



axmedis
*Automating Production of Cross Media Content
for Multi-channel Distribution*
www.axmedis.org



IST-2-511299

General Overview

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<http://www.axmedis.org/>
version 1.0
October 2007, Roma, Italy

www.AXMEDIS.org, Oct 2007



AXMEDIS

Presentation Overview

- **AXMEDIS Overview**
 - ◆ What is AXMEDIS
 - ◆ Cross Media Content, AXMEDIS Editor
 - ◆ AXMEDIS Major Tools, Players
- **AXMEDIS Automated Content production**
 - ◆ AXMEDIS CP GRID solution
 - ◆ Automated Content production
 - ◆ AXMEDIS Content Processing Tools
- **Digital Rights Management and Protection**
- **Applications and Demonstrators**
 - ◆ P2P Content Sharing
 - ◆ TISCALI, EUTELSAT, ILABS,
 - ◆ VARIAZIONI Project
 - ◆ Production on Demand
 - ◆ DRM and Interoperability
 - ◆ SIAE Trial, video
- **AXMEDIS Framework how to...**

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AXMEDIS



What is AXMEDIS ?

- **AXMEDIS is a consortium/project of the European Commission proposed by companies and institutions to solve a set of problems in the area of e-commerce of digital content**
 - ◆ approved by the EC for reaching specific objectives, among them the creation of an Open Platform for the digital content production, protection and distribution.
 - ◆ partially funded by the EC and partially from the Companies and Institutions involved
- **AXMEDIS is open to ALL via the Affiliation**
 - ◆ It is possible to join AXMEDIS, allowing you to access at the knowledge and tools/source code produced for your business
- **Start: 1st September 2004**
- **More than 35 partners (contractors and affiliated)**

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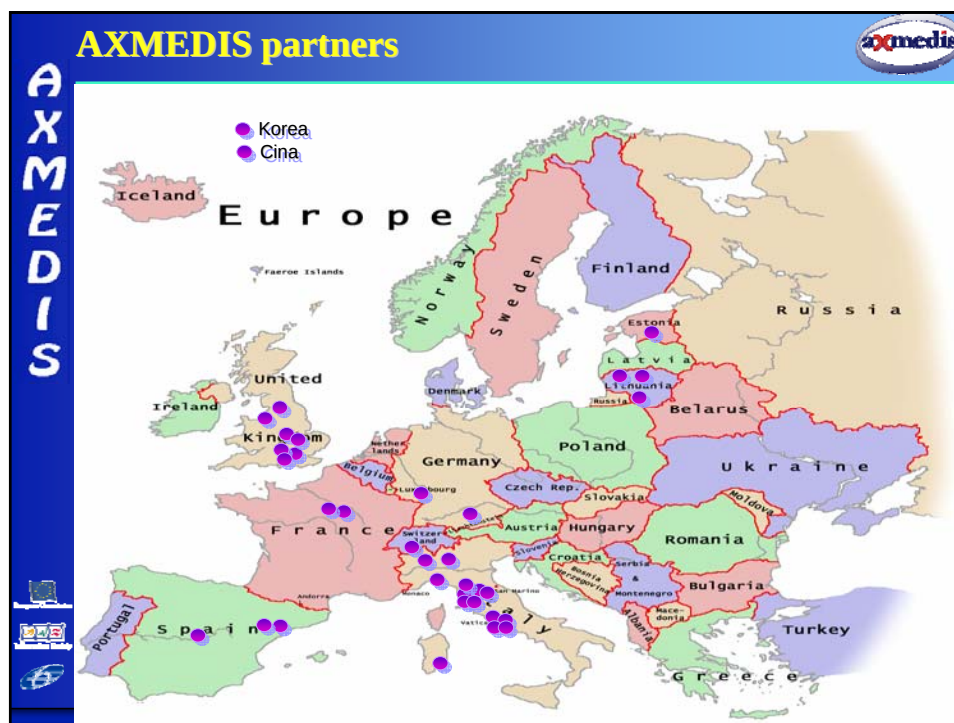


Partners



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AXMEDIS Objectives

- **Perform research on enabling technologies to allow**
 - ◆ reduction of distribution and aggregation costs for content production, protection and management
 - ◆ using and exploiting new models, methods and tools for content production, protection and distribution
- **Create a unified European platform for content production and distribution, developing the AXMEDIS framework to:**
 - ◆ Enable interoperability among different
 - content formats, cross media and simple resources
 - distribution channels (TV, PDA, mobile, kiosks, broadcasting,...)
 - DRMs (digital rights management) models (e.g., MPEG-21, OMA, Windows DRM, etc.)
 - ◆ Enable massive processing for content production and distribution (on demand), license processing, event tracking, protection, tracking and DRM, exploitation of legacy CMSs
 - ◆ Enforce flexibility in business and transaction models
 - ◆ Integrate and Harmonize of DRM in B2B and B2C areas
 - ◆ Enable secure/legal P2P content sharing for both B2B and B2C
 - ◆ Reuse and improved present standards, remaining open and expansible

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Applications and Customers

- **Applicative areas of AXMEDIS automation**
 - ◆ Entertainment, edutainment, infotainment, educational, etc.
 - Real-time and non-real-time content production, distribution and sharing
 - Internet, P2P, broadcast, IPTV, mobiles, DVB-T, DVB-S, DVB-H, etc.
 - ◆ And also:
 - banking, governmental, military and healthcare
- **AXMEDIS Customers**
 - ◆ content management, production, protection and distribution
 - Broadcasters, satellite, terrestrial, etc.
 - Telecom operators, multichannel operators
 - Content producers, editors, publishers
 - Collecting societies
 - Multimedia and cross media archives and WEB Portals
 - Etc.

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Technical Applications of AXMEDIS

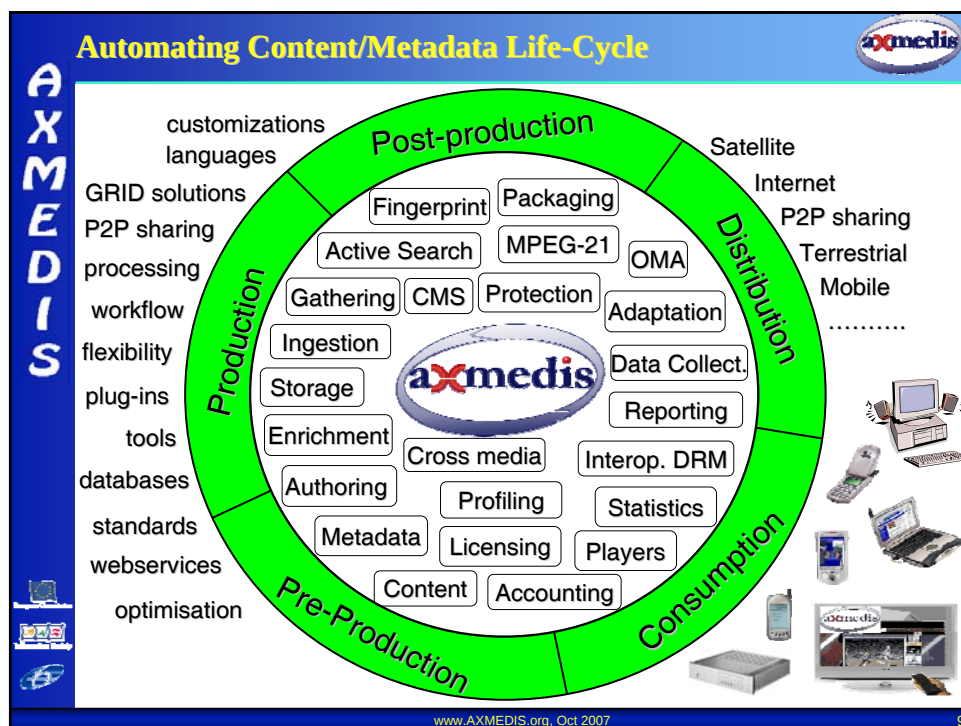
- General content management and processing
- Multi-channel production and distribution:
 - ◆ broadcasting, IP/Internet, WEB sites, P2P, mobile, PDA, IPTV, interactive TV and channels, etc.
- Multi-channel experience for your customers
- Exploit Video on Demand (VOD) solutions
- Exploit Production on Demand solutions
- Control of P2P content sharing and distribution, involving your customers in distribution (super-distribution)
- Involve your customers and final users in content production and social networking
- Integrate interoperable DRM into your business (MPEG-21, OMA, etc.)
- Exploit different business models and/or transactions on the same distribution channels: pay per play, monthly rate, preview, renting, advertising, etc.
- Exploit interactivity with cross media models
- Adopt advertising (customized and/or real time personalized advertising)

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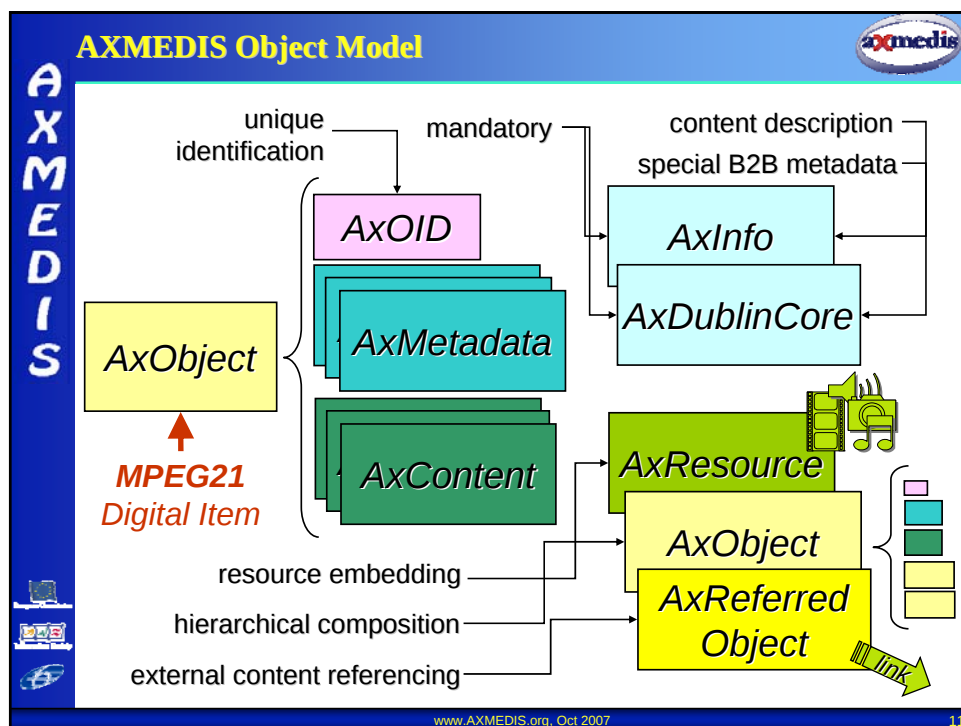
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The Cross Media Content Model

- **Based on MPEG21 Digital Items, but not limited to**
- **Overcoming limitations in content modeling and DRM:**
 - ◆ Cross media:
 - any kind of metadata and any kind IDs
 - presentation and glue (e.g., HTML, SMIL,), plus
 - digital resource images, documents, video, audio, games, MPEG-4, etc.;
 - ◆ Content components: composition and reuse;
 - ◆ DRM interoperability: MPEG-21 and OMA
 - ◆ DRM Chain of licenses: B2B and B2C integration;
 - ◆ Integration of semantics and behavior into the content.
- **DRM, Digital Rights Management**
 - ◆ Modeling licenses for the B2B-B2C areas
 - ◆ Algorithms and tools for processing licenses, chains and relationships
- **Supporting legal/secure P2P for B2B and B2C/C2C**
- **Supporting B2B-B2C content production and transactions,**
 - ◆ for protected and non protected objects

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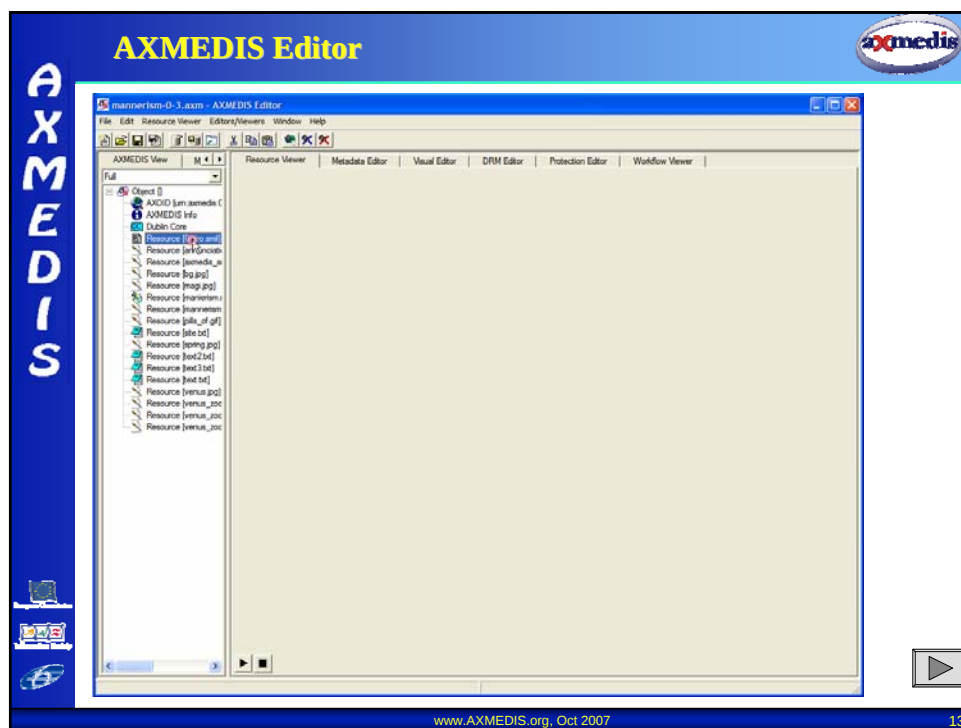


AXMEDIS Authoring Editor

- **The AXMEDIS Editor is an application allowing**
 - ◆ manual production of AXMEDIS objects
 - ◆ inspection of automatically produced objects
 - ◆ finishing AXMEDIS objects pre-produced automatically
- **It integrates many Editors & Viewers to handle all the aspects of the AXMEDIS Objects production**
 - ◆ Resource
 - ◆ OBJ Composition
 - ◆ Metadata
 - ◆ DRM/Licenses
 - ◆ Protection
 - ◆ Presentation
 - ◆ Behavior
 - ◆ Etc....

The screenshot shows the AXMEDIS Authoring Editor interface. It includes a menu bar (File, Edit, View, Windows, Help), a toolbar, and a main workspace. The workspace displays a portrait of a historical figure (likely a king or nobleman). A right-click context menu is open over the image, showing options like 'Load', 'Fit', 'Zoom in', 'Zoom out', 'Fullscreen', 'Show button', 'Show editor', 'Show button page', 'Show button zoom', 'Show video', 'Play Audio', 'Show Image', 'Show Document', and 'Empty'.

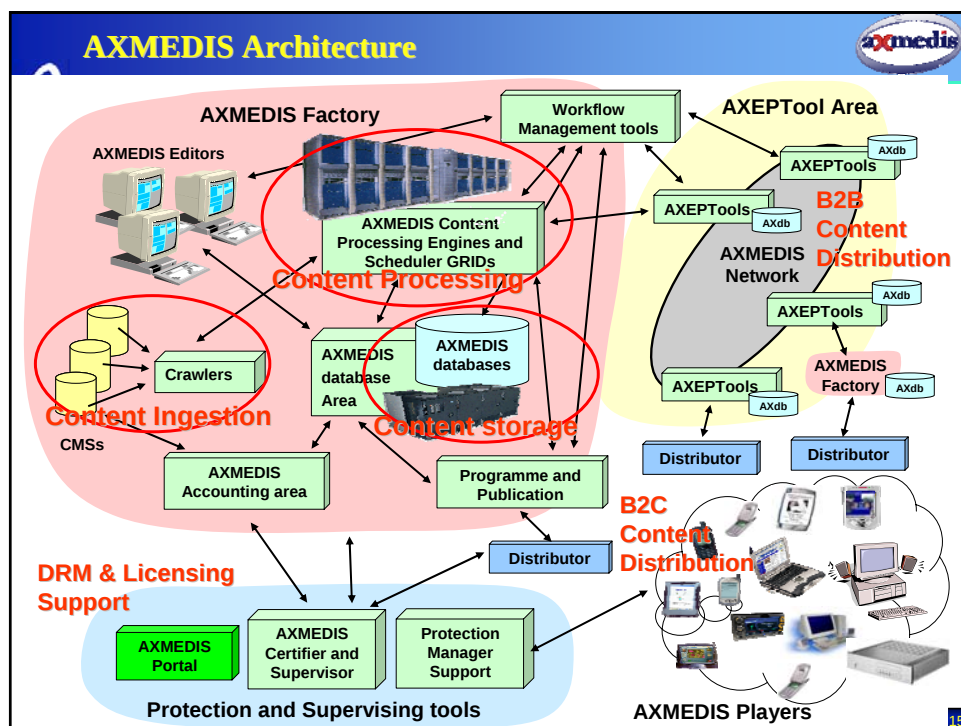
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Major AXMEDIS Tools

- **Players for cross media content:**
 - ◆ PC, PDA, STB, mobiles, etc.
- **DRM and protection support**
- **Content Production tools**
 - ◆ Authoring tools for cross media content: AXMEDIS Editor
 - ➔ for content, protection and licenses
 - ◆ Automated production tools for content, protection packages and licenses: AXCP, Workflow
 - ◆ CMS: search and retrieval, automated connection with your own and/or third parties CMSs
- **Content Distribution**
 - ◆ P2P tools for B2B and C2C in a controlled and safe/legal manner: AXEPTool, AXMEDIA
 - ◆ User and tool Registration portals
 - ◆ Certification authority, AXCA
 - ◆ License Server and Certifier and Verificator, PMS/AXCS
 - ◆ Scheduling: Program and publication, Workflow, etc.
 - ◆ Distribution Portal

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Interoperable Players

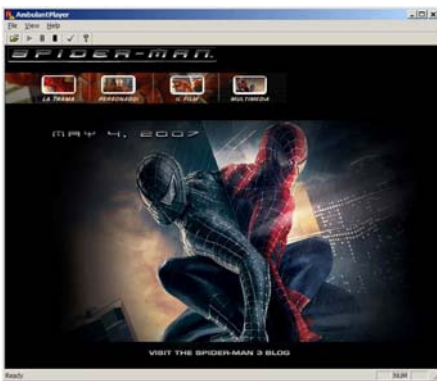
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- **PC players with full functionalities**
 - ♦ Stand Alone Player for Windows
 - ♦ Version with Replaceable skins
 - ♦ Active X Player for Windows, for:
 - Integrating player in Html pages
 - Microsoft Internet Explorer Browser
 - Macromedia tools Authorware
 - Realising customised AXMEDIS Players based on .NET
 - ♦ Plug in for Mozilla Internet Browser
 - Integrating player in Html pages
 - Two different skins
- **PDA player:**
 - ♦ MPEG-4, SMIL, HTML
- **STB player:**
 - ♦ for IPTV
 - ♦ for DVB-S
 - ♦ MPEG-2, MPEG-4
- **Mobile player:**
 - ♦ A pure Java player will be ready for October 2007
 - ♦ SMIL support with Audio Visual, MMAPI of Java

The right side of the slide displays several screenshots of AXMEDIS players in use. These include a desktop version with a classical painting skin, a version with a portrait of a man, a version with a landscape, and a version with a classical painting. The players are shown in various windowed and full-screen modes, demonstrating their interoperability and skinning capabilities.

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Cross media Player as Active X, for MS IE and .NET applications

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AXMEDIS Player for STB, PVR, Decoders, etc.

Inventory

Id	Content
101	Ax MP4 clip
102	Ax MP2-TS clip
103	AX DIVX clip






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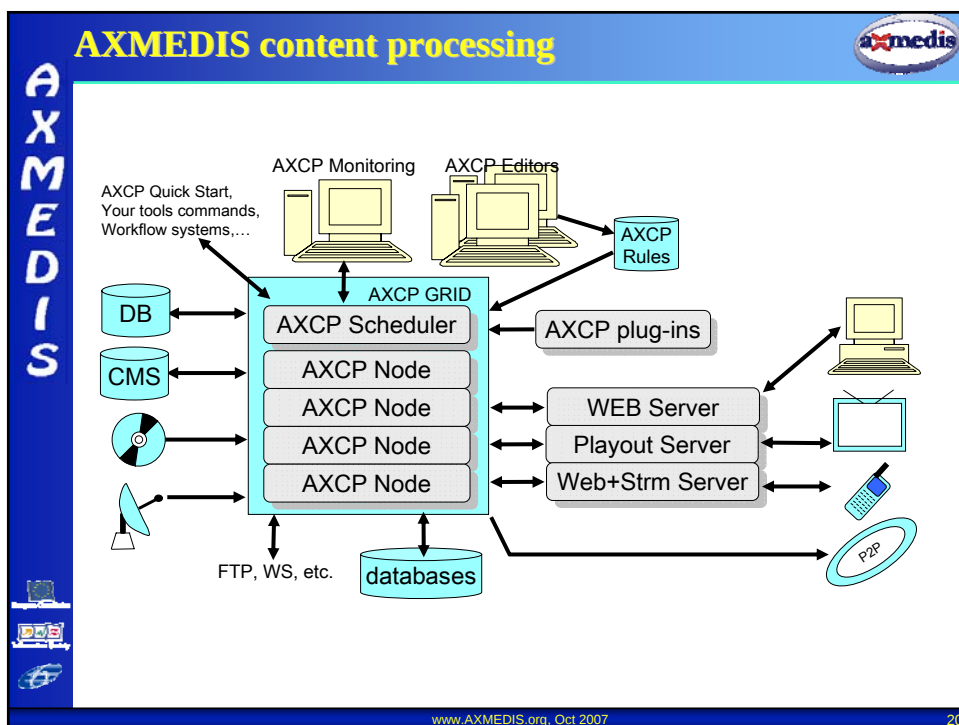
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AXMEDIS Content Processing Platform



- **AXCP GRID solution allows automated management of:**
 - ◆ content, metadata and licensing information, etc.,
- **operations of**
 - ◆ ingestion, crawling, database management, indexing, processing, adaptation, transcoding, encoding, decoding, descriptor extractor, recognition, filtering, production, archiving, storing, packaging, preview, extracting fingerprint, licensing, DRM, profiling, protection, encryption, accounting, enrichment, network management, etc.
- **AXCP tools can be integrated and controlled by your applications and/or workflow management systems.**
- **AXMEDIS allows you to reduce costs and increase efficiency of your content management.**



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AXMEDIS Content Processing Platform

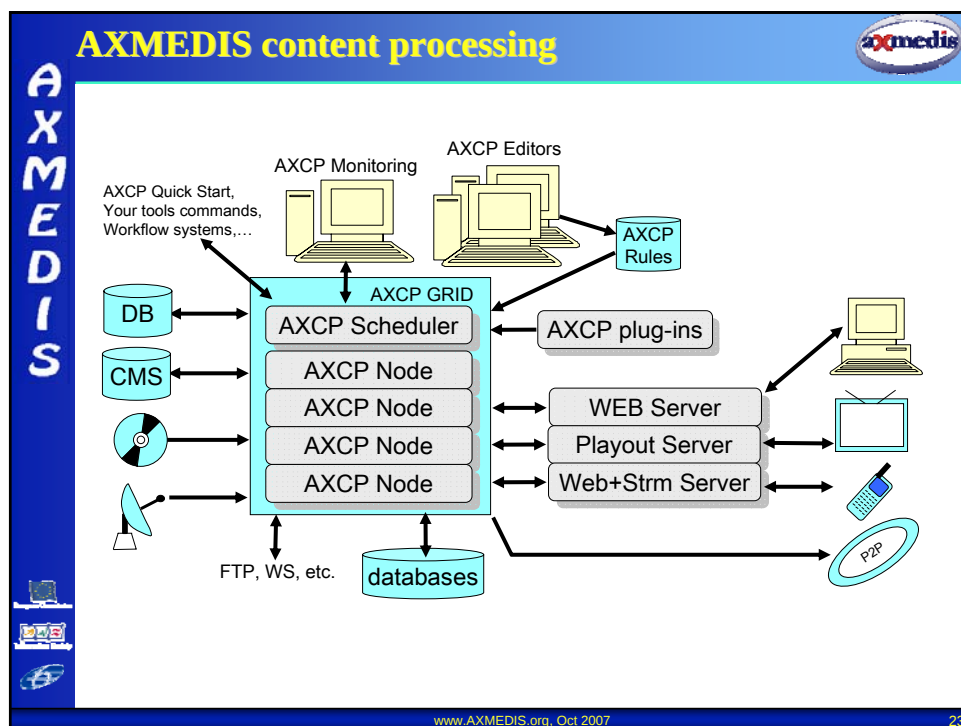


- **AXMEDIS supports the whole value chain and makes real and simple the convergence of media,**
 - ◆ media transcoding,
 - ◆ interoperability of content enabling multi-channel distribution (e.g., mobile, satellite, kiosk, iTV, web, P2P, interactivity, etc),
 - ◆ provides a flexible and interoperable DRM, for both B2B and B2C across traditional and P2P distribution platforms.
- **AXCP solution is based**
 - ◆ AXCP Rules formalized in JavaScript and XML to define jobs, processes and their features (deadlines, needs, etc.).
- **The AXCP tools are based on a Service Oriented Architecture (SOA);**
 - ◆ fully documented APIs for all the JavaScript functionalities, and WEB Services for accessing and controlling tools, and for distributing produced content towards your front-end distribution servers.



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AXMEDIS CP GRID tools

- **AXCP Rules can be:**
 - ◆ activated for content processing on any AXCP Node as well as on a single computer
 - ◆ used/parameterized to produce content on demand or to be integrated in your content factory
 - ◆ activated from your Workflow Management System or from any other application
 - ◆ activated by changes in remote objects and queries in the local database and on the P2P network.
- **AXCP Nodes allow to be controlled by an AXCP Scheduler. The stand alone version of the AXCP Node can be used for executing AXCP Rules for ad-hoc processing and activation without demanding their allocation and scheduling to the AXCP Scheduler.**
- **AXCP Scheduler to allocate and manage AXCP Rules on Nodes:**
 - ◆ scheduling and balancing jobs/processes on AXCP Nodes
 - ◆ activating jobs as sporadic and periodic tasks
 - ◆ monitoring progress of production processes and their status, etc.
- **AXCP Rule Editor allows you to produce, debug, test and validate AXCP Rules to execute them on AXCP Nodes**
- **AXCP Quick Start allows you to activate Rules in simple manner by passing them parameters;**

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AXMEDIS Content Processing Editor, AXCP Editor

The screenshot displays the AXMEDIS Rule Editor 1.0 - ScriptProduction.xml - [JS Script Editor - Main]. The interface includes a menu bar (File, Edit, View, Insert, Command, Tools, Workflow, Window, Help), a toolbar, and a tree view on the left showing the project structure. The main area contains a JavaScript script for creating and uploading an AXMEDIS object. A large, stylized watermark reads "GRID technology Automate your Backoffice".

```

170 print("Creating MASTER Copy of AXMEDIS Object");
171 var masterObj = new AxmedisObject();
172 print("Embedding resource into MASTER Axmedis Object");
173 masterObj.addContent(resource);
174 var label = resTitles["MASTER_"];
175 createDC(masterObj, label, resource.mimeType);
176 if(!fillObjectCreatorCredentials(masterObj))
177     return false;
178 var axInfo = masterObj.getAxInfo();
179 axInfo.distributorAXIDID=AXIDID;
180 creatorID = axInfo.getObjectCreatorAXIDID();
181 print("Adding PAR to MASTER (A,B,C type)");
182 if(!addPar(masterObj))
183     return false;
184
185 print("Uploading non protected MASTER object on DB: "+masterObj.AXIDID);
186 if(!masterObj.uploadToDB(AXDRF_serverEndPoint, AXDRF_user, AXDRF_pass, AXDRF_unin))
187 {
188     var error = "Upload request failure: "+masterObj.AXIDID;
189     print(error);
190     return false;
191 }
192 var filename = masterObj.AXIDID.replace(" ", "_")+".xml";
193 masterObj.save(backUpFolder+filename);
194 appendToFile(productionFile, masterObj.AXIDID+"\n");
195
196 masterObj.dispose();
197 masterObj = null;
198 return true;
199
200 }
    
```

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Content Production Quick Starter

The screenshot displays the AXCP Quick Starter interface. It features a menu bar (File, Edit, Query, Rules), a toolbar, and a tree view on the left. The main area shows a table of objects with columns for Title, Creator, and Object ID. A context menu is open over the table, showing options like "Add Object", "Preview", "ObjectProduction", and "ObjectCollection". A "Rule Configuration" dialog box is also visible, showing parameters for a rule.

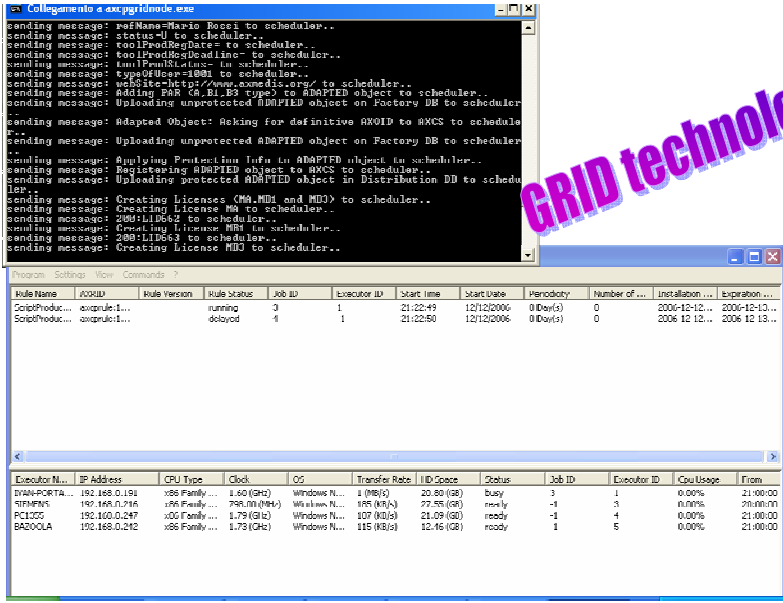
Title	Creator	Object ID	St.
Torino	NALL	urn:axmedis:0000:obj:020479d-1113-4e60-b4d0-062a30e34866	AXID
Boccioni Umberto	NALL	urn:axmedis:0000:obj:01023d2-2982-4d1f-f9eb-f9eb111997f9	AXID
Rancor Pierre-Auguste	NALL	urn:axmedis:0000:obj:052d4526-e2d9-4526-99ee-e0d379ea4288	AXID
Gauguin Paul	NALL	urn:axmedis:0000:obj:0909627-825d-4208-57d2-c107a5217465	AXID
Croix-Carl	NALL	urn:axmedis:0000:obj:0a013d3-9d11-4f13-b070-e98a68f1e0d1	AXID
Gauguin Paul	NALL	urn:axmedis:0000:obj:11152d88-4132-4a88-b6ad-af4765d5d514	AXID
City mpt	XPM	urn:axmedis:0000:obj:122d279e-5d1f-4d88-8252-b52518119000	AXID
Torino	NALL	urn:axmedis:0000:obj:128730d4-5d36-4a26-996a-99a3a3f3197d	AXID
Boccioni Umberto	NALL	urn:axmedis:0000:obj:14505d1-1d13-4d51-6d10-434d9e45429	AXID
Gauguin Paul	NALL	urn:axmedis:0000:obj:15104d4-1805-495d-8007-74a059d63c22	AXID
mandorlini napoletano Porto	NALL	urn:axmedis:0000:obj:159192d4-4091-4051-41d8-252d30f60990	AXID
Torino	NALL		
Campanelli a Testera	Accademia Nazionale di Santa Cecilia		
Croix-Carl	NALL		
Torino	NALL		
Gauguin Paul	NALL		
Gauguin Paul	NALL		
Moro della Pi	NALL		
Francia Jean	Accademia Nazionale di Santa Cecilia		
Rancor Pierre	NALL		
Mandorlini Nap	Accademia Nazionale di Santa Cecilia		
Croix-Carl	NALL		
Levard	NALL		
Moro della Pi	Accademia Nazionale di Santa Cecilia		
mandorlini napoletano Porto	Accademia Nazionale di Santa Cecilia		
Alouardier	NALL		
SETTE NOTE IN NERO	API		
Gauguin Paul	NALL		
Torino	NALL		
Rancor Pierre-Auguste	NALL		
Gallin	Accademia Nazionale di Santa Cecilia		
City mpt	NALL		
Mandorlini Nap	NALL		
Veliquet Diego	NALL		
Gauguin Paul	NALL		

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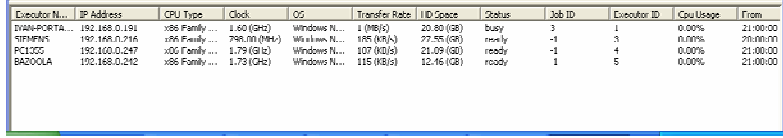
AXMEDIS GRID Scheduler and nodes



Jobs Table:

Job Name	Job ID	Job Version	Job Status	Job ID	Executor ID	Start time	Start Date	Periodicity	Number of ...	Installation ...	Expiration ...
ScriptProd...	axcpul1...	running	3	1	1	21:22:49	12/12/2006	0 Day(s)	0	2006-12-12...	2006-12-13...
ScriptProd...	axcpul1...	delayed	4	1	1	21:22:50	12/12/2006	0 Day(s)	0	2006-12-12...	2006-12-13...

GRID technology



Nodes Table:

Executor N...	IP Address	CPU Type	Clock	OS	Transfer Rate	HDD Space	Status	Job ID	Executor ID	CPU Usage	From
DVANI-PORT...	192.168.0.194	x86 Family ...	1.60 (GHz)	Windows N...	1 (MB/s)	20.80 (GB)	busy	3	1	0.00%	21:00:00
RTMPART	192.168.0.216	x86 Family ...	798.00 (MHz)	Windows N...	195 (KB/s)	27.55 (GB)	ready	-1	3	0.00%	20:00:00
PC225	192.168.0.247	x86 Family ...	1.79 (GHz)	Windows N...	107 (KB/s)	21.09 (GB)	ready	-1	4	0.00%	21:00:00
BA200LA	192.168.0.242	x86 Family ...	1.79 (GHz)	Windows N...	115 (KB/s)	12.45 (GB)	ready	1	5	0.00%	21:00:00

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AXCP allows you Automating:

- Workflow management and harmonize Production Process
- Content and metadata access, ingestion and gathering
- Content and metadata management and retrieval
- Metadata modeling and processing
- Content Processing for audio videos, document, images, multimedia, cross media, and any files
- Content Composition Presentation and Interactive models
- Multimedia and cross media adaptation/processing
- General Information Processing
- Content Packaging, for media Containers and DRM
- Content Formatting
- Content Adaptation Process
- Content Protection and DRM
- Content Licensing and DRM
- Content Publication and Distribution
- Communication Capabilities with multiple channels
- Control of P2P network

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AXMEDIS content processing

- **AXCP solution is open since it can be expanded and/or customized for your needs by:**
 - ◆ creating and customizing AXCP Rules to be executed on AXCP Nodes
 - ◆ putting in execution Rules according to different policies such as: periodic, sporadic or on demand from third parties, external tools, web services, etc.
 - ◆ customizing, realizing and installing additional AXMEDIS plug-ins to add new formats, encoders, decoders, adapters and converters, etc.
 - ➔ The AXMEDIS Plug-in technology is open, well documented and supported by a development tool kit
 - ◆ organizing AXCP GRID Nodes in a hierarchical manner.
 - ➔ An AXCP Node may control one or more AXCP Schedulers which in turn may control other AXCP Nodes, etc.
 - ◆ executing operating system processes, passing them parameters/files and getting eventual errors.



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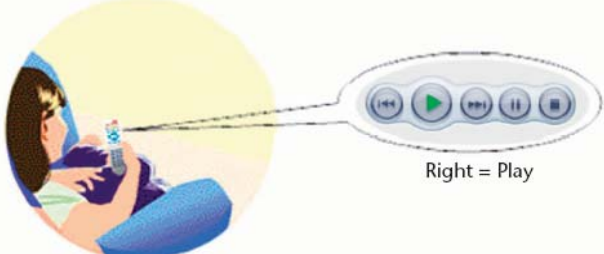
An example of statement



Condition = November 2003



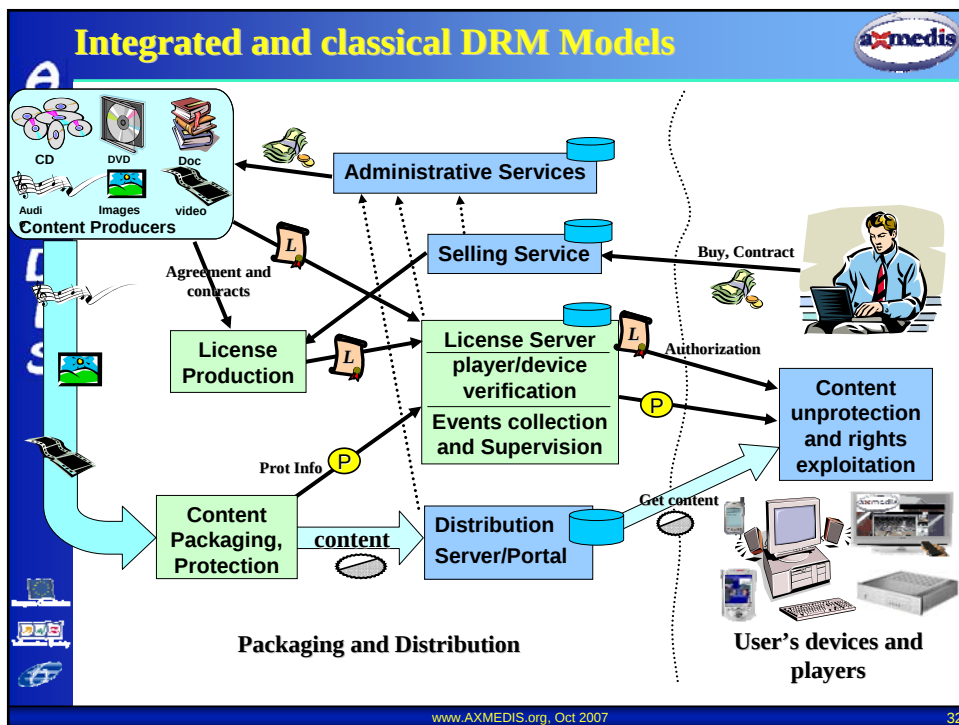
Resource = Ocean Wilds



Right = Play

- Rosy can Play 3 times the Ocean Wilds in November 2003.

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List of Events/Actions on rights Exploitation

- **Collecting Events and Actions**
 - ◆ Further reporting
 - ◆ Further verification of consistency
 - ◆ provide the evidence about the exploitation of rights to: content owners, producers, collecting societies, distributors, etc.
 - ◆ provide the billing information to the final user
 - ◆ provide the statistical information
- **Counting the usage, exploitation of rights**
 - ◆ how many times a music piece has been played, how many print out have been produced, etc.
 - ◆ Dynamic definition of price for example...
- **MPEG-21 Event Reporting**
 - Specifies how to express ER-Request and Event Report and how they are represented as digital item

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AXMEDIS Accounting and reporting

Result: 0
Number of collected Logs: 237
Collapse/expand logs table

AXOID	Version	AXCE	AXDM	AXWDE	Execution Timestamp	Owner Name	Location	Operation Id	Operation Details Id	Protection Stanc	Registration Timestamp
1	URN AXMEDIS 00001 OBJ 9F378B83-1C09-32AF-9E5-360DF2634499										97
2	URN AXMEDIS 00001 OBJ 68D93560-DB0D-3DD8-9E54-3955F5CDD19F										15
3	URN AXMEDIS 00001 OBJ 91551FDD-FBEF-3DD8-9E54-3955F5CDD19F										13
4	URN AXMEDIS 00001 OBJ B1AFE1BF-4AEC-3A21-94B5-9F3705362D9E										13
5	URN AXMEDIS 00001 OBJ D5F1383D-B731-3EFC-AC07-6329141C420F										12
6	URN AXMEDIS 00001 OBJ 82EF315B-47C9-3774-A82A-3671CF4AB8DA										10
7	URN AXMEDIS FFFFF OBJ 8640C										
8	URN AXMEDIS 00001 OBJ 0C9347										
9	URN AXMEDIS 00001 OBJ 76AA47										
10	URN AXMEDIS 00001 OBJ CB832B										

AXMEDIS Camart Statistic Service - Requested Logs

Hello test

Result: 0
Number of collected Logs: 100
Collapse/expand logs table

Log Id	AXOID	Version
CSO_560ead4e-b2d8-339b-af26-940c49e27c3c	OBJ_fdf7914a4-4476-3764-a70c-5adb0744cf2	1.0
CSO_a22bcc04-ec8c-3115-bb70-ba488a5d3dc3	OBJ_887215ee-98f6-3eaf-972b-8f5a113	1.0
CSO_1efac220-5bac-3170-8d98-ed6d9e73b34a	OBJ_9ecc229a-193d-4b88-9573-40	4.0
CSO_eb9a2151-4a8b-3eeb-98f4-beb1153b6019	OBJ_9e4a-b36d32b7a	1.0
CSO_bcd70949-71c2-3a77-9cff-409b-3b35-8c0	OBJ_8f1e-b3e1-3b35-8c0	1.0
CSO_87b0760-05b-390	OBJ_7466-1f55-12	1.0
CSO_86042	OBJ_91a5b963c8	5.0
CSO_85a7894c-7a54	OBJ_1f62f44-0840-3821-8163-b1c3e9b0deee	4.0

Monitor the exploitation of YOUR rights

MPEG-21

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AXMEDIS statistical reporting

AXMEDIS Camart Statistic Service - Requested Logs

Hello test

Result: 0
Number of collected Logs: 100
Collapse/expand logs table

Log Id	AXOID	Version
CSO_560ead4e-b2d8-339b-af26-940c49e27c3c	OBJ_fdf7914a4-4476-3764-a70c-5adb0744cf2	1.0
CSO_a22bcc04-ec8c-3115-bb70-ba488a5d3dc3	OBJ_887215ee-98f6-3eaf-972b-8f5a113	1.0
CSO_1efac220-5bac-3170-8d98-ed6d9e73b34a	OBJ_9ecc229a-193d-4b88-9573-40	4.0
CSO_eb9a2151-4a8b-3eeb-98f4-beb1153b6019	OBJ_9e4a-b36d32b7a	1.0
CSO_bcd70949-71c2-3a77-9cff-409b-3b35-8c0	OBJ_8f1e-b3e1-3b35-8c0	1.0
CSO_87b0760-05b-390	OBJ_7466-1f55-12	1.0
CSO_86042	OBJ_91a5b963c8	5.0
CSO_85a7894c-7a54	OBJ_1f62f44-0840-3821-8163-b1c3e9b0deee	4.0

get statistical data on rights exploitation

open to market analysis and reasoning

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AXMEDIS



Presentation Overview

- **AXMEDIS Overview**
 - ◆ What is AXMEDIS
 - ◆ Cross Media Content, AXMEDIS Editor
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 - ◆ AXMEDIS Content Processing Tools
- **Digital Rights Management and Protection**
- **Applications and Demonstrators** 
 - ◆ P2P Content Sharing
 - ◆ TISCALI, EUTELSAT, ILABS,
 - ◆ VARIAZIONI Project
 - ◆ Production on Demand
 - ◆ DRM and Interoperability
 - ◆ SIAE Trial, video
- **AXMEDIS Framework how to...**



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P2P Content Sharing and Publication

- **P2P network set up for content distribution**
 - ◆ BitTorrent Technology with Query and Catalogue
 - ◆ Protected content, legal P2P
 - ◆ Automated B2B content distribution/publication via P2P, fast seeding
 - ◆ Automated and efficient control of P2P networks
 - ◆ P2P Client Tools
 - ◆ CONSUMER content distribution and sharing
 - ◆ Collection of statistical data and network status
 - ◆ Collection of reporting data about the downloads
- **Content Sharing among, producers, integrators, archives and libraries, etc.**
- **Programme and publication for programming content distribution**



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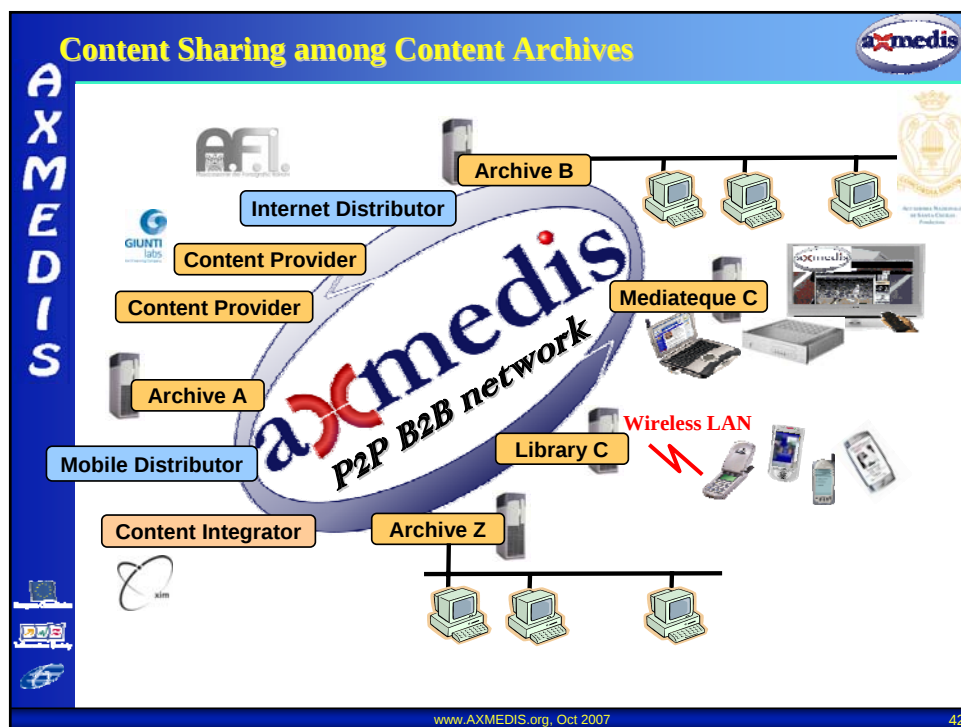
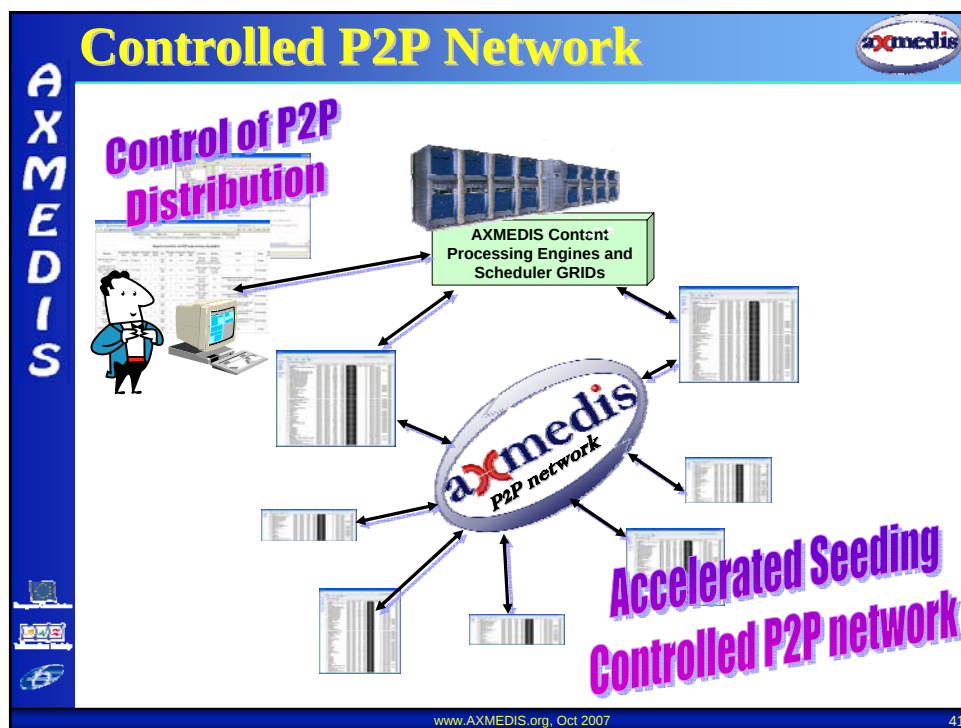
AXMEDIS

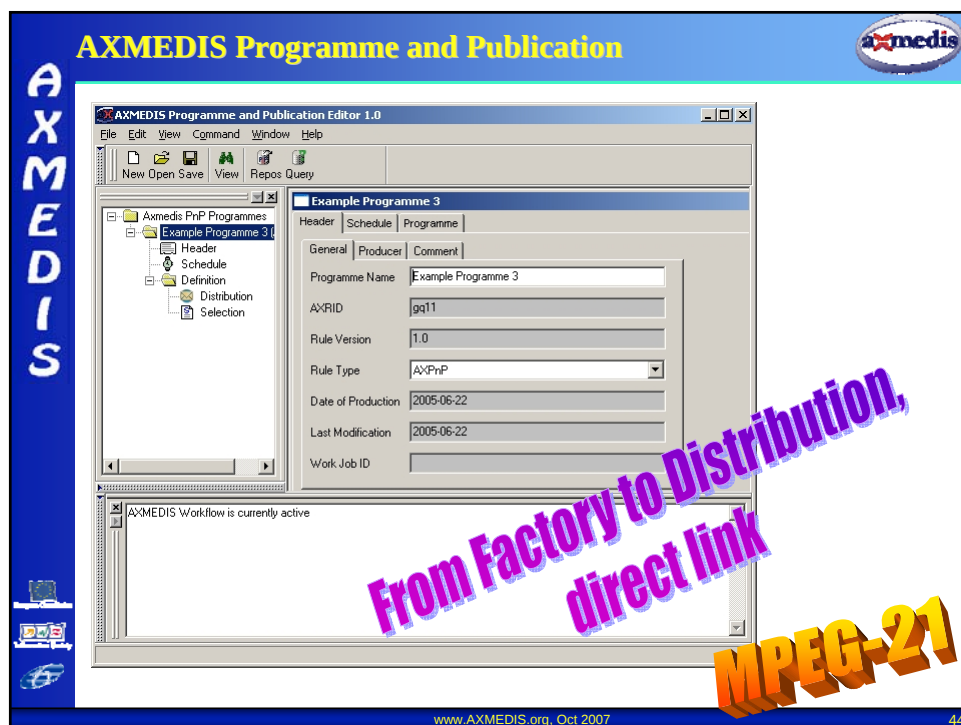
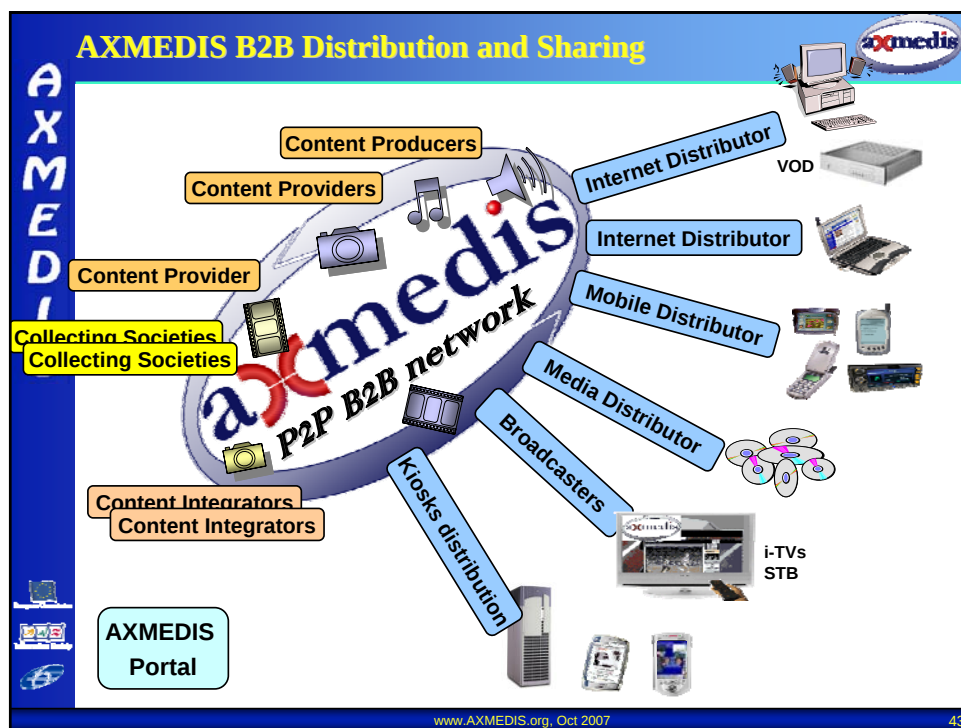
AXMEDIS P2P for B2B: AXEPTool

AXMEDIS

AXMEDIS P2P Tools

- **AXMEDIS P2P tools for content sharing respecting IPR**
 - ◆ Content Distribution and P2P file sharing based on BitTorrent
 - ◆ DRM support, supervision and control
 - ◆ Certified metadata, etc.
- **AXEPTool**
 - ◆ Only for B2B
 - ◆ Technical queries and information:
 - ➔ Features, descriptors, duration, formats, license information, distribution model, etc.
 - ◆ Automated loading and publication via the AXCP tools
 - ◆ Control and certification of metadata
- **AXMEDIA tool:**
 - ◆ Only for C2C and B2C
 - ◆ Simple queries on simple user focussed metadata
 - ◆ Simple management of files on the file system
 - ◆ Control and certification of metadata





AXMEDIS Multichannel Distribution

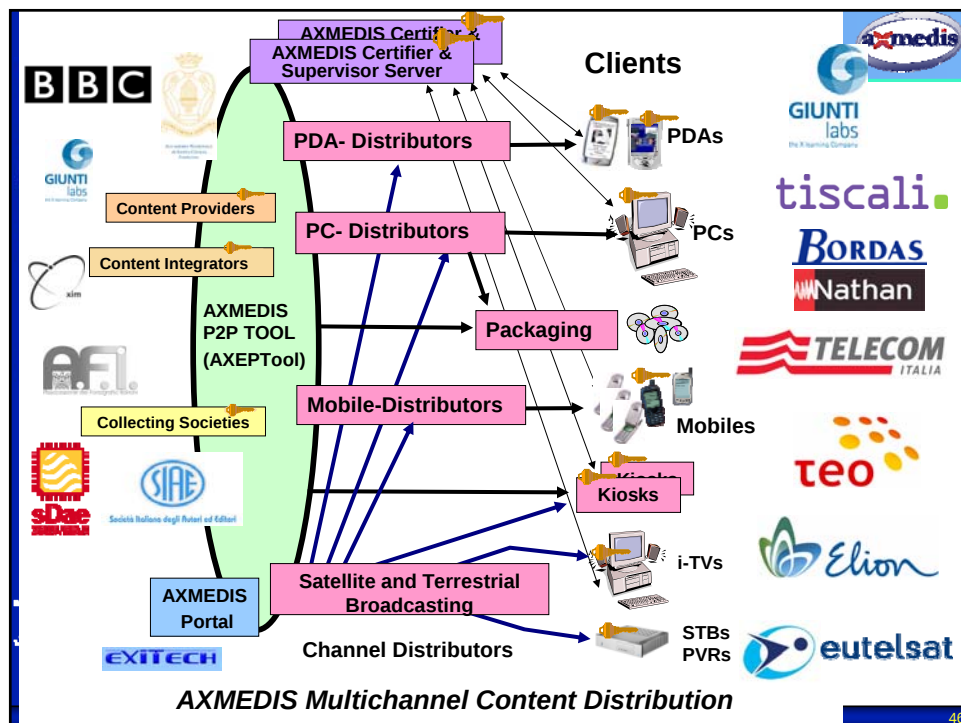


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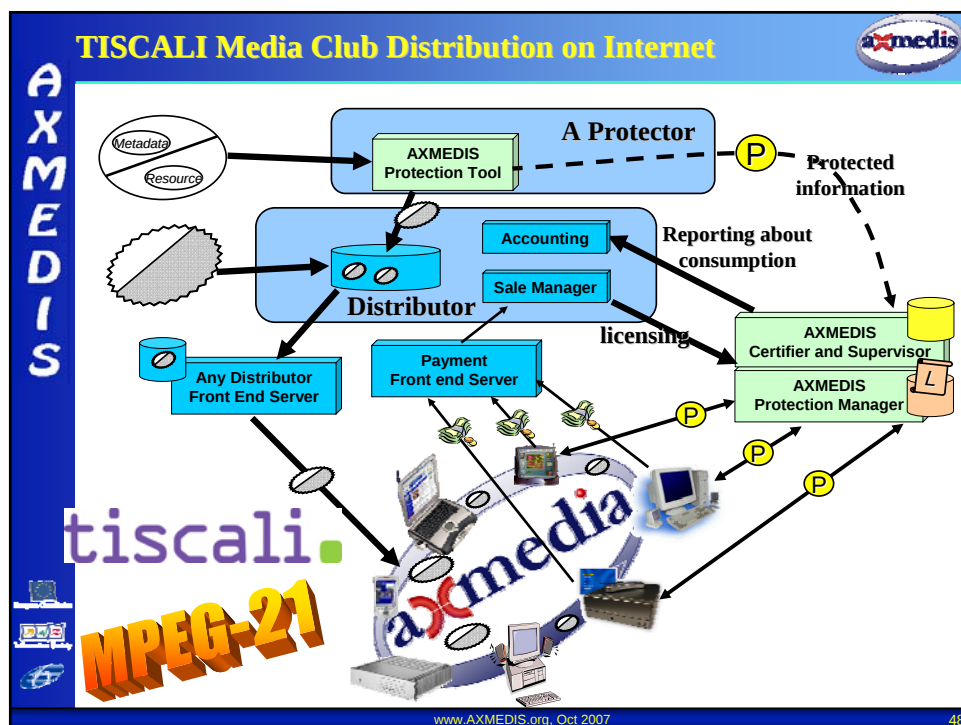
- PCs via Internet+P2P, AXMEDIS P2P and PC player: TISCALI Media Club, DSI 
- PCs via Internet, AXMEDIS PC player:
 - ♦ ELION, VRS 
- PCs via Satellite data broadcast, AXMEDIS PC player:
 - ♦ EUTELSAT, UNIVLEEDS 
- PDA via Kiosks, AXMEDIS PDA player:
 - ♦ ILABS + ANSC Kiosks, TISCALI, DSI  
- STBs and PVRs:
 - ♦ AXMEDIS STB: IPTV, Internet VOD: TEO, VRS 
 - ♦ AXMEDIS STB/PVRs via Satellite data broadcast: EUTELSAT, MBI 
- Mobiles:
 - ♦ AXMEDIS mobile player: ILABS, TISCALI, DSI  
 - ♦ OMA player: Telecom Italia (TI), DSI 
- PCs via Internet+P2P, AXMEDIS P2P and PC player:
 - ♦ free air DVB-T + home domains/media center
 - ♦ BBC, SDAE, ETRI, UPC  

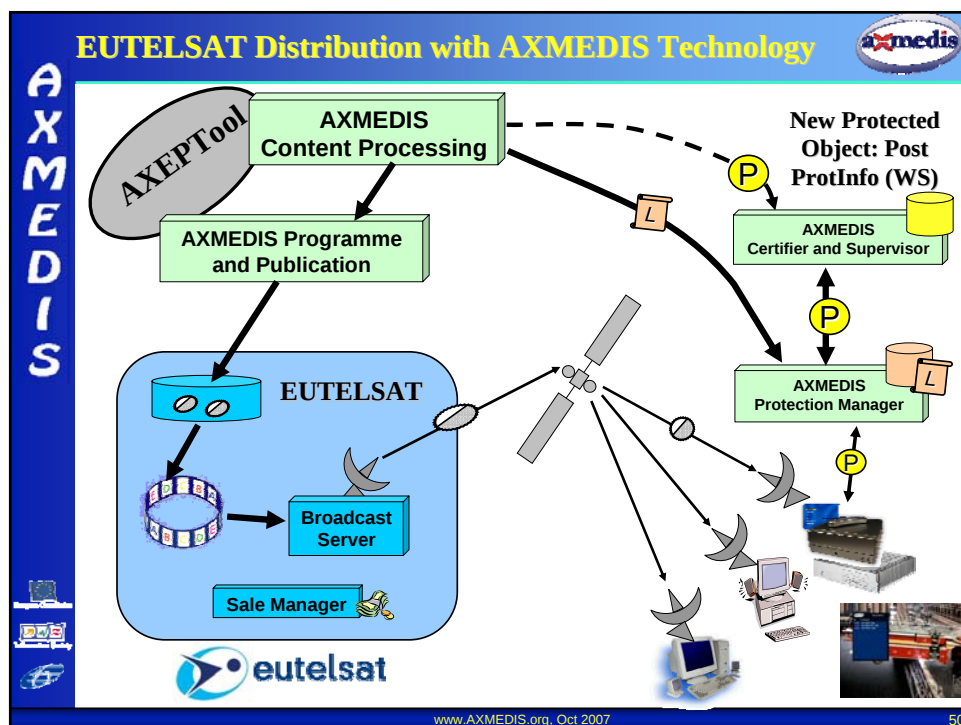
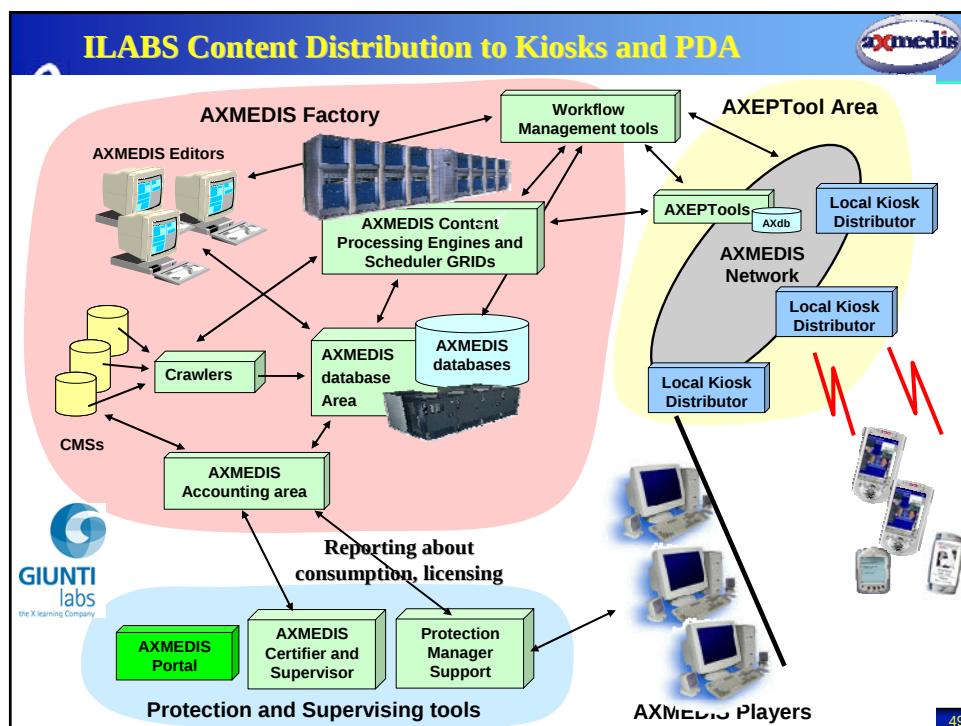
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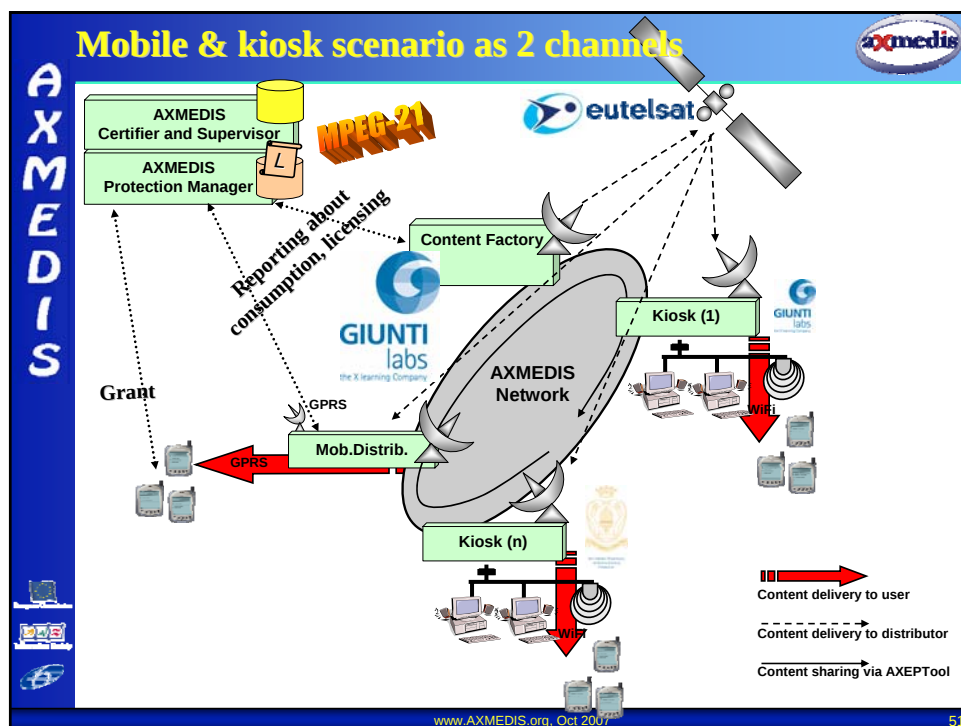


TISCALI Media Club, Distribution Portal

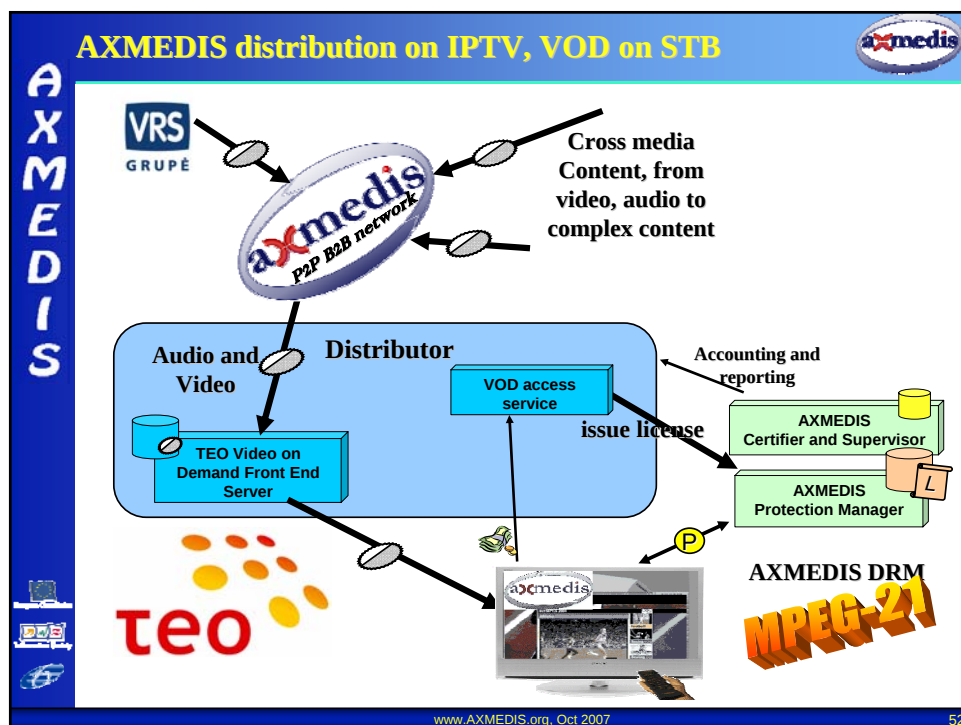
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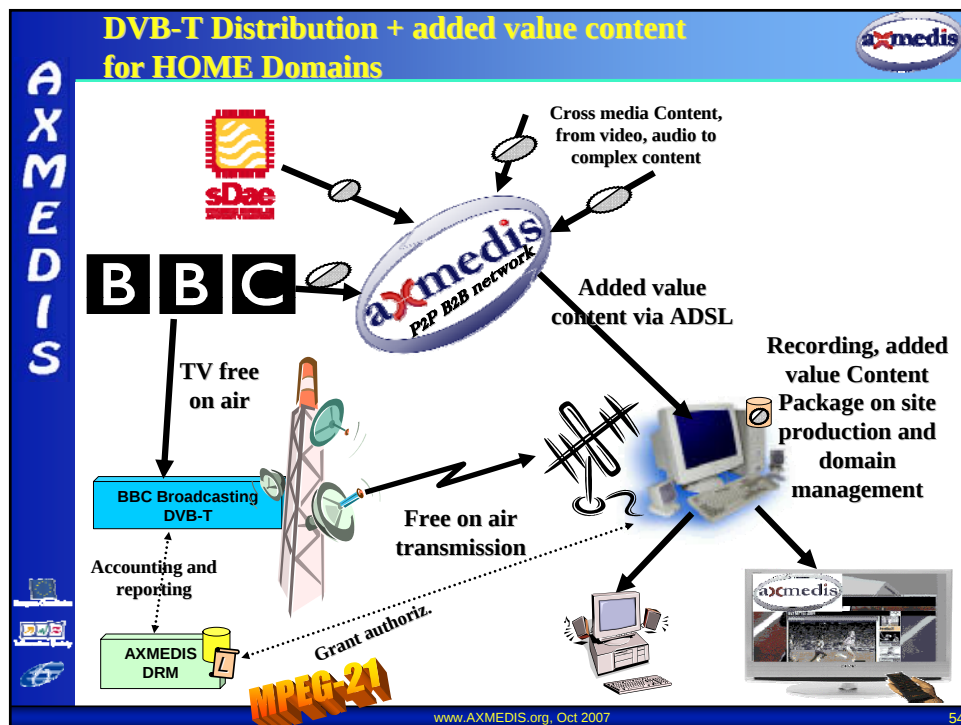
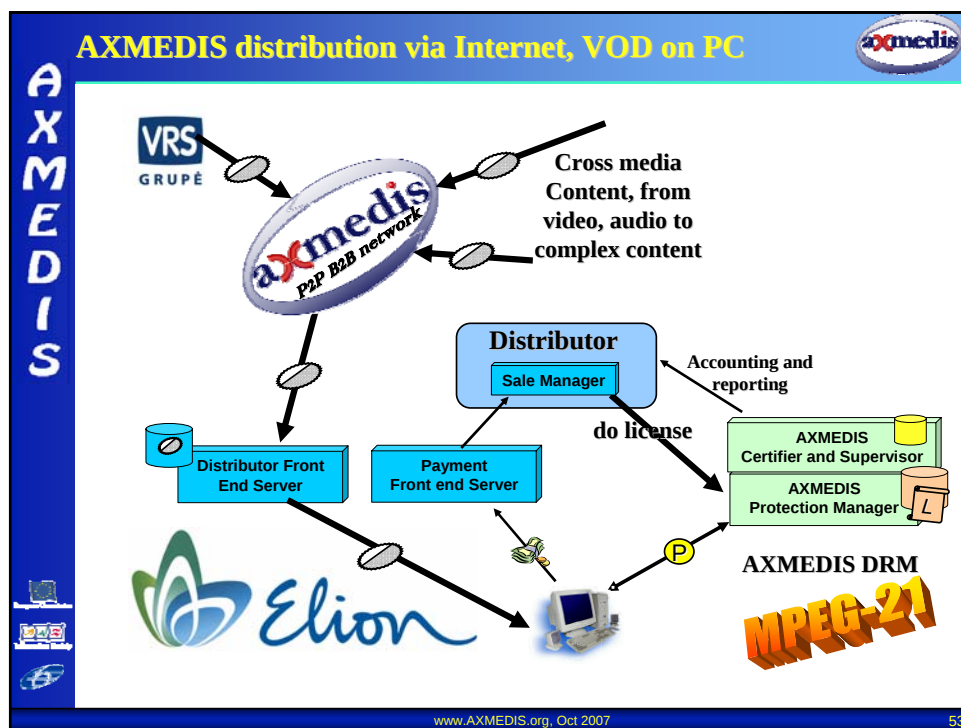


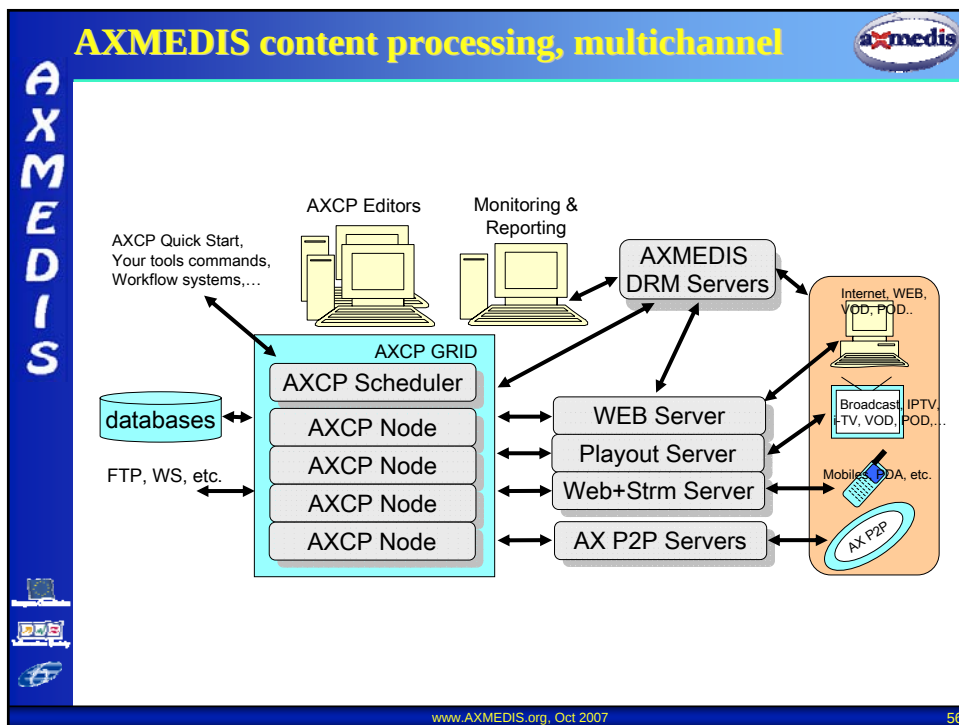
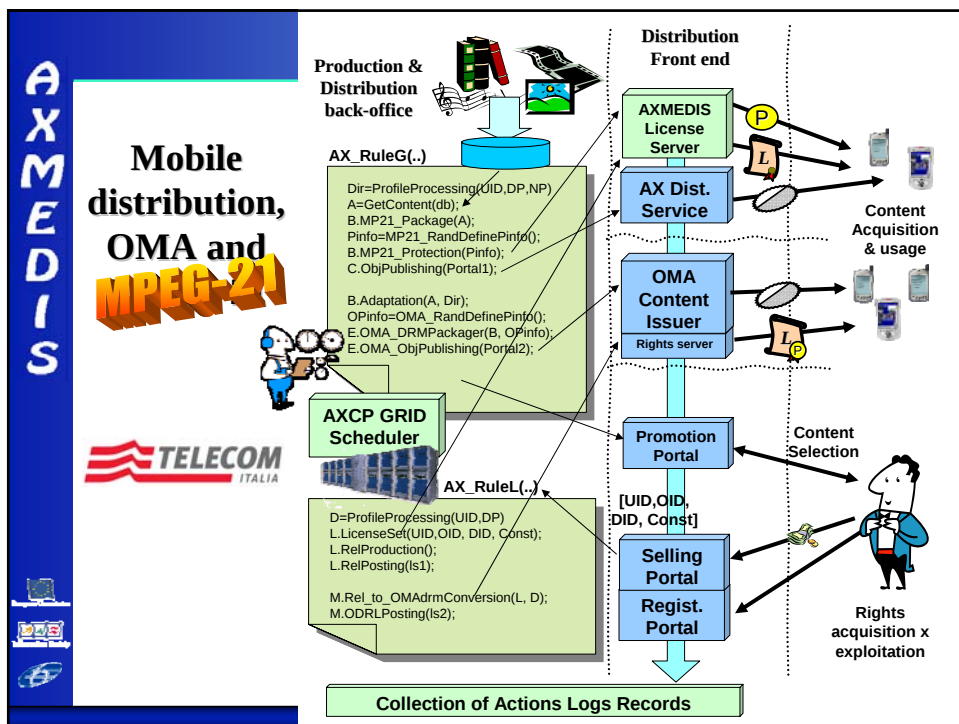


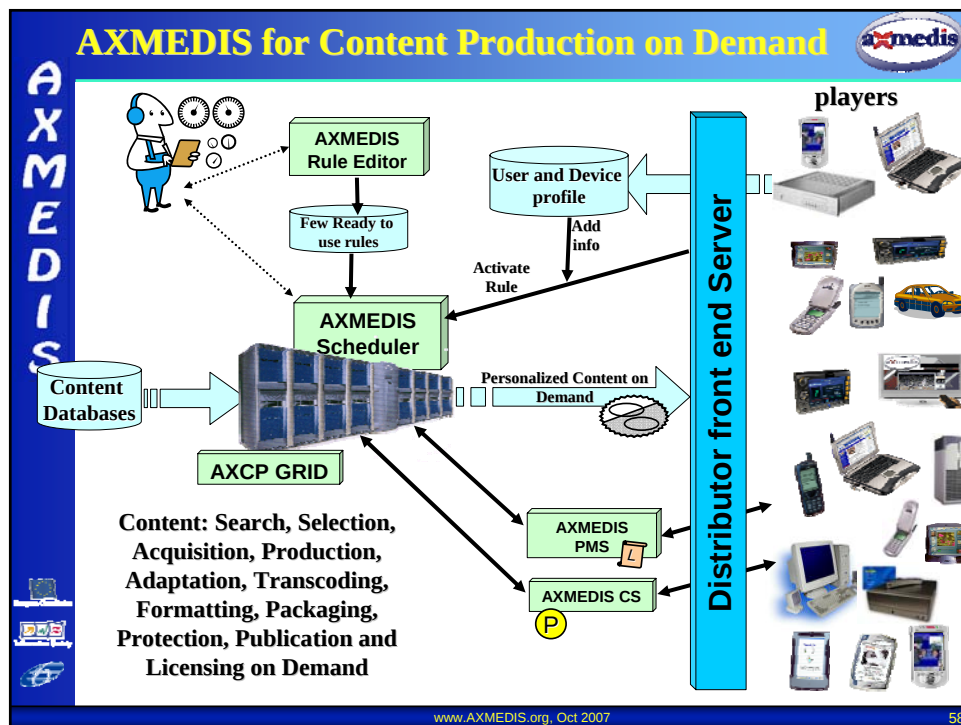
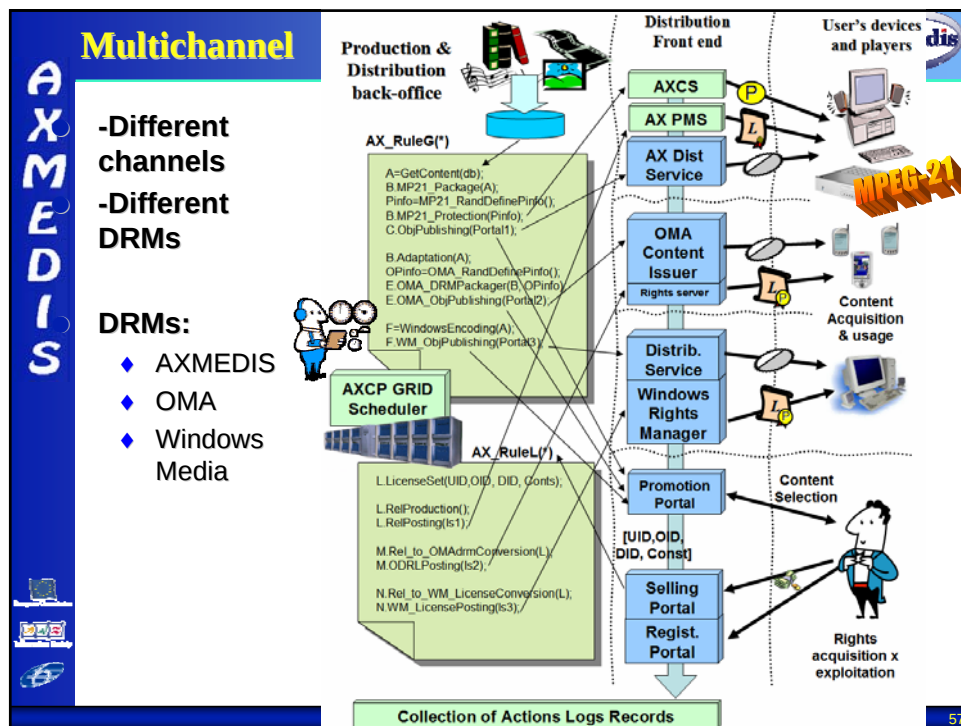
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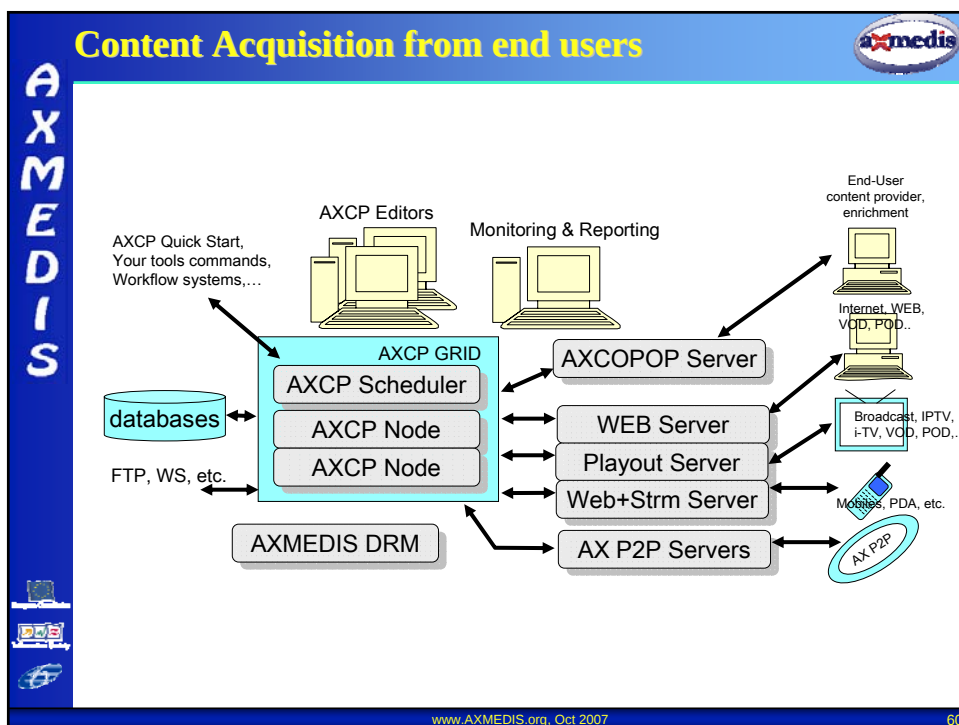
FINAL USERs production and distribution

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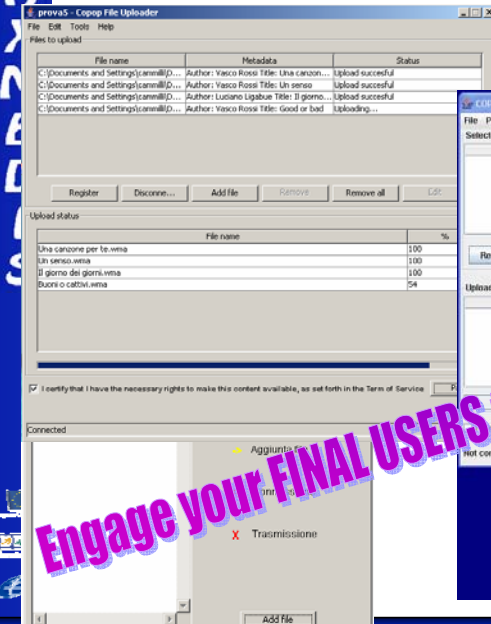
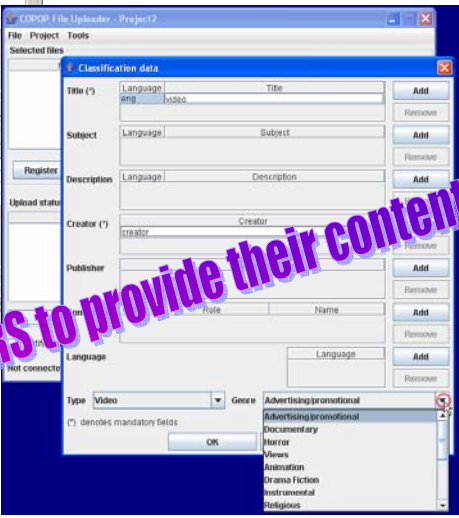
- **Content production tools for final users, SIAE trial**
 - ◆ Set up a service for finala users' content collection and distribution with/without DRM
 - ◆ Content Posting client (COPOP)
 - ◆ Content Posting PORTAL server (COPOP Srv)
 - ◆ Content distributor portal

- **Content Enrichment with AXMEDIS:**
 - ◆ VARIAZIONI e-Content*Plus*
 - ◆ More than 10 partners + communities
 - ◆ www.variazioni.org

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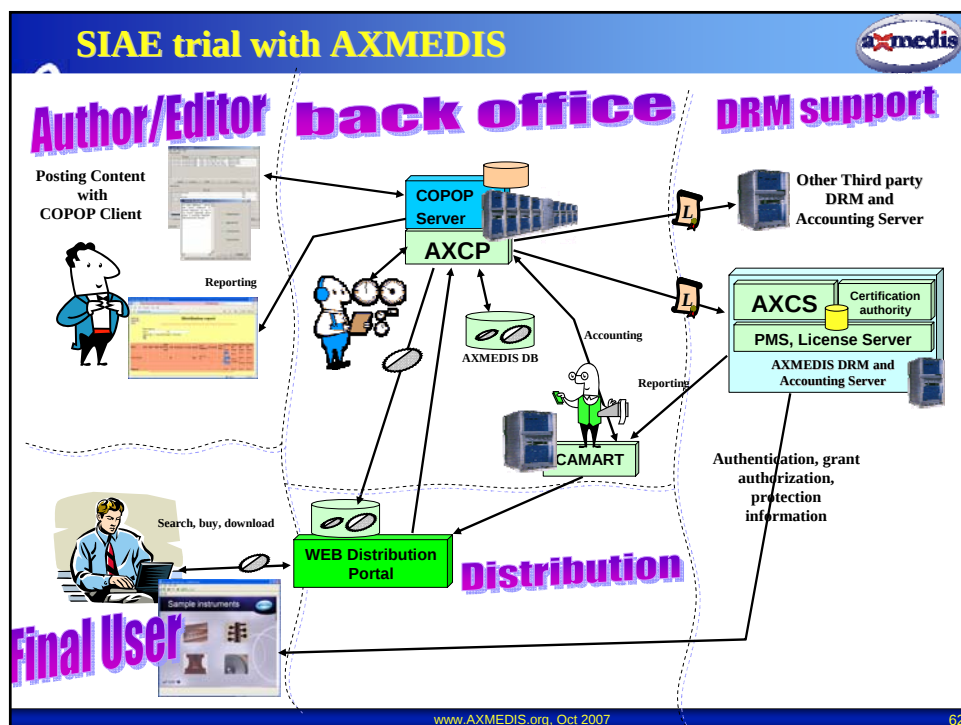
AXMEDIS Content Posting Portal, SIAE

Engage your FINAL USERS to provide their content

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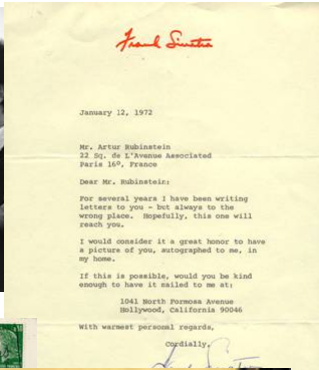
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For Content Enrichment with **VARIAZIONI**



- **700 hours of audiovisual**
 - ◆ Master classes of famous magisters (Harmos)
 - ◆ Concerts
 - ◆ Conferences
 - ◆ Special Events...
- **1000 hours of audio**
 - ◆ Concerts
 - ◆ Lessons
 - ◆ Rehearsals of concerts
 - ◆ Popular Songs...
- **2000 historic documents**
 - ◆ Programs of concerts
 - ◆ Letters
 - ◆ Scores
 - ◆ Images
 - ◆ Articles
 - ◆ Pedagogical Material



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Partners in **VARIAZIONI**



- **Coordinator and content provider**
 - ◆ Fundacion Albeniz (FIA)- *Spain*
- **Technical providers**
 - ◆ Germinus XXI, Grupo Gesfor (Germinus)- *Spain*
 - ◆ Dipartimento di Sistemi e Informatica, Università degli Studi di Firenze (DSI) -*Italy*
 - ◆ Rigel Engineering SRL (Rigel)- *Italy*
 - ◆ Music Technology Group, Universitat Pompeu Fabra (UPF)- *Spain*
 - ◆ Exitech SRL - *Italy*
- **Content providers**
 - ◆ Lithuanian Academy of Music and Theatre (LMTA)- *Lithuania*
 - ◆ Koninklijk Conservatorium Brussel, Erasmushogeschool Brussel (EHB)- *Belgium*
 - ◆ Escola Superior de Música e Artes do Espectáculo do Porto (ESMAE)- *Portugal*
 - ◆ Sibelius Academy (SIBA)- *Finland*
- **Dissemination**
 - ◆ Association Européenne des Conservatoires, Académies de Musique et Musikhochschulen (AEC) - *Netherlands*



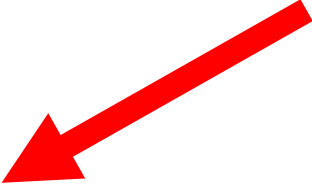
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 - ◆ DRM and Interoperability
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- **AXMEDIS Framework how to...**

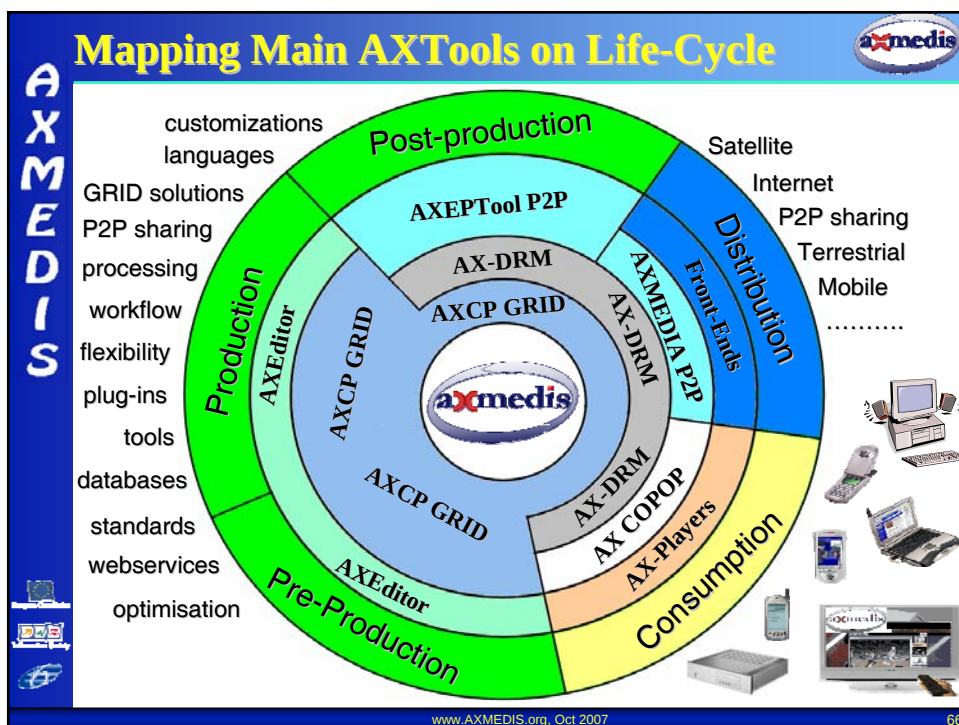






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AUTOMATING the BACKOFFICE

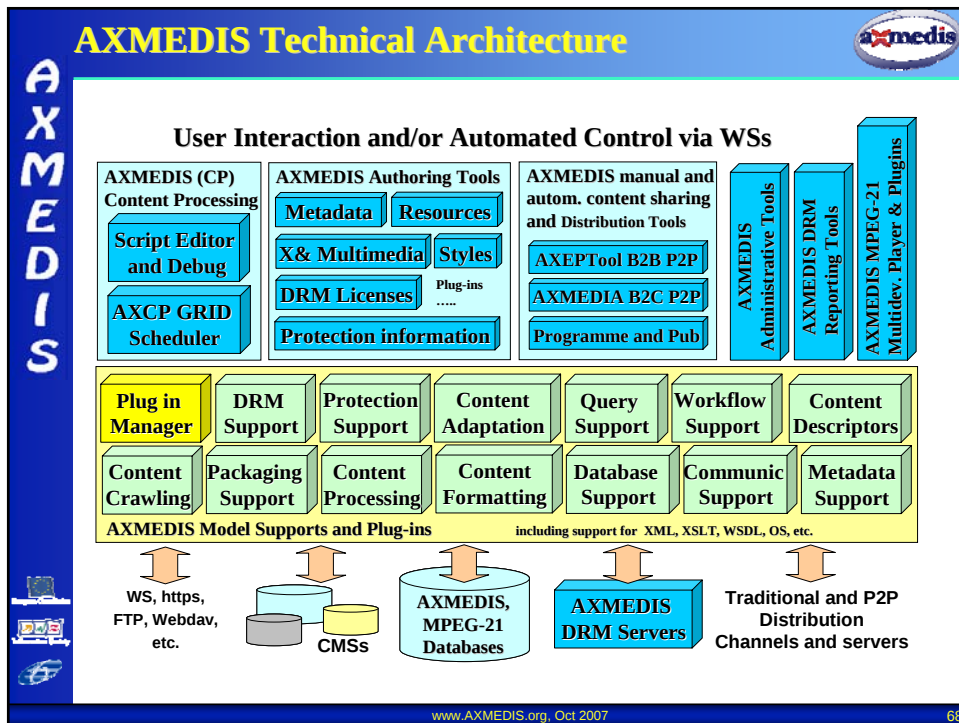
AXMEDIS

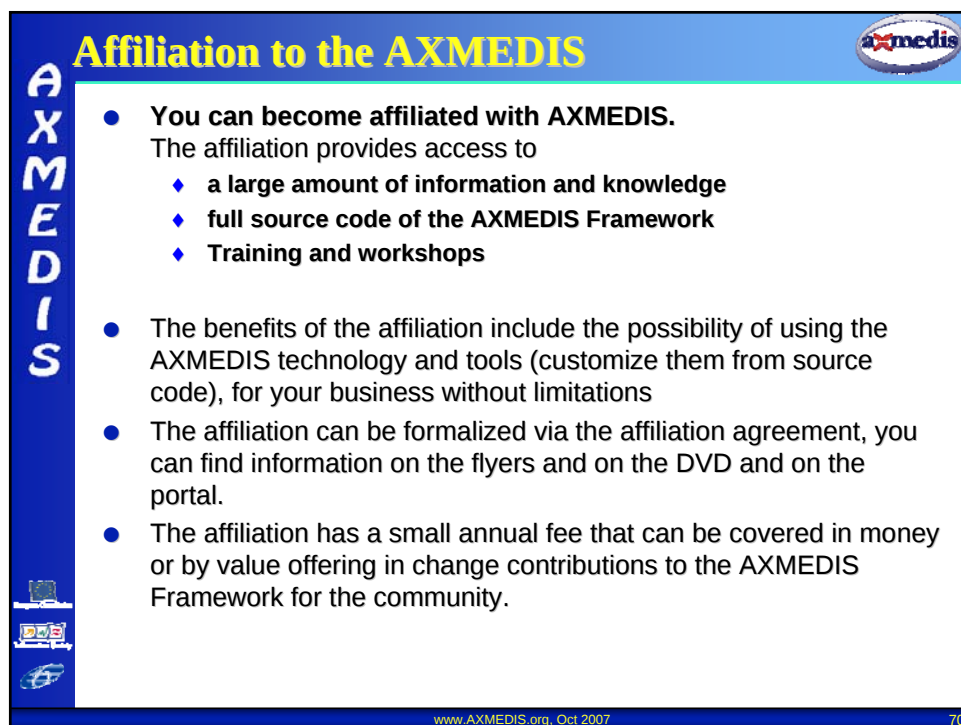
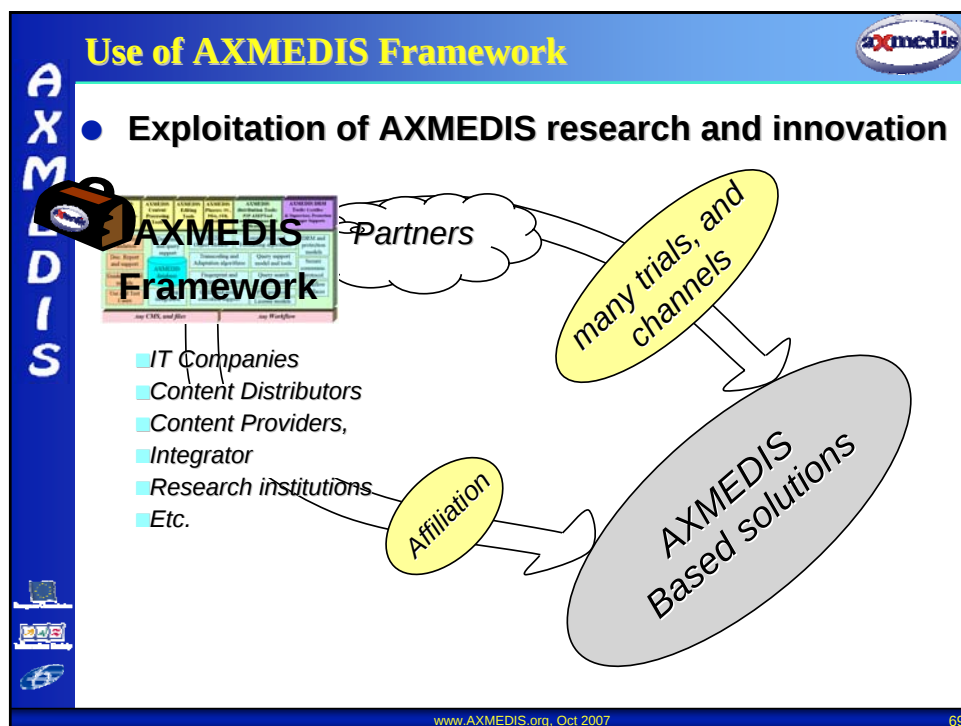


- **Lower costs of and enabling**
 - ◆ content gathering, transcoding/monitoring platform, production of content on demand with AXCP
 - ◆ integrate cross media content and automatically managing rights for complex multimedia products
 - ◆ production, B2B distribution, promotion via P2P B2B
- **New forms of content and unexploited content:**
 - ◆ Making business with cross media content, integrating HTML, SMIL, document, video, etc., no possible up to now
 - ◆ Exploiting the content "long tail"
- **Interoperability, convergence of media**
 - ◆ interoperability of content and DRM, Multi-channel distribution
 - ◆ access to the same content on several platforms, devices and locations
 - ◆ greater level of security, control of content usage in all channels B2B2C
- **DRM, creation new business models**
 - ◆ different business models on the same channel may be used
 - ◆ adapting the distribution channel to the users needs and would
 - ◆ Access to detailed reporting on the exploited rights
- **Distribute content with**
 - ◆ Any B2C: Internet, STB, broadcasting, Mobile, kiosks, pda, etc.
 - ◆ P2P to Consumers with the support of DRM

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AXMEDIS 2007 Conference

AXMEDIS



- **Venue: Universitat Politècnica de Catalunya, Barcelona, Spain**
 - ◆ UPC Campus Nord, Jordi Girona, 1-3., E-08034 Barcelona, Spain
- **Date: 28th – 30th November 2007**
- **Web: www.axmedis.org/axmedis2007/**
- **Registration Open**
- **Programme includes**
 - ◆ Cutting edge scientific and technical developments
 - ◆ Latest possibilities, and applications in industrials and research
 - ◆ Future trends, impacts and exploitations
 - ◆ Workshops, Panels, Posters
- **Key topics include**
 - ◆ Cross-media and digital-media content production, processing, management, standards, representations, sharing, protection and rights management interoperability







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AXMEDIS project

Past conferences

Welcome to AXMEDIS 2007 Web Conference

AXMEDIS 2007 Conference Registration Open

Instructions for final submissions



3rd International Conference on Automated Production of Cross Media Content for Multi-channel Distribution

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Contact Information

AXMEDIS



- ***If you like to know more about the AXMEDIS framework and other AXMEDIS technologies and functionalities please do not hesitate to contact the project coordinator***
- ***Prof. Paolo Nesi, Ph.D.***

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Distributed Systems and Internet Technology Lab

University of Florence

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Email: nesi@dsi.unifi.it

Web: <http://www.AXMEDIS.org>



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