.php?doc_id=2023

Content Modeling and Test Cases

- Content Aspect Specification http://www.axmedis.org/documenti/view_documenti.php?doc_id=1389

- Content Aspect Specification Appendix
  http://www.axmedis.org/documenti/view_documenti.php?doc_id=1670
- Content for Test Cases and Validation
  http://www.axmedis.org/documenti/view_documenti.php?doc_id=1393
- Content Selection Guidelines http://www.axmedis.org/documenti/view_documenti.php?doc_id=1390
- Multilingual Guidelines and Technical Solutions
  http://www.axmedis.org/documenti/view_documenti.php?doc_id=1427
- AXMEDIS Editorial Format Guidelines and basic examples
  http://www.axmedis.org/documenti/view_documenti.php?doc_id=1394

9.4 AXMEDIS Framework Demonstrators, Cases, Trials, for distribution etc.

- requirements and use cases of AXMEDIS ELTEO of the content distribution for DVB-T to STB of Telecom Lithuania, and content distribution of Telecom Estonia
  http://www.axmedis.org/documenti/view_documenti.php?doc_id=2978
- requirements and use cases of the 4HOME take up, demonstrators of BBC, TI, SDAE, including domains, AXMEDIS for broadcasting, and OMA integration and distribution
  http://www.axmedis.org/documenti/view_documenti.php?doc_id=2976
- Specification final version of Take up AXMEDIS ELTEO for Video on demand, STB, IPTV solutions based on AXMEDIS technology: http://www.axmedis.org/documenti/view_documenti.php?doc_id=3096
- Integrated CMS integration aspects:
  http://www.axmedis.org/documenti/view_documenti.php?doc_id=2853
- Integrated prototype: automated content production and formatting:
  http://www.axmedis.org/documenti/view_documenti.php?doc_id=2939
- Integrated Distribution on demand via Internet
  http://www.axmedis.org/documenti/view_documenti.php?doc_id=2951
- Integrated distribution via satellite data broadcast:
  http://www.axmedis.org/documenti/view_documenti.php?doc_id=2954
- Integrated distribution towards mobiles:
  http://www.axmedis.org/documenti/view_documenti.php?doc_id=2945
- Integrated Distribution towards PDA via Kiosks:
  http://www.axmedis.org/documenti/view_documenti.php?doc_id=2944
- Content Posting Portal, Content Posting for Final User publication, SIAE Trial presentation:
  - http://www.axmedis.org/documenti/view_documenti.php?doc_id=2922
  - http://www.axmedis.org/documenti/view_documenti.php?doc_id=2923
- VARIAZIONI project portal: http://www.variazioniproject.org/

9.5 Brochures and press cutting (a part)

- AXMEDIS Project Brochure
  http://www.axmedis.org/documenti/view_documenti.php?doc_id=2712
- Annual Public Report (2006) http://www.axmedis.org/documenti/view_documenti.php?doc_id=2471
- Annual Public Report (2005) http://www.axmedis.org/documenti/view_documenti.php?doc_id=1439
- AXMEDIS Project Synopsis http://www.axmedis.org/documenti/view_documenti.php?doc_id=1668
- Digital Media in Italy presentation
  http://www.axmedis.org/documenti/view_documenti.php?doc_id=1669

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- ISO/IEC, ISO/IEC FDIS 21000-6 - Rights Data Dictionary. ISO/IEC JTC 1/SC 29/WG 11/N5842. July 2003.
- Iannella, R.: Open Digital Right Language (ODRL) Version 1.1. http://odrl.net/1.1/ODRL-11.pdf . August 2002.
- Open Mobile Alliance (OMA), http://www.openmobilealliance.com/
- OMA DRM Rights Expression Language version 2 (OMA DRM REL v.2), http://www.openmobilealliance.com/

- ISO/IEC, Study of ISO/IEC FCD 21000-4 IPMP Components. ISO/IEC JTC 1/SC 29/WG 11/N7426. July 2005.