


axmedis Automating Production of Cross Media Content for Multi-channel Distribution
www.axmedis.org IST-2-511299

AXMEDIS Overview June 2008

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<http://www.axmedis.org/>
version 1.4

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Partners



UNIVERSITAT POLITÈCNICA DE CATALUNYA (UPC), Fraunhofer IGD, GIUNTI labs, EUREKA, SIAE, SOCIETÀ ITALIANA DEGLI AUTORI ED EDITORI, UNIVERSITY OF LEEDS, University of Reading, BORDAS, Nathan, sDae, EPFL, LABLITA, DigiChannel.net, VRS, FUNDACION ALBENIZ, STRATEGICA, hp invent, EXITECH, mbi, raabook, BBC, Rai, GRUPO GESFOR, [rigel][engineering], tiscali, TELECOM ITALIA, Hexaglobe, Pentex S.r.l., eutelsat, Elion, teo, maat, telsey

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Partners

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Growing and numbers

- **AXMEDIS started in Sept 2004 with fewer partners**
 - ◆ GIUNTI, TISCALI, EUTELSAT, HP, AFI, SEJER, etc.
 - ◆ Univ. Florence, Univ. Leeds, FHG, Univ. Politecnica Catalogna, Univ. Reading, etc.
- **Added 10 more partners in the December 2006:**
 - ◆ BBC, TEO, ELION, TI, SDAE
 - ◆ MBI, VRS, KTU, ETRI, PKU
- **Added Affiliated partners:**
 - ◆ SIAE, PENTEX, GESFOR, MAAT-G, FIA, RIGEL, HEXAGLOBE, Focuseek, AI2, TELSEY, RAI, EUREKA, APT...TelcomBretagne
- **Now from the web portal**
 - ◆ Several trials and show cases
 - ◆ technical documents and tools
 - ◆ Millions of accesses and downloads

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Summary

- **Coverage** ←
- **AXMEDIS Model**
- **AXMEDIS DRM**
- **AXMEDIS Editor and Players**
- **AXCP: Automating Content Management**
- **AXMEDIS P2P**
- **Multichannel Support**
- **AXMEDIS Framework**

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Context

- **Users are requesting content from multiple channels**
 - ◆ DVB-T,S,H,SH, ...; IPTV, webTV, P2P, mobile, etc.
- **TelCO are proposing Multiple-Play**
 - ◆ Mobile: OMA, i-Tune,
 - ◆ STB: Irdeto, Nagravision
 - ◆ PC: Windows, Adobe, ...
 - ◆ PDA: ..??
- **Problems**
 - ◆ Content & devices are not interoperable
 - ◆ Business models are not interoperable
 - CAS and DRM are not interoperable
 - Content acquired for a device cannot be moved on others
 - ◆ Advertising business implies high costs for user profiling and dynamic content production, automation is needed
 - ◆ Backoffice is too expensive to be managed, automation is needed
 - ◆ Returns for accounting are too expensive, automation is needed
- **AXMEDIS can solve all these issues!**

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New integrated technologies are needed

- **More attractive formats**

Needs:


- **Evolved Formats with a certain intelligent**
 - ◆ Proactive content
 - ◆ Interoperable Players
- **Systems for automated production**
 - ◆ Prod. on demand, VOD, personal advertising,
 - ◆ managing UGC,
 - ◆ managing rights and CAS, etc.
- **Efficient automated distributions systems**
 - ◆ Multichannel
 - ◆ Controlled P2P
- **multi DRM, interoperable DRM and CAS**



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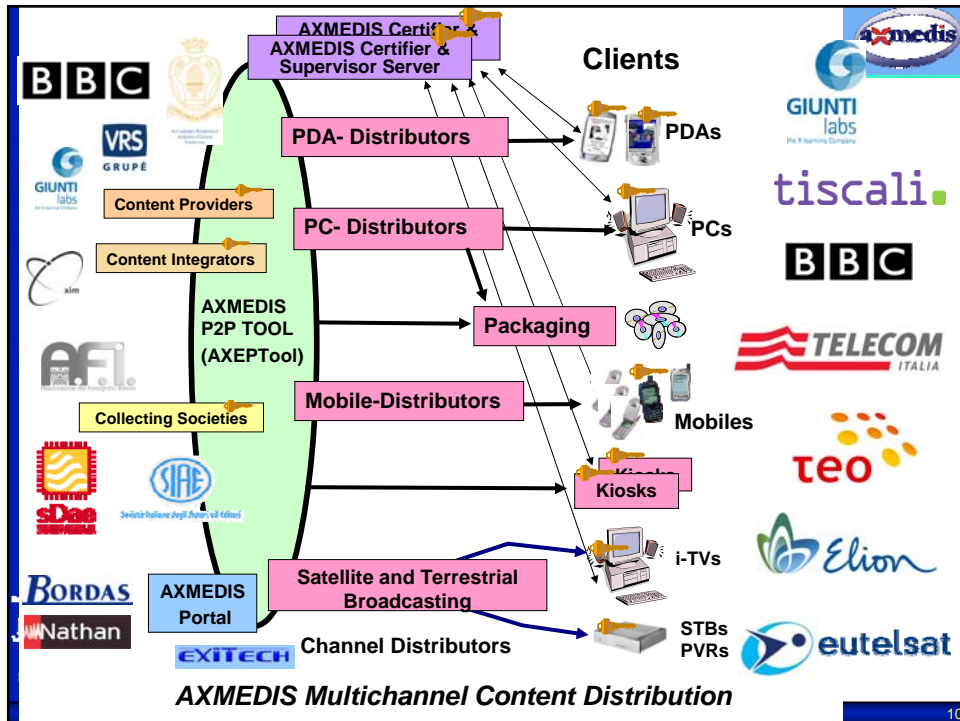
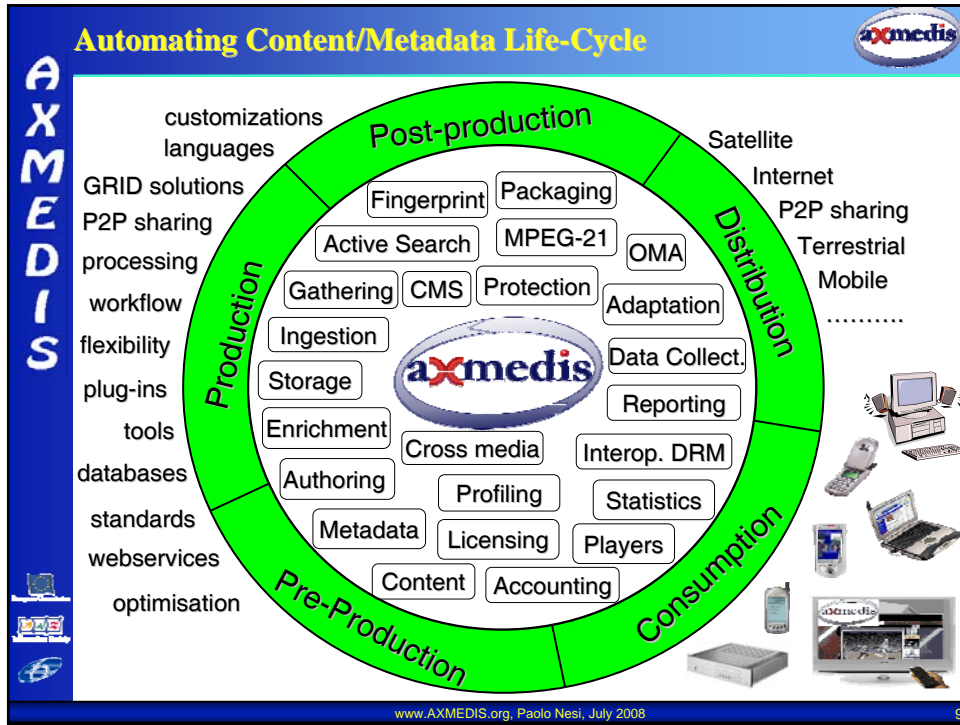
Innovations

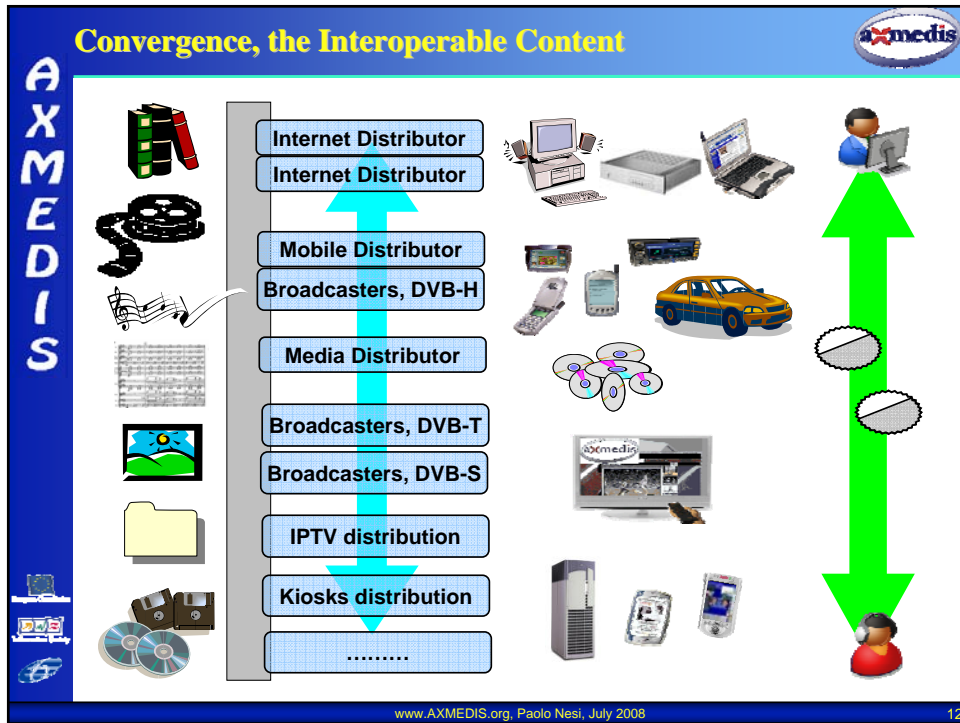
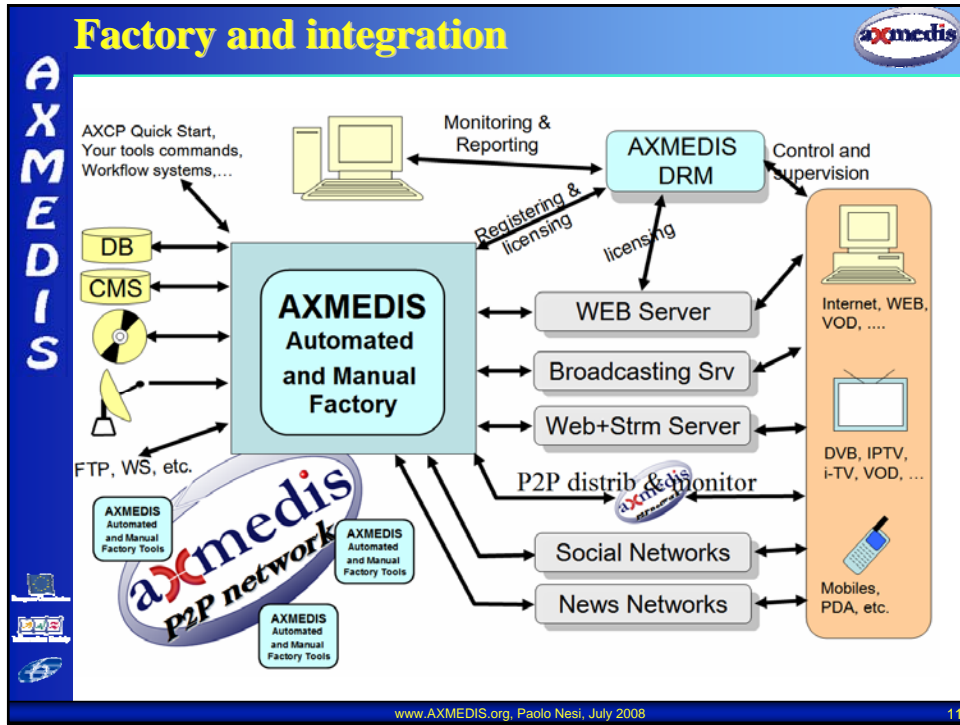
- **New models, methods and tools for:**
 - ◆ *interactive*: from multimedia → to cross media
 - ◆ *intelligent*: active and proactive with users
 - ◆ *interoperable*: devices, DRMs, and formats
- **Cost reduction, via**
 - ◆ Automated Content Management:
 - production, processing, protection and multichannel distribution
 - ◆ Workflow+processing+DRM
 - ◆ Integration of B2B/B2C rights management activities
 - ◆ Secure/Legal P2P for content distribution
 - B2B and B2C
- **AXMEDIS Framework open to all**



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Major Tools

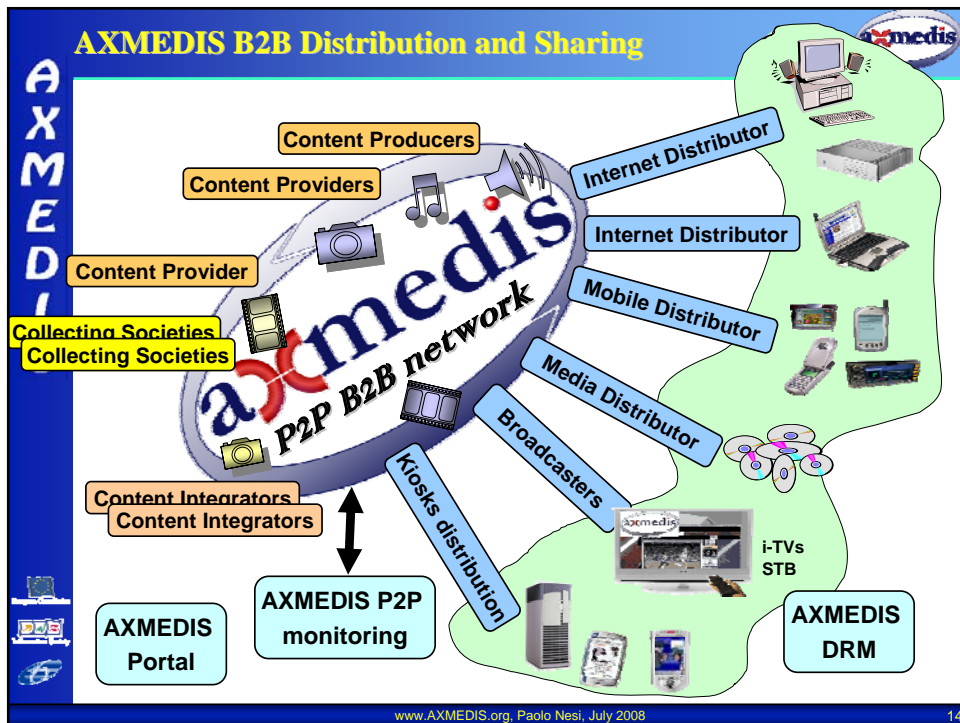
AXMEDIS





- **Players for cross media content:**
 - ◆ PC, PDA, STB, mobiles, etc.
- **Tools for DRM and protection**
- **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 Registration portals
 - ◆ Certification authority, AXCA
 - ◆ License Server and Certifier and Verificator, PMS/AXCS
 - ◆ Scheduling: Program and publication, Workflow, etc.
 - ◆ Distribution Portal
 - ◆ Content acquisition portal for end user production


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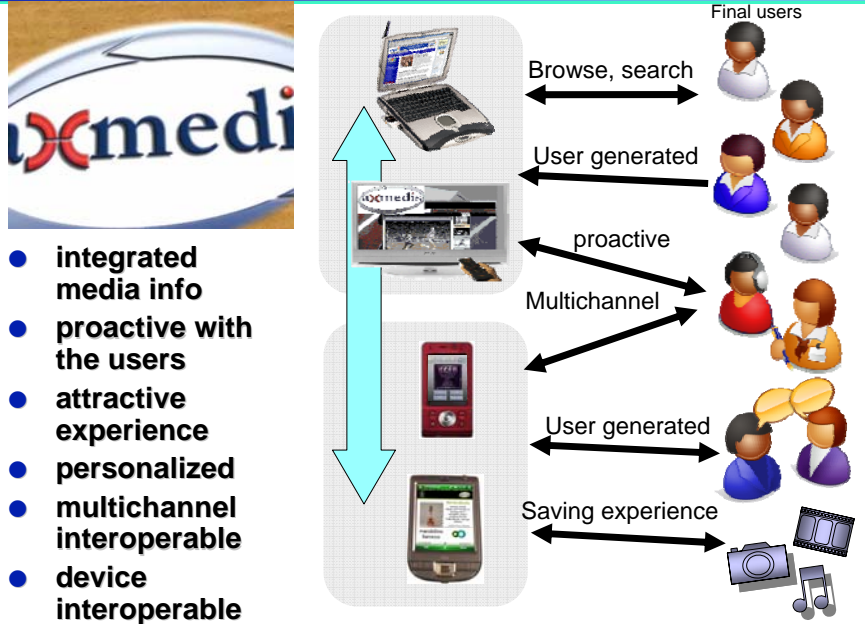


Summary



- Coverage
- **AXMEDIS Model** 
- AXMEDIS DRM
- AXMEDIS Editor and Players
- AXCP: Automating Content Management
- AXMEDIS P2P
- Multichannel Support
- AXMEDIS Framework

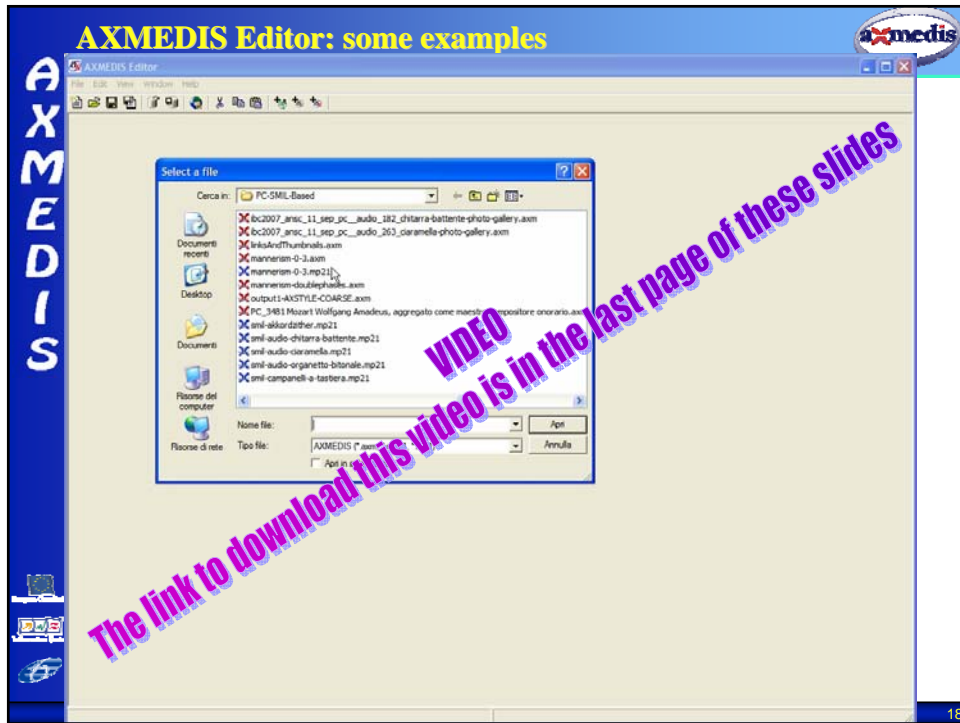
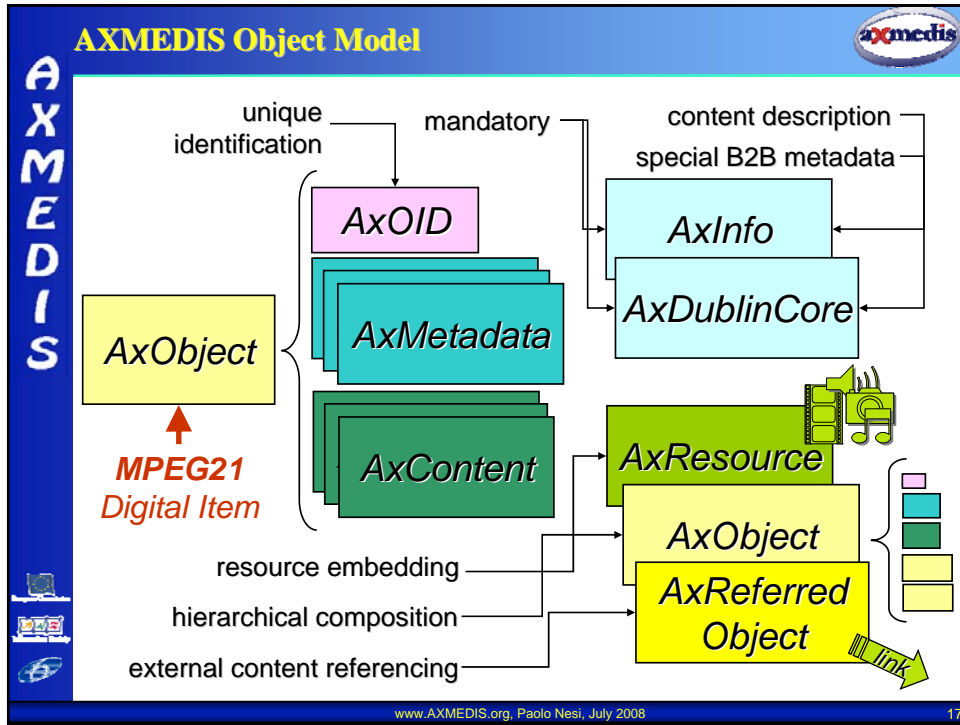
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Interactive and intelligent



- integrated media info
- proactive with the users
- attractive experience
- personalized
- multichannel interoperable
- device interoperable

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An example to wrap it all up

Music Album

- AxInfo**
 - Rights Owner
 - Producer
 - Distributor
- DublinCore**
 - Title
 - Genre
 - Authors
- Other Descriptions** (e.g. MPEG7)

Album Cover

- Image: Resource JPG image
- Author
- Size

Album Lyrics (printable)

- Doc: Resource PDF
- Authors
- Format

Album Tracks

- Audio collection
- Time
- Length
- mp3 mp3 mp3 mp3 mp3

Backstage Video

- Rights Owner
- Producer
- Distributor
- Video
- Genre
- Authors
- Subtitles Languages
- Playing time
- Resolution
- Resource MPEG2 Video

Referred Object

- Metadata will be always accessible for indexing and querying

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NewsML

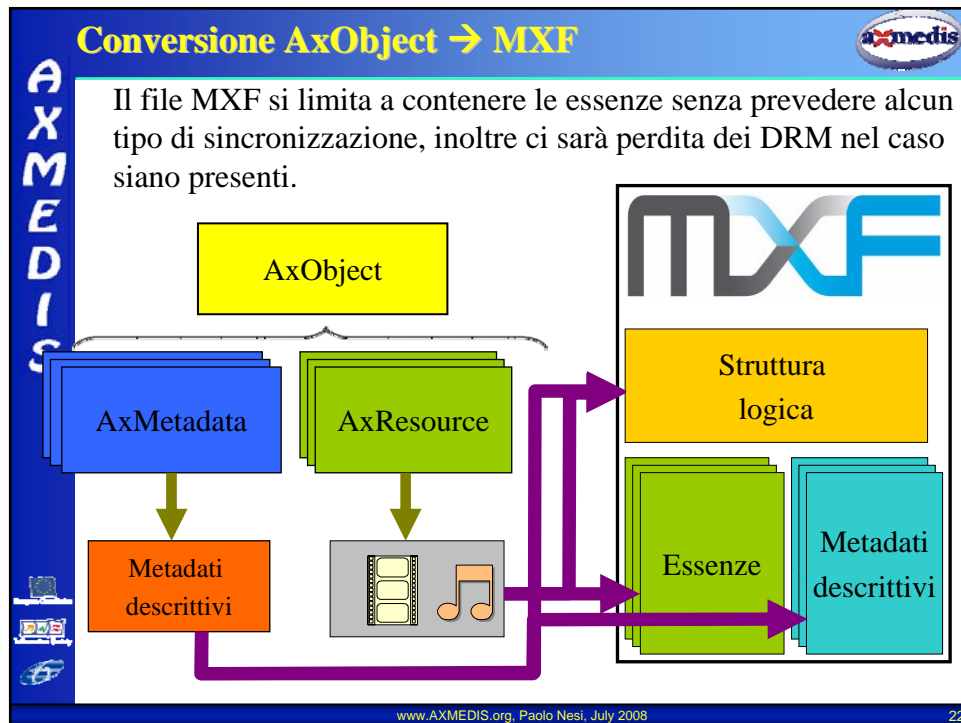
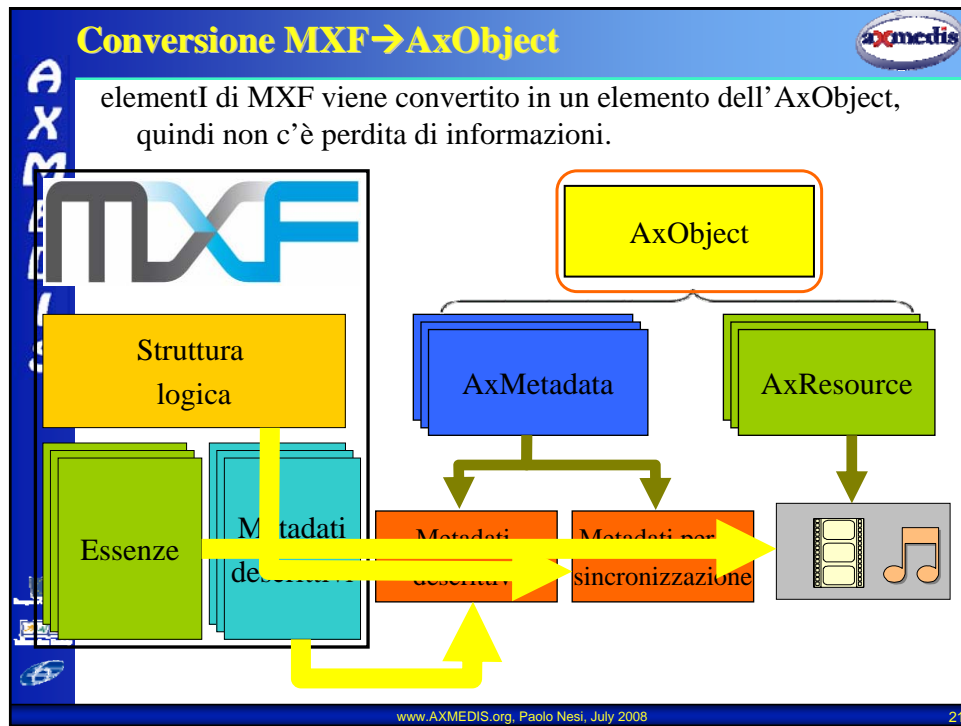
News Markup Language

```
graph TD; NewsML --> NewsItem1[NewsItem]; NewsML --> NewsItem2[NewsItem]; NewsItem1 --> NewsComponent1[NewsComponent]; NewsItem2 --> NewsComponent2[NewsComponent]; NewsComponent1 --> ContentItem1[ContentItem]; NewsComponent2 --> ContentItem2[ContentItem];
```


target.axm - AXMEDIS Player

- Object []
 - AXOID [urn:axmedis:00000:obj_ebe8be2e-16fb-48e3-bf79-7]
 - Dublin Core
 - Object []
 - AXOID [urn:axmedis:00000:obj_abfffd6a2-d52e-4f8b-a9c]
 - Dublin Core
 - Resource [News0.html]
 - Resource [Prime Minister's Questions in the House of C
 - Resource [David Cameron1.jpeg]
 - Resource [David Cameron2.jpeg]
 - Object []
 - AXOID [urn:axmedis:00000:obj_04422853-98cb-452e-b
 - Dublin Core
 - Resource [News1.html]
 - Object []
 - AXOID [urn:axmedis:00000:obj_e434afa8-7cc3-47d4-b2
 - Dublin Core
 - Resource [News2.html]
 - Resource [Patricia Hewitt 0.jpeg]
 - Resource [Health Secretary Patricia Hewitt 1.jpeg]
 - Resource [NHS logo2.jpeg]
 - Object []
 - AXOID [urn:axmedis:00000:obj_fe50e954-2b67-4615-ac
 - Dublin Core
 - Resource [News3.html]

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AXMEDIS Cross Media Content


- **Any content inside a package:**
 - ◆ Mix of: HTML, SMIL, MPEG-4, video, audio, text, Documents, images, actions, games, animations, etc.
 - ◆ Additional content and interactivity for the end users
 - ◆ compliant and extending MPEG-21
- **AXMEDIS Intelligent content allow user/producers to**
 - ◆ create content for other devices: ringtones, mobiles, ...
 - ◆ support social activity
 - annotations
 - user generated content
 - personal collections
 - ◆ internal query
 - ◆ customized for culture and language



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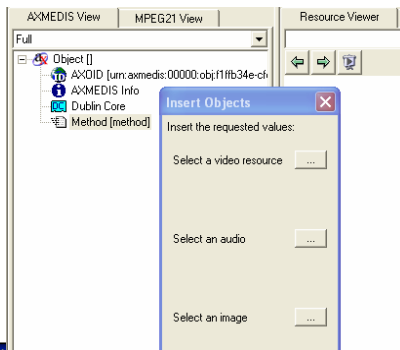
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Intelligent Content


- **From buttons and events to actions**
 - ◆ HTML, SMIL, Flash may activate AXmethods
- **HTML forms to collect user inputs**
- **AXMethods intelligence in Extended javascript**
 - ◆ AXCP functionalities: ingestion, content processing, transcoding, database access, licensing, mailing, save/load, profiling, etc.
 - ◆ communication, monitoring, reporting events, etc.
 - ◆ content production, migration (from PC to PDA) and protection
 - ◆ coding presentations, sliding, sequences
 - ◆ educational intelligent content
 - ◆ non linear story telling
 - ◆ collecting user content
 - ◆ Internal search
 - ◆ Annotations (future)
 - ◆ autorun
- **Future:**
 - ◆ collaborative communications
 - ◆ cameras connections
 - ◆ etc.



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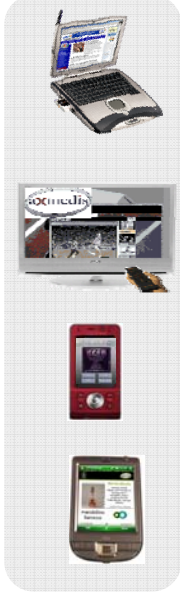
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Interoperability among devices


- **interoperability among devices, e.g., getting**
 - ◆ a video for the TV and reproducing it on mobiles, PC, etc.
 - ◆ an MP3 audio track and using as ringtone in the phone, reproducing it on the car stereo, or in the living room, passing to a friend.
 - ◆ a guide in a museum for his mobile/PDA, using there, and passing and playing it at home on the TV set and/or on the PC
 - ◆ Making annotations on a video and pass to a friend, ...
 - ◆
- **Buy once to use on all**
 - ◆ According to the business model
 - ◆ Via different DRM models and tools




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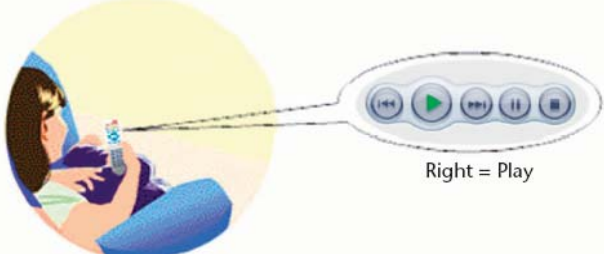
An example of REL statement



Condition = November 2003



Resource = Ocean Wilds



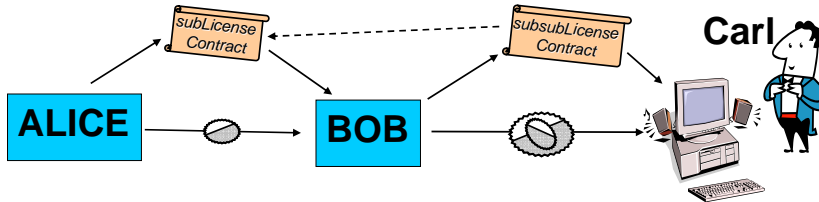
Right = Play


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

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Managing License Chain, B2B and B2C

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- **Alice states** "Bob has the right to issue a license to anyone to print the book in Italy"
- **Bob states** "Carl has the right to print the book in Italy"
- To solve the SubSubLicense for Carl all the connected Licenses are needed
- Licenses have to be accessible on Processing Engine
- Alice can revoke the license to Bob

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The Licence Maker Wizard, an AXMEDIS obj

Home Settings
Sat, 05 Jul 2008 20:11:42 GMT

Creation of mother license and end user license

Password:	<input type="password"/>
Grant:	Business Model <input checked="" type="radio"/> pay per use forever <input type="radio"/> pay per play <input type="radio"/> pay per play, constrained
Amount:	<input type="text"/>

Object Creator ID (AXCID):	<input type="text" value="Creator ID"/>
Object Distributor ID (AXDID):	<input type="text"/>
End User ID (AXUID):	<input type="text"/>
Object ID (AXOID):	<input type="text"/>

Options
 Only Mother License
 Only End User License
 Both Licenses

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Cross media content and composition

- **AXMEDIS objects can be used as components for creating other added values AXMEDIS objects**
 - ◆ Allowing the production added value object for composition or integration of protected content
 - ➔ Who is composing can add its own protection and licensing
 - ◆ Allowing the Rights Management Of Composition, in the digital world similarly at what is performed in the physical world
 - ◆ The shares along the value chain are de facto formalized

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Make easier the B2B market of digital content

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- **PAR: Potentially Available Rights into AXMEDIS objects**
- **The PAR can be used to make queries**
 - ◆ PARs based content trading, Customers may know directly which rights they could buy and by who
 - ◆ PARs may be used to harmonize and automate B2B and B2C

Controlled P2P network

◆ *Audio tracks of Bocelli for Audio broadcasting for June 2008 in Gemany?*



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Managing License Chain and Protection Information

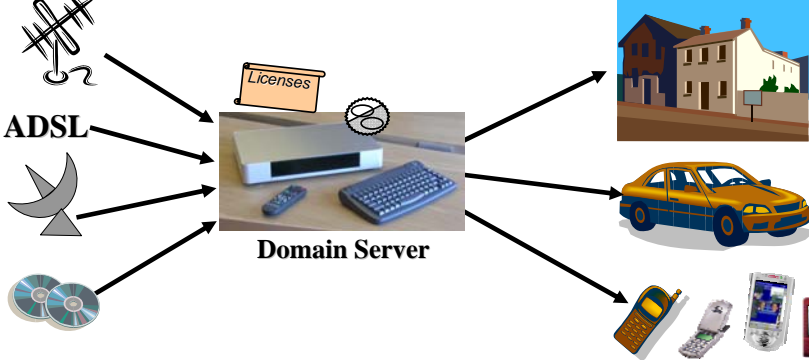
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DRM and Domain Management



- **Users are strongly interested in acquiring a content to be used in their domain in which they have their**
 - ◆ Home devices, cars, mobiles, etc.
- **Media Centers and/or Home Servers are going to manage content and licenses for the whole domain**
 - ◆ One license for all devices and people



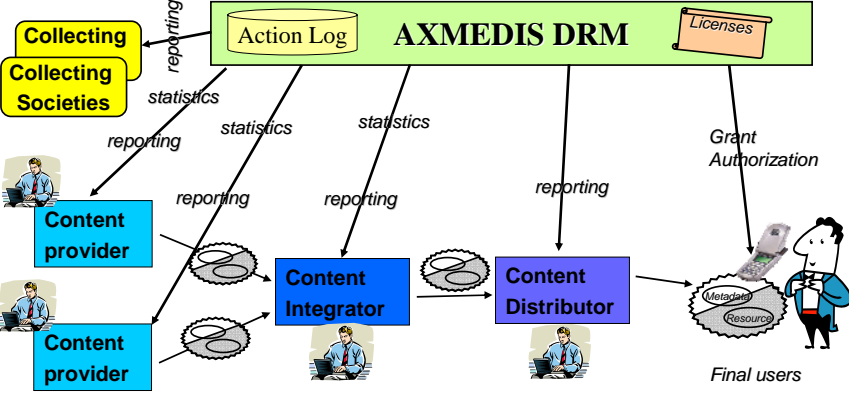
Domain Server

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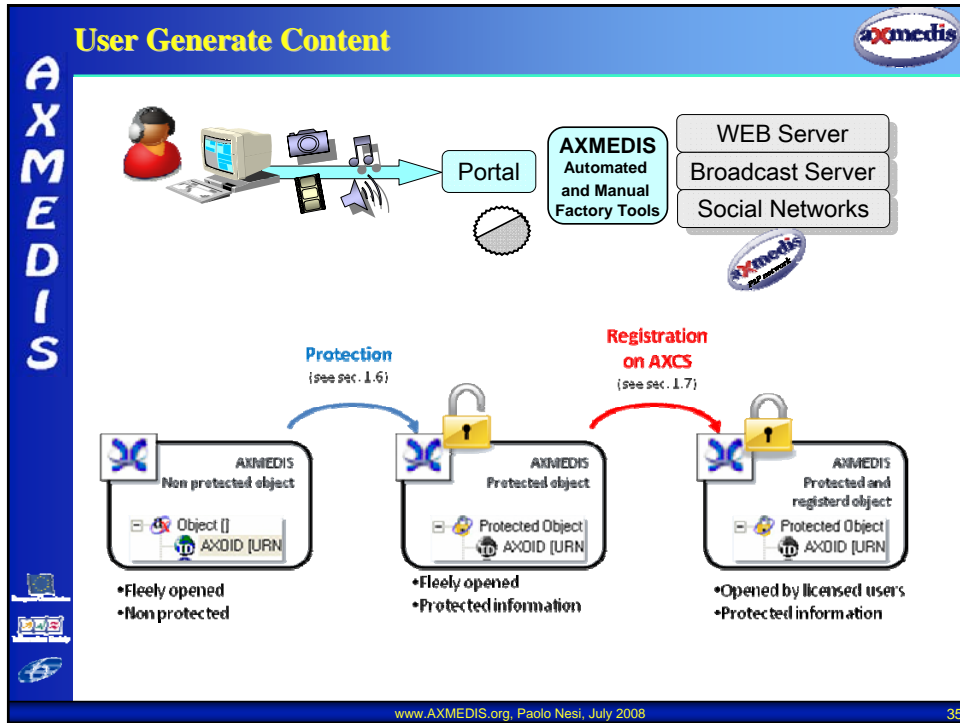
Tracking and monitoring Exploitation of Rights

- **Different reports and statistics for different roles**
 - ◆ Reports on licensing and on the consumption/exploitation of rights
- **REL and Composition enforce flexibility in business and transaction models, multiple models for the same channel**
 - ◆ Pay per play, all you can eat, subscription, etc. etc.

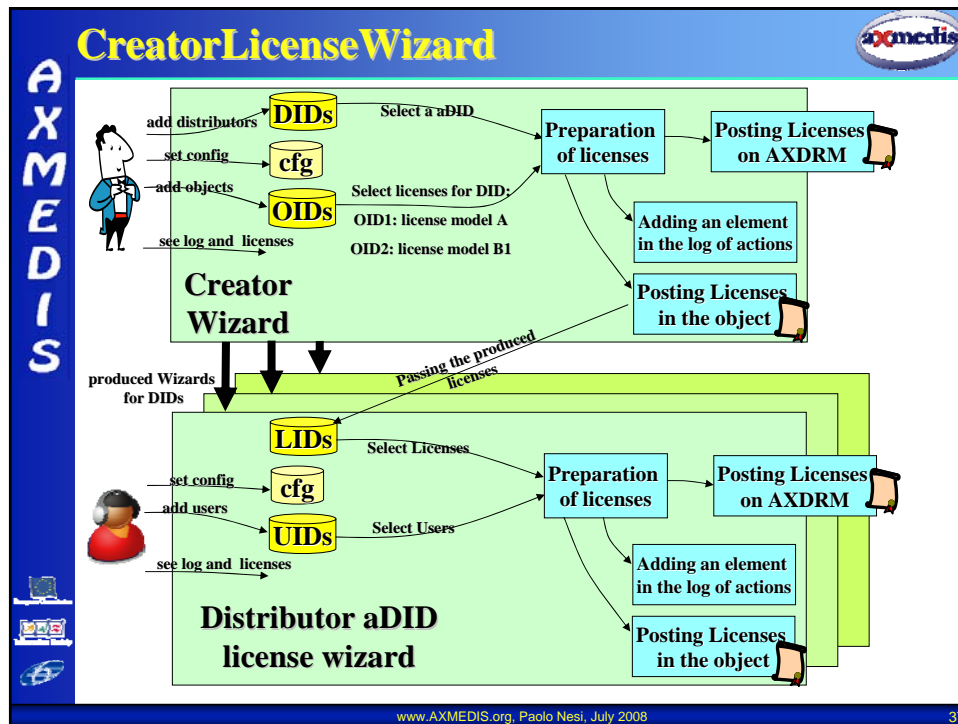


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Market solutions	viz	AXMEDIS
Business Models		Larger number of Business Models
B2C DRM		B2B, B2C, B2B2C DRM solution
Proprietary / Standard DRM and model		Standard DRM: MPEG-21, OMA, etc.
Non interoperable DRM		Allowed Interoperable DRM: MPEG-21, OMA, etc.
Fixed/Flexible Protection Model		Any Protection Model, key, algorithms, etc.
Separation among Content and license		Separation among Content and license
Signed Content Header		Signed Content AXINFO, any Metadata
Channel distribution		Multichannel with the same license
Players and Devices		Players and Devices: PC MS-Windows, PDA Windows Mobile, STB, Linux OS, Apple MAC (in progress), Java Mobiles
License Proprietary: number of rights		Licenses MPEG-21 REL: Expandable dictionary, any type of rights, licenses OMA, domains
Authentication of Player		Authentication of device, user, domain, etc.
Revocation per Player		Revocation per device, user, etc,
Revocation per license		Revocation per license
Source code non accessible		Source Code Accessible
Limited Metadata		Any metadata, custom metadata, any ID, any Descriptor
Media content, simple content, not intelligent		Any digital format, of any type: audio, video, image, games, doc, and Cross media: SMIL, HTML, MPEG-4,... INTELLIGENT content
Customizable Tools		Customizable Tools: servers and player clients

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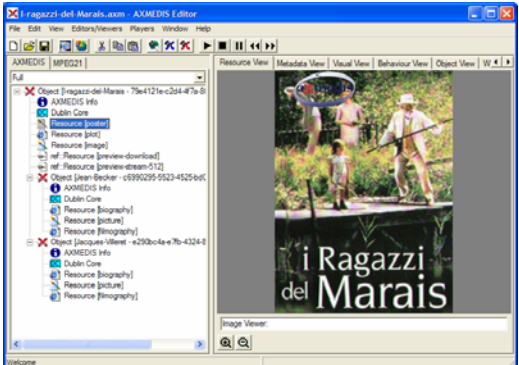
-
- Summary**
- Coverage
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- www.AXMEDIS.org, Paolo Nesi, July 2008 38

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AXMEDIS Editor


- **Metadata editor, Metadata mapper:**
AXINFO, DC ++
- **Resource player/viewer:**
Images, video, audio, doc, HTML, SMIL, MPEG-4
- **visual editor:**
SMIL, synchronization, presentation
- **Behavior editor,**
AXmethods: Business logic, extended JavaScript,a huge range of functionalities
- **DRM Editor:**
license editor, production of licenses
- **Protection editor:**
how to protect the object, DES, AES, etc..
- **Workflow:**
content production status, flags, etc.
- **In the short future:**
Scenarios Editor to design links of SMILs, etc.



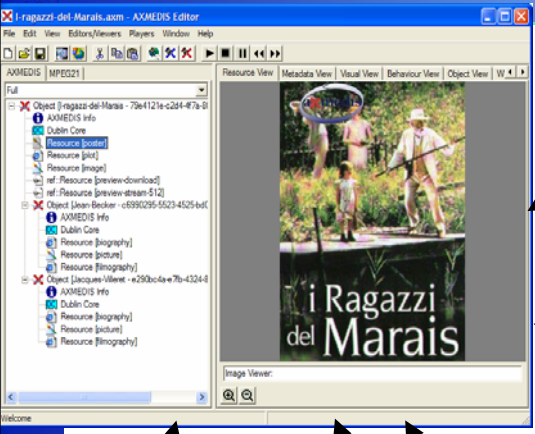
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AXMEDIS



AXMEDIS Editor



AXMEDIS Workflow Management System

control

AXMEDIS DRM

Prod/grant

Collection of AXMEDIS plug ins

AXMEDIS Database

AXMEDIS Database

AXMEDIS P2P

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Some Snapshots from the examples shown

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Interoperable Players

- **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 Feb 2008
 - ◆ SMIL support with Audio Visual, MMAPi of Java

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AXMEDIS Players, interaction, SMIL, HTML, MP4...

The screenshot shows a Windows file explorer window titled 'Select a file'. The address bar indicates the current location is 'Cerca in: PC-Animation-Game-based'. The file list contains various files with extensions such as .axm and .axr, including 'AFIdeepred.axm', 'AFIobject1.axm', 'AFIobject4.axm', 'aica-SLIDES.axm', 'ANSC-MPEG4-material.axm', 'ax-banner.axm', 'Ax-tools-mp4.axm', 'dsi fancy interactive.axm', 'dsi magnifier.axm', 'Flash-example-2-AXMEDIS-WEDEL.axr', 'juggling.axm', 'kangaroo.axm', 'karate.axm', 'karate.mp21', 'littlevampire flashhtml-xim.axm', 'macropup-game-html.axm', 'moses-game-flash-html-xim.axm', 'mouseSensor.axm', 'mouseSensor_IBCO', 'mp4-example-fancy-interactive.axr', 'mp4-test-1-Examples.axr', 'mp4-test-2-Examples.axr', 'mp4-test-zoom-4.axm', 'pavis-menu.axm', 'otello.axm', 'swf2-SIMPLE-FLASH.axm', 'whatwomenwant-screensaver-ap', 'xim-christmas-game.axm', 'xim-flash-ansc-sample.axm', and 'xim-flash-ansc-sample-sounds.axr'. The 'Nome file' field is empty, and the 'Tipo file' is set to 'AXMEDIS (*.axm;*.mp21;*.m21)'. There are 'Apri' and 'Annulla' buttons at the bottom right.

VIDEO
The link to download this video is in the last page of these slides

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AXMEDIS Player: video, SMIL, HTML,

The screenshot shows the AXMEDIS Player interface. It features a large black area with two horizontal white bars, likely representing video content. A small window titled 'Log' is visible in the center, showing a list of items. The interface includes a vertical 'AXMEDIS' logo on the left and a small 'axmedis' logo in the top right corner.

VIDEO
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AXMEDIS: videos, SMIL

AXMEDIS Player

File Play Resource panel Help

0/0

VIDEO

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AXMEDIS Custom MM Players

- **Multimedia Players**
- **Customizable for**
 - ◆ Skin, multiple
 - ◆ Functionalities
 - ◆ Formats
 - ◆ Interface

Chitarra battente

Botticelli

VARIAZIONI

The Allegory of Spring

The Adoration of the Magi

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AXMEDIS Player for STB, PVR, Decoders, etc.



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MPEG-2

STB with AXMEDIS tech

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PDA and mobiles players



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VIDEO

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AXMEDIS mobile player, java based

AXMEDIS

- Progressive Download from HTTP
- AXMEDIS DRM with registration
- Browsing on Memory
- Java based
- Content: SMIL, images, video, audio, and text
- SMIL interactivity and presentation layer
- Menus and collections
- Chained AXMEDIS obejcts







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Interoperable Players


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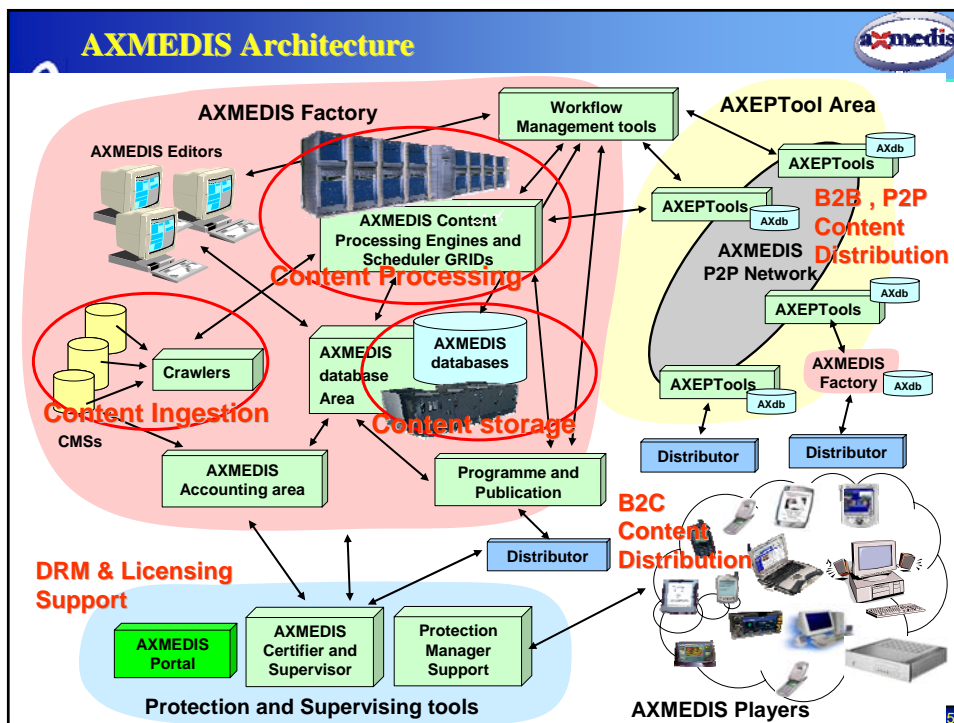


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Enabling massive content production and processing

AXMEDIS

- **AXMEDIS GRID language and tools for**
 - ◆ Automated Content Ingestion and Gathering
 - ◆ Automated Content Query and Retrieval
 - ◆ Automated Content Load and Storage: databases and files
 - ◆ Automated Content and Metadata Processing, enrichment
 - ◆ Automated Content and Data processing
 - ◆ Automated Content Filtering and Repurposing
 - ◆ Automated Content Composition, Formatting
 - ◆ Automated Content Protection and Licensing
 - ◆ Automated Content Publication/Download on/from any channel
 - ◆ Automated Content Distribution via Multichannel
 - ◆ Automated Profiles management and processing
 - ◆ Automated Production of Content on Demand
 - ◆

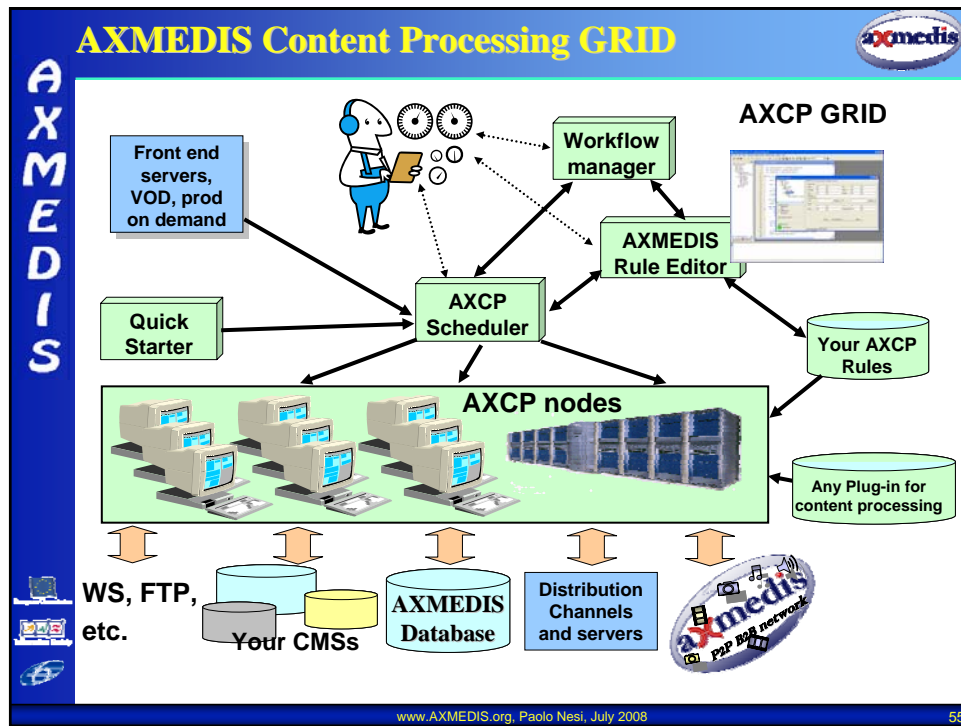
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Content Processing Applications

AXMEDIS

- **AXMEDIS allows you to reduce costs and increase efficiency of your content management.**
- **Automating back office content production/protection and distribution**
 - ◆ Open and secure architecture for content production, processing, protection and enrichment, based on a scalable GRID model
 - ◆ Maximum flexibility with
 - ➔ AXMEDIS content processing GRID Language
 - ➔ Uses plugins for content adaptation/transcoding for multi-channel production, fingerprinting, processing profiles, etc.
- **AXCP GRID solution allows automated management of:**
 - ◆ content, metadata and licensing information, etc.,
- **AXCP tools can be integrated and controlled by your applications and/or workflow management systems.**

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- ### AXMEDIS Content Processing capabilities
-
- AXMEDIS**
- **In AXCP Scripts you can manipulate, produce, adapt, extract, manage and process:**
 - ◆ Any type of resource in any format
 - AXMEDIS/MPEG-21 Objects, IMS, SCORM, OMA objects, and features
 - ◆ Digital resources in any format
 - ◆ Production of new objects: composition, etc.
 - ◆ Formatting, automatically producing/selecting: SMIL, XSLT, etc.
 - ◆ Digital resource adaptation, transcoding,
 - ◆ Extraction of descriptors and fingerprints
 - ◆ Synchronization of media, etc.
 - ◆ Metadata processing, adaptation, and mapping
 - ◆ production and posting of licenses/PAR in OMA and MPEG-21
 - ◆ Verification of Licenses against them and PAR
 - ◆ Protection Information, OMA and MPEG-21 IPMP
 - ◆ Profiling for devices and network capabilities,
 - ◆ Reasoning on device capabilities and user preferences
 - ◆ User Profile and preferences
 - ◆ Etc.
 - **Open to any other module with plug-in technology:**
 - ◆ Burning
 - ◆ Etc.
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Some Snapshots from the examples shown

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Rule Scheduler

AXMEDIS - Rule Scheduler

Rule Name	AXRID	Rule Version	Rule Status	Job ID	Executor ID	Start Time
searchBox_1...		9	completed	-1	-1	16:05:11
searchBox_1...		10	completed	-1	-1	16:05:11
searchBox_1...		11	completed	-1	-1	16:05:11
searchBox_1...		12	completed	-1	-1	16:05:11
searchBox_1...		13	running	2	2	16:05:11
searchBox_1...		14	completed	-1	-1	16:05:11
searchBox_1...		15	completed	-1	-1	16:05:11
searchBox_1...		16	running	3	3	16:05:11
searchBox_1...		17	completed	-1	-1	16:05:11
searchBox_1...		18	completed	-1	-1	16:05:11
searchBox_1...		19	completed	-1	-1	16:05:11
searchBox_1...		20	completed	-1	-1	16:05:11
searchBox_1...		21	completed	-1	-1	16:05:11
searchBox_1...		22	completed	-1	-1	16:05:11
searchBox_1...		23	completed	-1	-1	16:05:11
searchBox_1...		24	running	8	8	16:05:11
searchBox_1...		25	completed	-1	-1	16:05:11
searchBox_1...		26	completed	-1	-1	16:05:11
searchBox_1...		27	completed	-1	-1	16:05:11
searchBox_1...		28	completed	-1	-1	16:05:11
searchBox_1...		29	completed	-1	-1	16:05:11
searchBox_1...		30	completed	-1	-1	16:05:11
searchBox_1...		31	completed	-1	-1	16:05:11
searchBox_1...		32	completed	-1	-1	16:05:11
searchBox_1...		33	running	7	7	16:05:11
searchBox_1...		34	completed	-1	-1	16:05:11
searchBox_1...		35	running	9	9	16:05:11
searchBox_1...		36	running	6	6	16:05:11
searchBox_1...		37	delayed	-1	-1	16:05:11
searchBox_1...		38	delayed	-1	-1	16:05:11
searchBox_1...		39	delayed	-1	-1	16:05:11
searchBox_1...		40	delayed	-1	-1	16:05:11

Executor N...	IP	CPU	Clock	OS	Transfer Rate	HD Space	Status	Rule ID	Executor ID	Workload p...	Start Time	End Ti
DISIT-01	192.168.0.197	intel	1800	Windows N...	-1	1073741824	busy	2	1	0.000000	15:04:38	15:04
DISIT-04	192.168.0.105	intel	1800	Windows N...	-1	45294632	busy	13	2	0.000000	15:04:05	15:04
DISIT-03	192.168.0.52	intel	1800	Windows N...	-1	89128960	busy	16	3	0.000000	15:27:33	15:27
DISIT-02	192.168.0.43	intel	1800	Windows N...	-1	84934656	busy	5	4	0.000000	15:45:09	15:45
MIRKOFANI	192.168.0.64	intel	1800	Windows N...	-1	1073741824	busy	6	5	0.000000	15:53:06	15:53
VEICOM-WORK	192.168.0.103	intel	1800	Windows N...	-1	-2147483648	busy	36	6	0.000000	16:01:28	16:01
M386	192.168.0.49	intel	1800	Windows N...	-1	-2147483648	busy	33	7	0.000000	16:05:11	16:05
DISIT-05	192.168.0.102	intel	1800	Windows N...	-1	0	busy	24	8	0.000000	16:25:49	16:25
HOMER	192.168.0.101	intel	1800	Windows N...	-1	-2147483648	busy	35	9	0.000000	16:35:48	16:35

23/09/2005 16:35:19

Snapshots of the GRID at work

The screenshot displays the AXMEDIS Grid management interface. On the left, a vertical 'AXMEDIS' logo is present. The main area is divided into several windows:

- License Server Status:** Shows the status of the license server, including messages like 'Sending message: License saved on disk' and 'License ready'.
- Job Scheduler:** A table listing scheduled jobs with columns for Job Name, Job Status, Job ID, Executor ID, Start Time, Start Date, Priority, and Number of Jobs.
- Console Windows:** Multiple windows showing error logs for 'AXCP Grid Node' connections. The logs indicate 'Socket Connect Error: Connection Refused' and 'AXCP Scheduler connection failed' for various nodes.

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AXCP visual editor

The screenshot shows the AXCP visual editor interface. It features a flowchart with several blocks connected by arrows, representing a sequence of actions. A list of available modules is visible on the left side of the editor.

- **Fast and simple Visual Programming of AXCP GRID processes**
- **Composing Blocks as JS modules to create AXCP rules**
- **Composing AXCP Rules to create sequences of actions to be scheduled according to their dependencies**

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AXCP Visual Designer

Name	Type	ID	Date of production	Last Modification	Affiliation	URL	Author
axcpProva	AXCP Rule Procedure	axcp:rule:3727f16-126c-2008-05-13	2008-05-11	2008-05-11	dist - dist	url:com	antonio
CreateTxtFile	Java Script Procedure	axcp:rule:072a2a59-479e-2008-05-19	2008-05-19	2008-05-19	dist	url: di prova	antonio
CreateWWWFile	Java Script Procedure	axcp:rule:668f4a2d-436f-4-2008-05-05	2008-05-05	2008-05-05	z_ affiliation	e_url	c_antonio
diWWWTxtFile	Java Script Procedure	axcp:rule:680490da-67da-2008-05-17	2008-05-17	2008-05-17	and	url di prova	anto
provaScoop	Java Script Procedure	axcp:rule:6d4cb88d-1a5d-2008-05-22	2008-05-22	2008-05-22	z_ affiliation	cvb_url	g_antonio
sample2	Java Script Procedure	axcp:rule:ccfa5f4e-1070-4-2008-05-04	2008-05-04	2008-05-04	s_ affiliation	url_d_prova	antonio

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Workflow Management, OpenFlow

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Interfactory content production and sharing

AXMEDIS

- **AXCP based Factories**
 - ◆ content management and publication
 - ◆ content gathering
 - ◆ automated production, transcoding
 - ◆ automated metadata enrichment, labeling, completion
 - ◆ content protection and DRM, B2B content sharing with DRM rules
- **WFMs**
 - ◆ Workflow harmonization and control
 - ◆ Control points and check points
- **HL-AXCP + AXP2P**
 - ◆ content sharing among Factories according to DRM
- **AXDRM**
 - ◆ Control of content access and usage
- **Fully Scalable, fully integrated**

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Planning and Exploiting Node capabilities

AXMEDIS

- **GRID node has a profile describing its capabilities: time profile, memory, HD, communication, tools and plug ins, etc.**

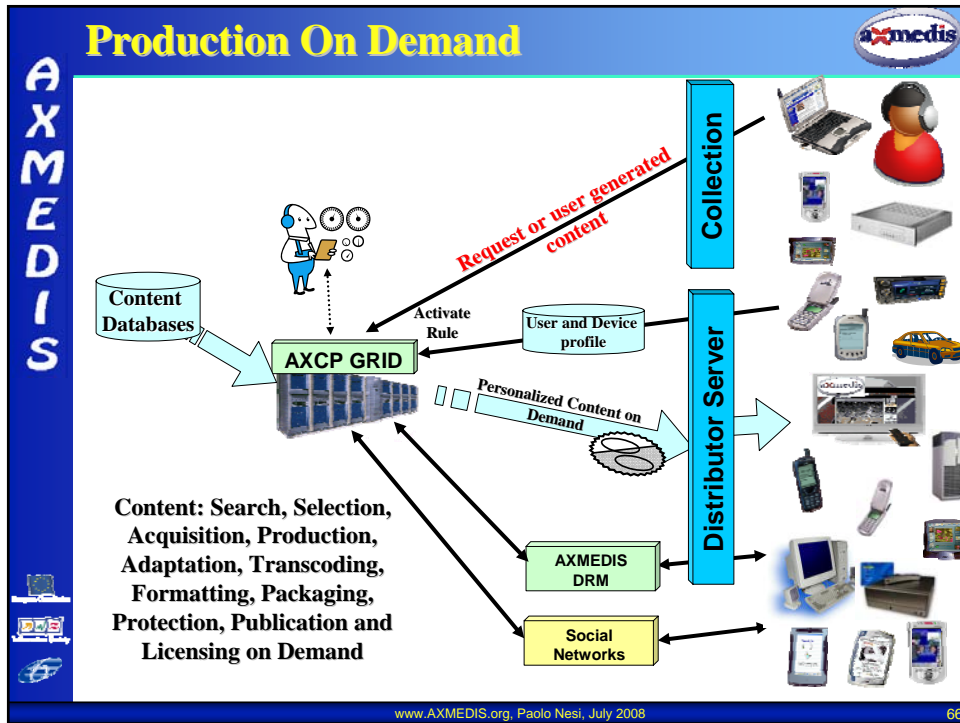
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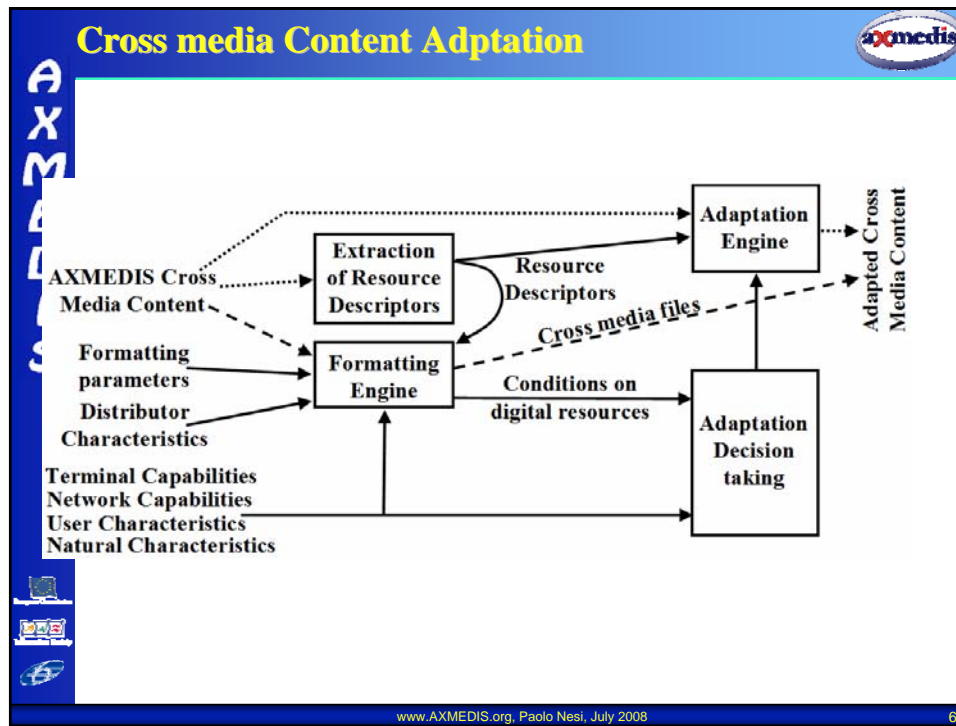
Metadata Mapper, XSLT visual production

AXMEDIS

XML to AXM
XML to XML
AXM to AXM
AXM to XML



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- ### Profiling, MPEG-21 DIA
-
- The *device/terminal capabilities* include codec capabilities (specific parameters for each codec), display capabilities, included players features, interactivity features, power consumption, memory, CPU power in terms of MIPS or MFLOPS, storage, etc.
 - The *network capabilities* (such as: maximum capacity, minimum bandwidth, quality indicators, etc.) and conditions (such as: delay and errors related to capabilities, etc.).
 - The *user characteristics* such as: user information in MPEG-7; user preferences; user history including (e.g., the actions performed on DIs), presentation preferences such as preferred rendering of audiovisual and textual information, accessibility features (for example, audio left/right balance and color arrangement), location characteristics (such as: mobility characteristics and destination, for example for describing the user movements).
 - The *natural environment characteristics* are related to the physical environment such as light conditions, time, location, environmental noise, etc.
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Examples of Cross media Adaption



header

nav

body

footer

header

nav

body

footer

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Process results

Alessandro Allori



Pieta

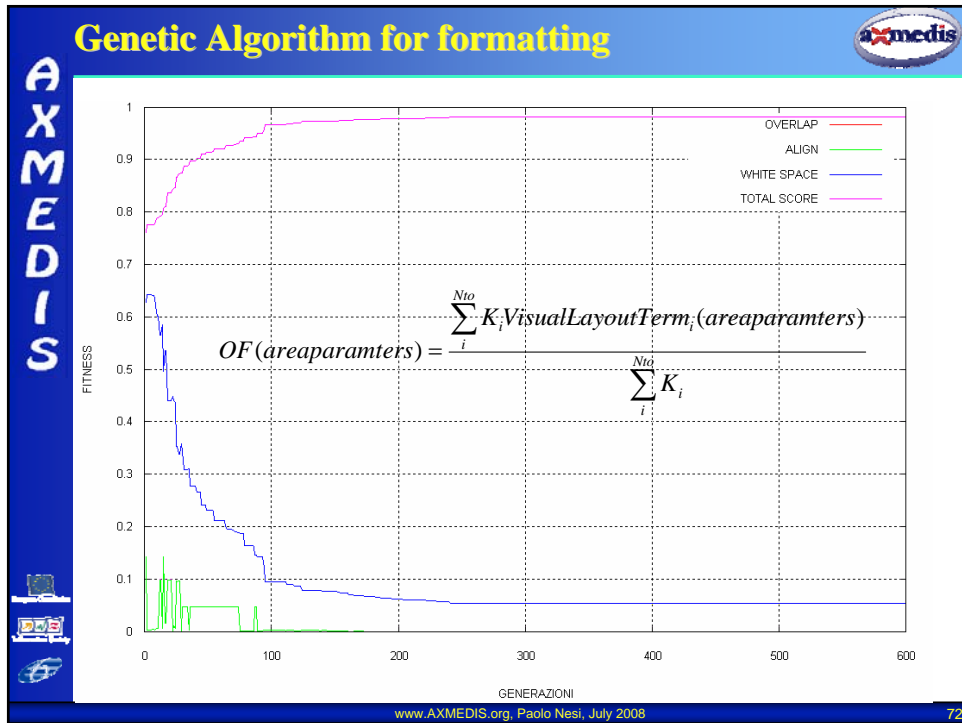
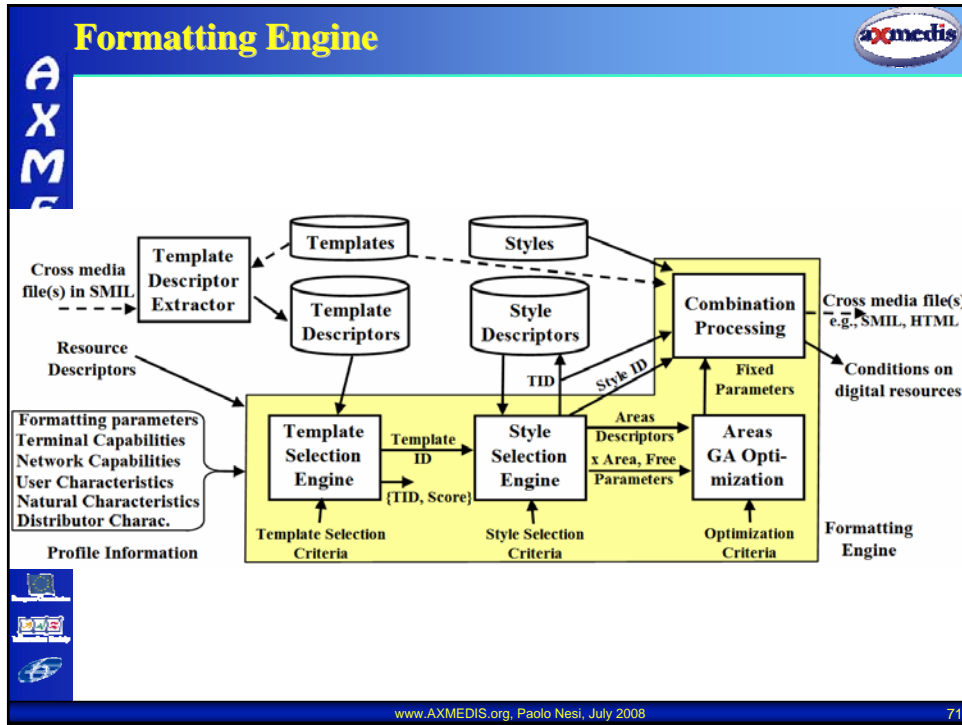
Oil on canvas, 253 x 181 cm
Uffizi Gallery, Florence

In a book of memories of St. Mary monastery in Vallombrosa (this is the place where the painting was found) we can read that the "Pieta", which had been owned for the San Giovanni Gualdoberto nella Dirda Chapel in 1739 was no more in that chapel. The painting had been moved to the security in order to restore the parts which had been damaged from the seepages of water. We do not have any news about the picture until 1844, that is when it was backed. Backing was carried out with wax instead of Florentine paste, probably because of the damages repeatedly caused by dampness. In fact it seems that many falls of colour have been restored in different times. In 1893 the picture underwent a new restoration by the Fontezza de Basso laboratories in Florence. This was certainly a partial intervention: a varnishing with a mixture of the discoloured retouchings in view of the Medicines exhibition of Strozzi Palazzo. After that, the picture has been moved first to the Middle Ages Arts Museum in Arezzo and then to Munich, where it remained until 1935. In the same year, thanks to a paintings exchange, the picture goes to the Uffizi Gallery.








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Summary

- Coverage
- AXMEDIS Model
- AXMEDIS DRM
- AXMEDIS Editor and Players
- AXCP: Automating Content Management
- **AXMEDIS P2P** 
- Multichannel Support
- AXMEDIS Framework

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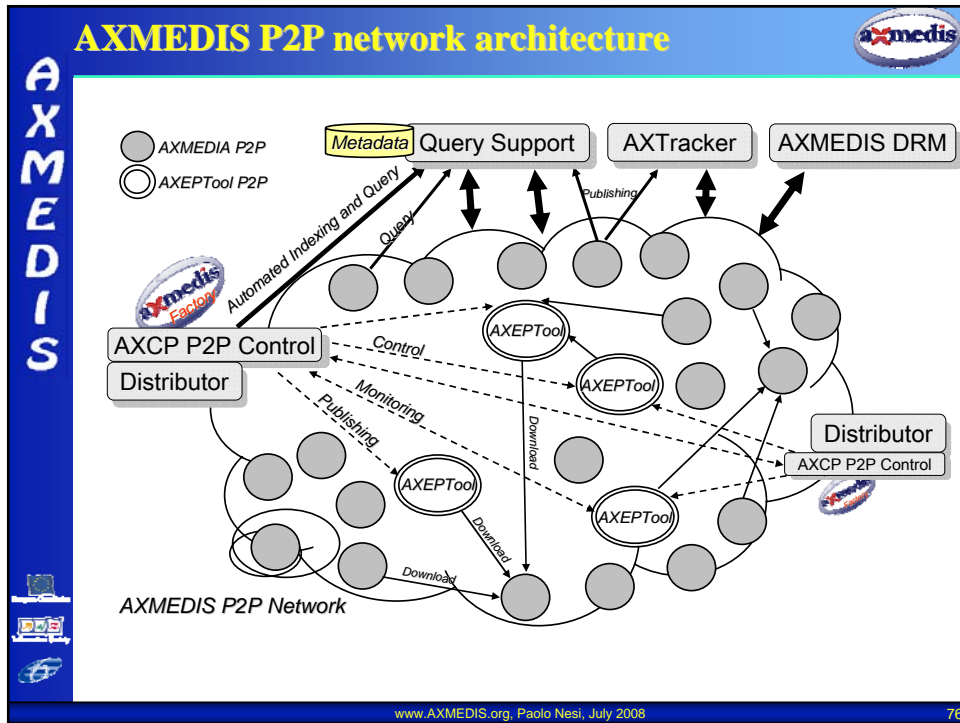
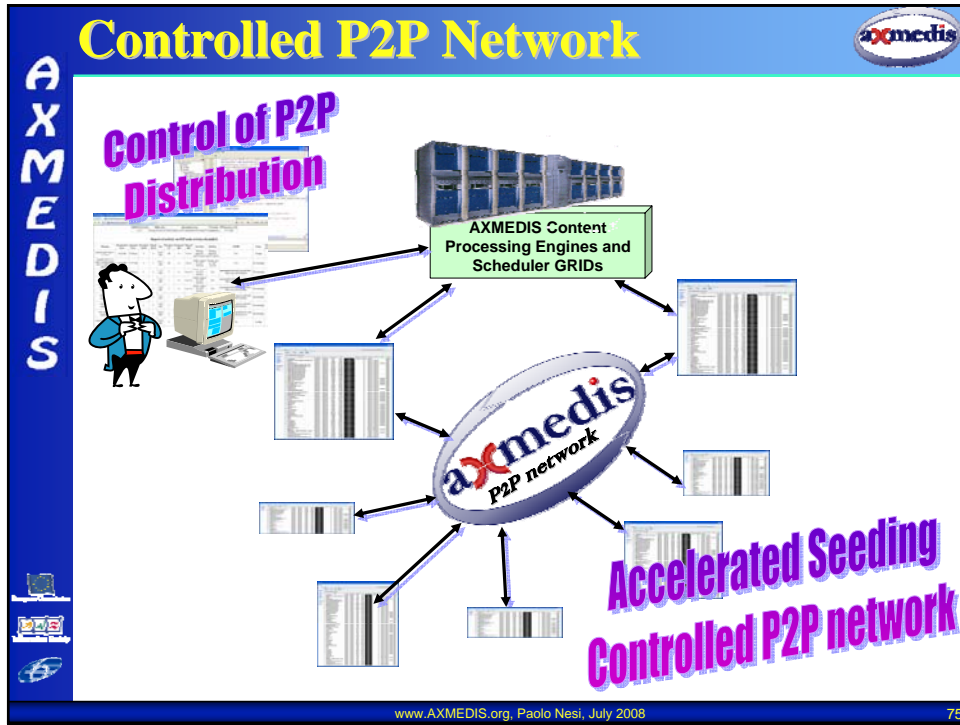
Secure and legal P2P

- **P2P network set up for content distribution**
 - ◆ CONSUMER content distribution and sharing
 - ◆ Allowing setting up large P2P networks at low costs, about 160,000 peers per server.
 - ◆ Automated B2B content distribution/publication via P2P, ready to download content on publication
 - Accelerated seeding
 - ◆ Protected content, legal P2P set up
 - ◆ Efficient control of P2P networks
 - ◆ BitTorrent Technology with Query and Catalogue
 - ◆ P2P Client Tools
- **Content Sharing for B2B and/or B2C**



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Example of AXEPTool monitoring

Summary of AXMEDIS P2P Node Status

Node Profile (.....)

AXEPTool Version	Online since	Operating System	Username	IP/Memory used
3.2.30	Wed Oct 24 18:48:46 CEST	Windows 2003 OS/Archi386 OS/Version:3.2	Administratore	202.24.5GB

Report of activity on P2P node at

Object n.	Filename	Size	Download (%)	Start date	End date	AXOIID	Status	Number of seeds	Number of peers
1	VRS-1-0r.asm	248.60 KB	100	Monday, October 22, 2007 17:18:24	Monday, October 22, 2007 19:21:11	am.axmedis.00000.aly.4413b7e-4f0c-4b-df-b17a-24688ae6123	Seeding	8	8
2	vrs_vr3.asm	242.24 MB	100	Monday, October 22, 2007 18:21:17	Monday, October 22, 2007 20:18:12	am.axmedis.00000.aly.4413b7e-4f0c-4b-df-9091-45c7cb0b807f	Seeding	12	74
3	Xm-garden-P4201481-5chdr.asm	51.85 KB	100	Monday, October 22, 2007 17:10:50	Monday, October 22, 2007 19:16:18	am.axmedis.00000.aly.55333634-4346-48ba-bd39-c718012f721e	Seeding	10	48
4	VRS-058-Signatures.asm	54.78 KB	100	Monday, October 22, 2007 18:23:52	Monday, October 22, 2007 18:59:54	am.axmedis.00000.aly.55333634-4346-48ba-bd39-c718012f721e	Seeding	134	348
5	Xm-garden-P4201483-5Hfers.asm	477.01 KB	100	Monday, October 22, 2007 17:10:22	Monday, October 22, 2007 18:50:17	am.axmedis.00000.aly.55333634-4346-48ba-bd39-c718012f721e	Seeding	390	456
6	Xm-garden-P4201475-PDA.asm	118.89 KB	100	Monday, October 22, 2007 17:10:49	Monday, October 22, 2007 18:16:53	am.axmedis.00000.aly.2f1800a-b695-4117-846c-eed138e1864	Seeding	5	9
7	Xm-garden-P4201465-PDA.asm	120.11 KB	100	Monday, October 22, 2007 17:10:27	Monday, October 22, 2007 18:26:23	am.axmedis.00000.aly.28f0c71c-48ff-4c8f-ad8-494e141015c	Seeding	456	563
8	REVIEW2007_18_OCT_REVIEW2007_18_Oct_nscatbest_Akkonidbter.asm	248.73 KB	100	Monday, October 22, 2007 17:10:49	Monday, October 22, 2007 18:16:53	am.axmedis.00000.aly.54b36f44-2405-43ac-b394-4548-1134a483	Seeding	76	82
9	REVIEW2007_18_OCT_8002_4_image_gpg_MASTER_REVIEW2007_18_OCT_13.asm	255.96 KB	100	Monday, October 22, 2007 18:21:28	Monday, October 22, 2007 18:24:07	am.axmedis.00000.aly.5762444-879c-4811-9048-842c14548552	Seeding	45	58
10	VRS-demo-0r.mprg1.asm	81.27 MB	100	Monday, October 22, 2007 17:09:47	Monday, October 22, 2007 18:13:28	am.axmedis.00000.aly.44f740-8f3c-4c44-bd69-3d869328823	Seeding	12	85

Number of objects: 2172 Total Disk Space: 219.83 GB Free Disk Space: 182.82 GB Total Objects Size: 14.85 GB

AXO-IDB3 2007 - Thu Oct 25 2007 12:48:42 GMT-0300 (see legale Europa occidentale)

Network results

AXTrack's traffic

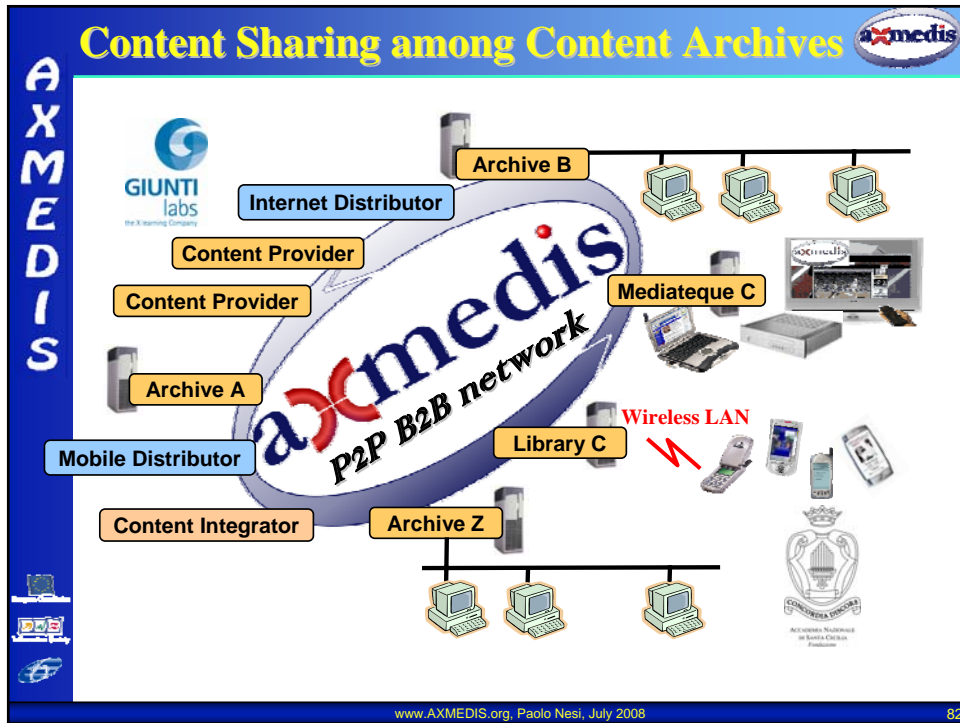
peers(n x 40.000)	Maximum Inbound	Average Inbound	Maximum Outbound	Average Outbound
1	1,59	1,52	1,24	1,18
2	1,87	1,72	1,46	1,34
3	2,16	1,94	1,72	1,55
4	3,43	2,89	2,72	2,29

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X Media Finder

The screenshot shows the AXMEDIS X Media Finder web application. The interface is titled "AXMEDIS" on the left and "X Media Finder" at the top. It features a search bar and a "Last posted" section with several video thumbnails. Below the thumbnails, there is a list of media items with their creators and download statistics. The AXMEDIS logo is visible in the top right corner, and a vertical banner with the AXMEDIS logo is on the left side.

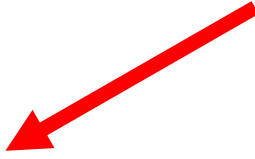
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Summary

- Coverage
- AXMEDIS Model
- AXMEDIS DRM
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- AXCP: Automating Content Management
- AXMEDIS P2P
- **Multichannel Support** 
- AXMEDIS Framework













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AXMEDIS Multichannel Distribution

- 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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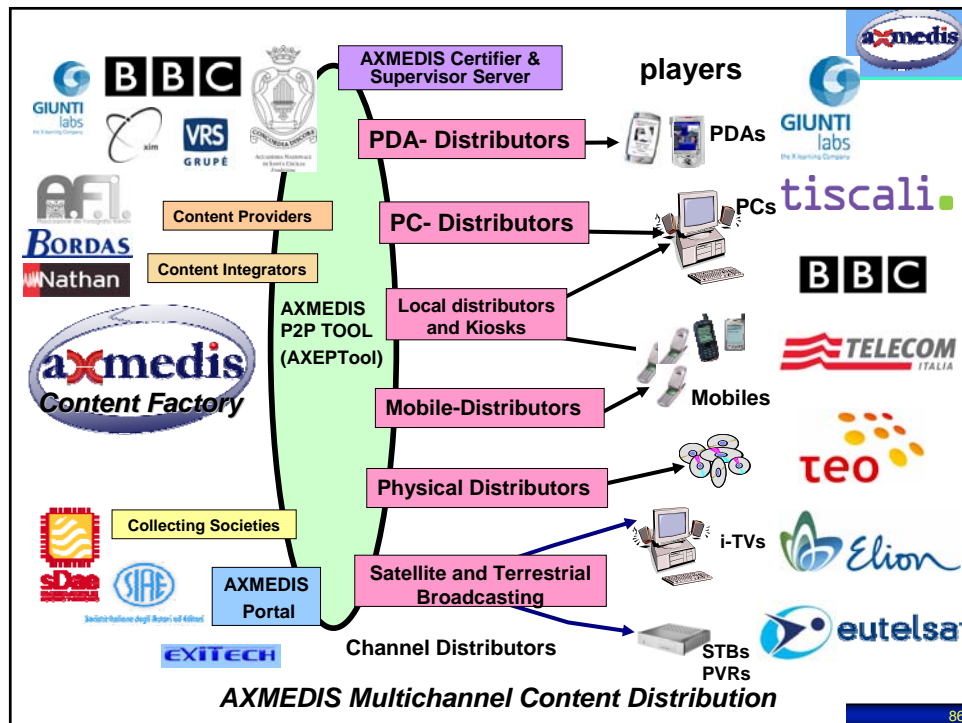
AXMEDIS Multichannel Distribution

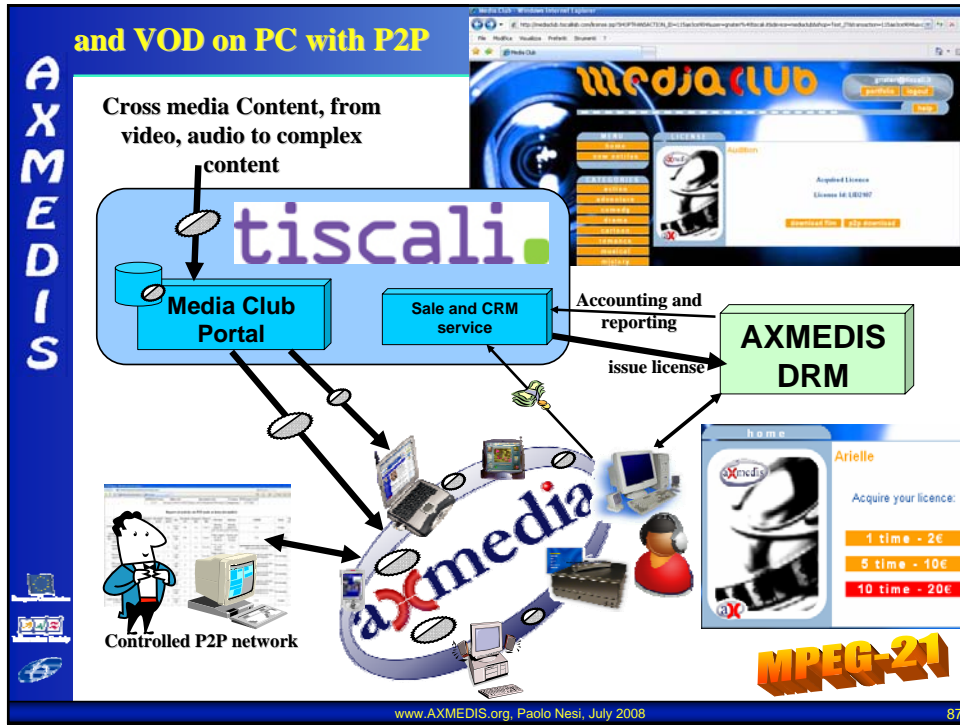
AXMEDIS

- **VOD, Video or Content on Demand:**
 - ◆ Internet direct download, PC (AXMEDIS DRM)
 - ◆ Internet P2P, PC, mobile
 - ◆ IPTV streaming: STB of Motorola
 - ◆ Streaming of AXMEDIS MPEG-21, audio/video
 - ◆ Progressive download of AXMEDIS MPEG-21, audio/video
- **Satellite data broadcast**
 - ◆ Distribution in Push
 - ◆ STB/PVR in download
- **DVB-T + P2P ++**
 - ◆ EPG + recording + intelligent content
- **Kiosks and PDA**
 - ◆ Push on Kiosks, Download on PDA
- **Mobiles**
 - ◆ Interoperable MPEG-21 and OMA DRM production
 - ◆ AXMEDIS/MPEG-21 player and/or OMA for mobiles
 - ◆ Download and progressive download on mobiles, java
- **UGC, user generated or posted content**
 - ◆ SIAE trial
 - ◆ Automated production, transcoding, licensing, etc.
- **P2P as support for the above**
 - ◆ B2B and/or B2C networks

Where AXMEDIS MPEG-21 or P2P files are used

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TISCALI Media Club, Distribution Portal

mediacubmanager

- Search Axmedis media
- Media catalog
- Statistics

Search for: CONTAINS and/or

right EQUAL play

territory EQUAL

exercise limit EQUAL

validly interval LESS EQUAL

2 records found

title	type	creator	date	import status
Ariete	NULL	NULL	12092007	

Statistics

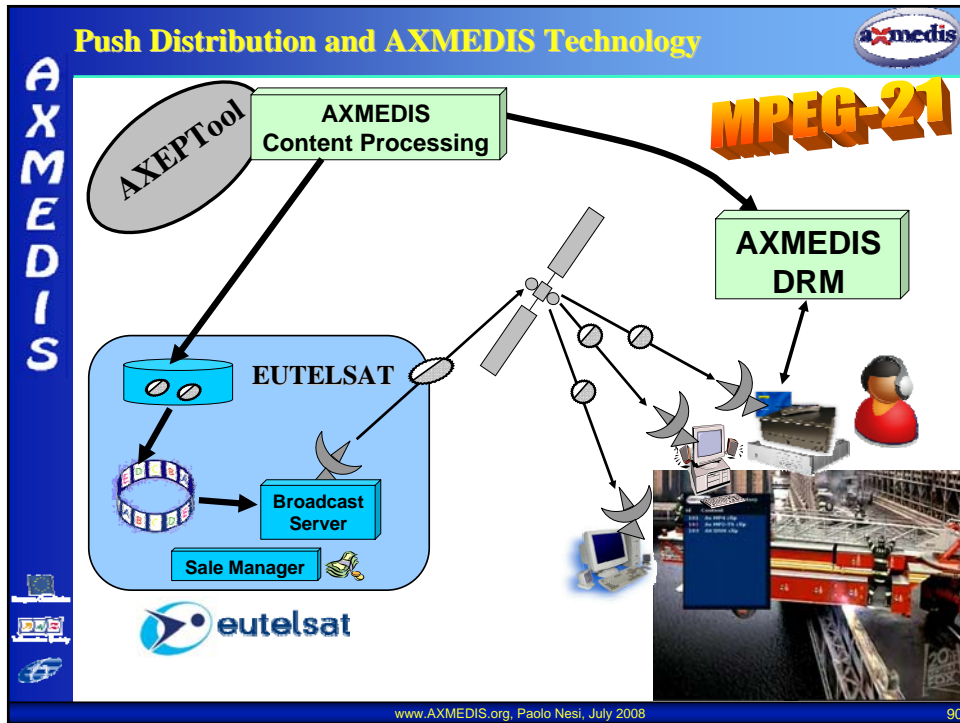
Search: from: media id:

creator: domain: work identification:

1844 records found

media id	creator	operation	execution	regi
URN:AXMEDIS:00002:OB:J09909E67-1D09-3709-8467-115183071318	URN:AXMEDIS:00002:BUS:DD998008-6E93-3ECC-ABC4-882122A0654C	mx play	2007-10-16 10:50:02	2007-10-49
URN:AXMEDIS:00002:OB:J7362A059-8A61-31A1-0B51-D6D73ED1E3F3	URN:AXMEDIS:00002:USR:7C98E82E-6040-3E09-8476-9C200DDEE43D	mx play	2007-10-18 09:24:19	2007-09-24
URN:AXMEDIS:00002:OB:J9A295BC0-34DB-3B29-B26A-44EF8CFD9B51	URN:AXMEDIS:00002:BUS:DD998008-6E93-3ECC-ABC4-882122A0654C	mx play	2007-10-16 09:43:19	2007-09-43
URN:AXMEDIS:00002:OB:J8905BACD-8887-375D-BC58-628F152AFA67	URN:AXMEDIS:00002:BUS:D6D45C52-802F-3AC2-995F-FF8087C784A4	mx play	2007-10-15 17:36:14	2007-17:37

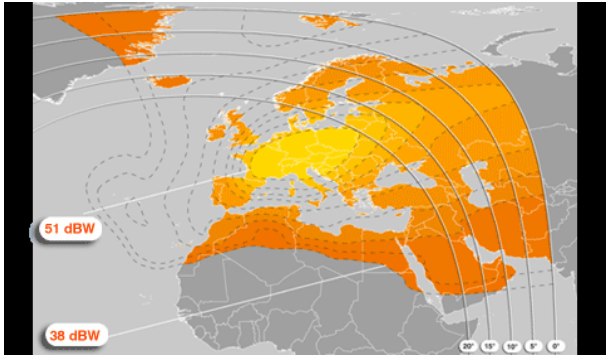

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EUTELSAT Distribution with AXMEDIS Technology

AXMEDIS

- AXMEDIS Service on ATLANTIC BIRD™ 1:
 - 12.5° West, covering Europe and Americas
 - Frequency: 11.428GHz
 - Symbol rate: 30000KSym/s
 - Polarization: Horizontal



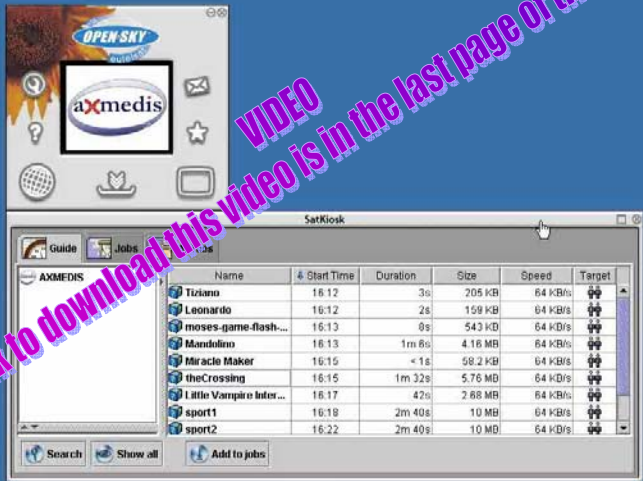
<http://www.eutelsat.com/satellites/125e.html>

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VIDEO on EUTELSAT distribution

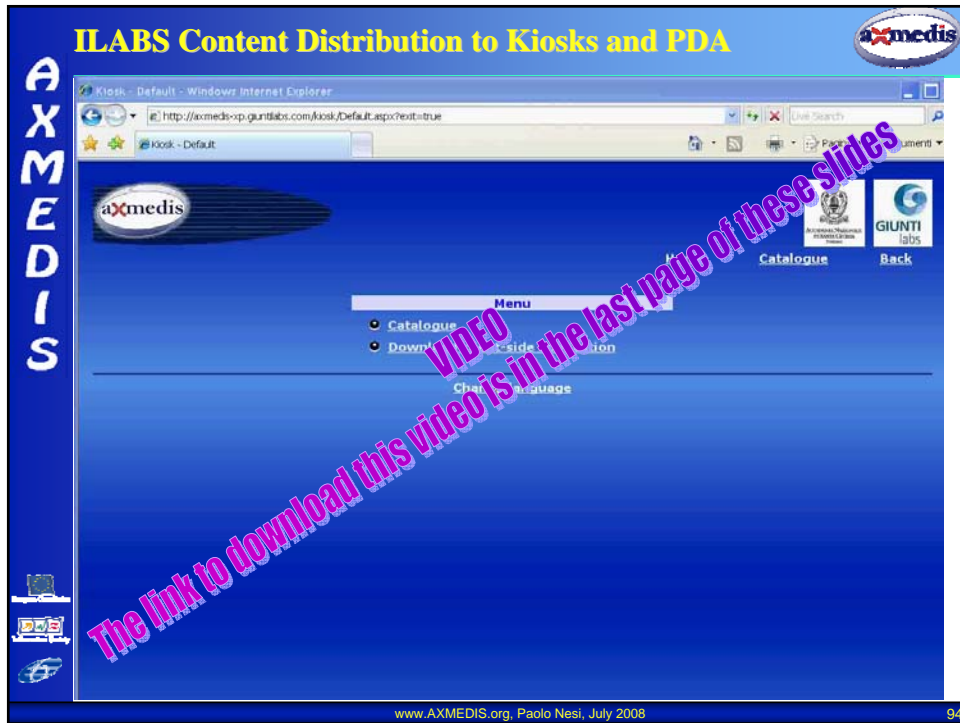
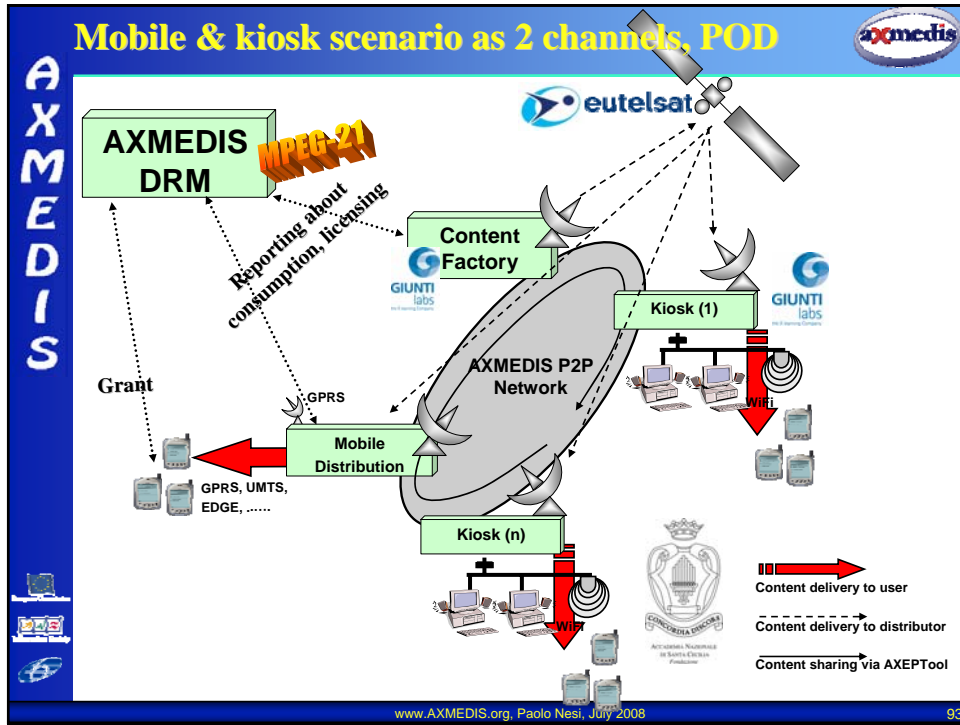
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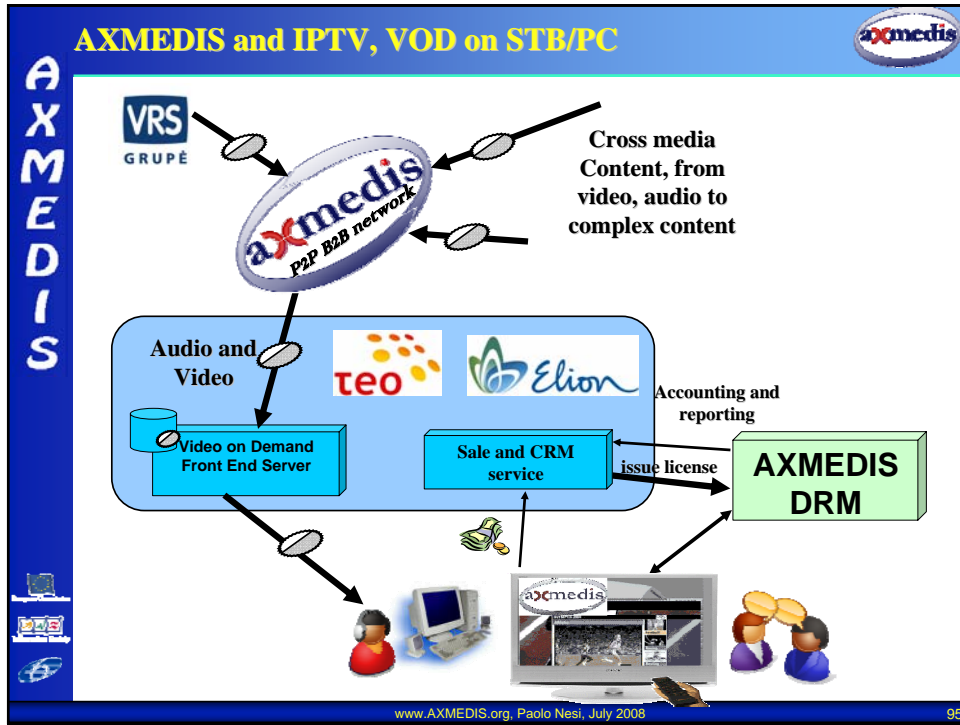


The link to download this video is in the last page of these slides

Name	Start Time	Duration	Size	Speed	Target
Tiziano	16:12	3s	205 KB	64 KB/s	64
Leonardo	16:12	2s	159 KB	64 KB/s	64
moses-game-flash...	16:13	8s	543 KB	64 KB/s	64
Mandolino	16:13	1m 8s	4.16 MB	64 KB/s	64
Miracle Maker	16:15	< 1s	58.2 KB	64 KB/s	64
theCrossing	16:15	1m 32s	5.76 MB	64 KB/s	64
Little Vampire Inter...	16:17	42s	2.88 MB	64 KB/s	64
sport1	16:18	2m 40s	10 MB	64 KB/s	64
sport2	16:22	2m 40s	10 MB	64 KB/s	64

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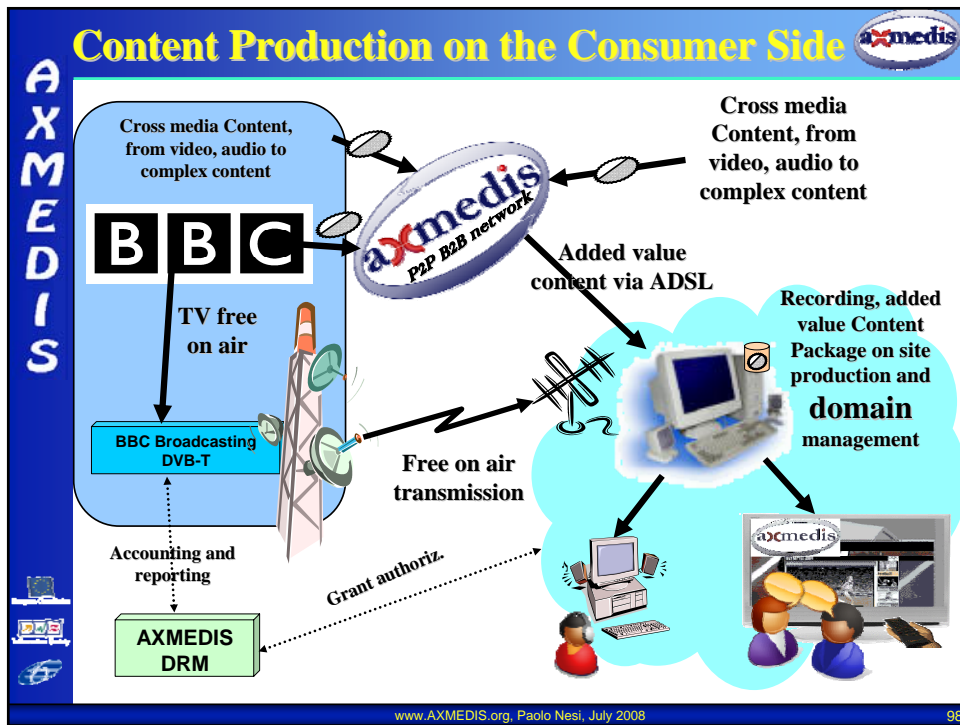
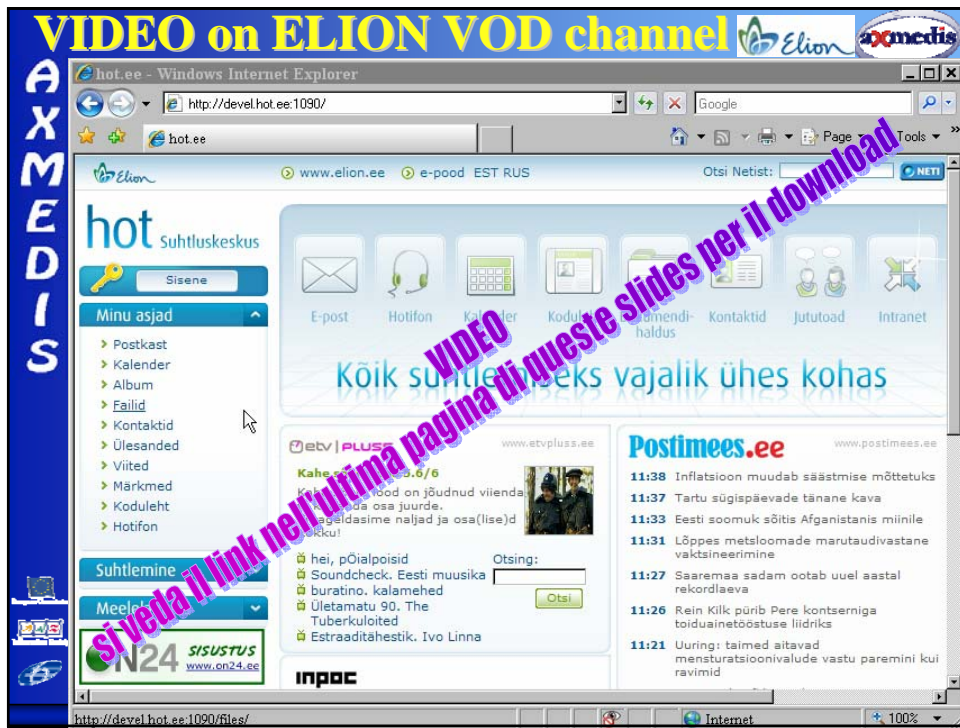





VIDEO on TEO VOD channel

The slide features the **axmedis** logo in the center. A large, diagonal watermark in purple text reads: **The link to download this video is in the last page of these slides**. The slide also includes the **teo** and **axmedis** logos in the top right corner.

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VIDEO on BBC content production

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AX4HOME Demonstrator 1:00am (Wed 10 Oct 2007) --> 12:59am (Thu 11 Oct 2007)

© BBC Research (British Broadcasting Corporation)

Time	BBC One	BBC Two	CBBC
1:30pm	BBC London News The latest stories from the BBC London newsroom. [S] 10 minutes		Class TV: Science Clips [Age 9-11] Interdependence and Adaptation: How plants and animals adapt to each other and their environments. [S] 10 minutes
1:45pm		Bring Lunch A consumer and workplace news programme. A forward-winning team who tell it like it is. With Adam Shaw, Nik Wood and roving reporter Rob Pittam. [S] 30 minutes	Class TV: Primary Geography [Age 9-11] World Environmental Changes - Berlin: Series of programmes exploring the ways in which human beings shape and influence the environments in which they live. [S] 15 minutes
2:00pm		Animal Park The animals of Longleat as you've never seen them before.	Lilly the Witch Lilly in the Wild West: Lilly wants to prove to Leon that there were too many girl sheriffs back in the Wild West. [S] 20 minutes

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AXMEDIS BBC AX4HOME recorder/player

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AX4HOME Demonstrator - TV Recorder

Neighbours

Just a moment...



Recorder Data:

Waiting for requests...

Arrows: Rewind play stopped

Stop Play

Stop Record

Quit Recorder

Available ArXivists:

For reference list: 14093.acm

Resp List



Programme	Status	Duration	When

Telecom Italia, OMA & MPEG-21 distribution

AXMEDIS Automated PRODUCTION

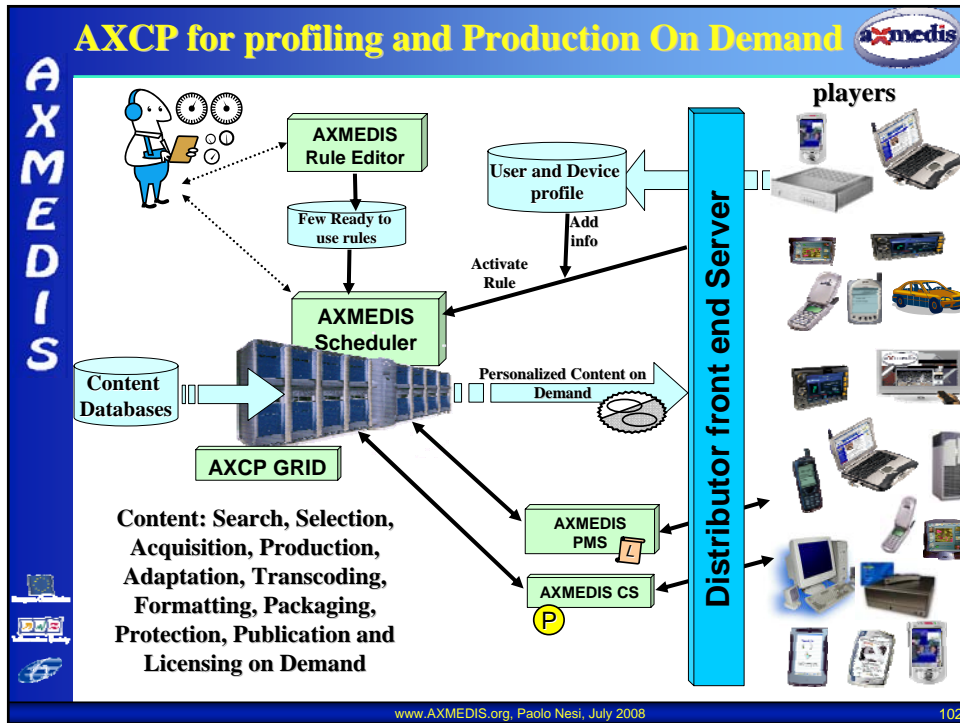
TELECOM ITALIA

Choose an option:

- View list of Axmedis contents
- Load a new content
- Load a new license

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Interoperability among channels

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Channels are the distribution methods for content:








- Streaming, e.g., DVB-T, S, H
- Downloading, WEB


Channels are grounded on different communication standards,


- MPEG, HTTP, RTSP, DVB, etc.
- Content and devices are strongly related to the supported input channel


AXMEDIS content is independent on the communication channel

- Content can be automatically produced for multiple channels at the same time
- Content received from one channel can be passed to a different one

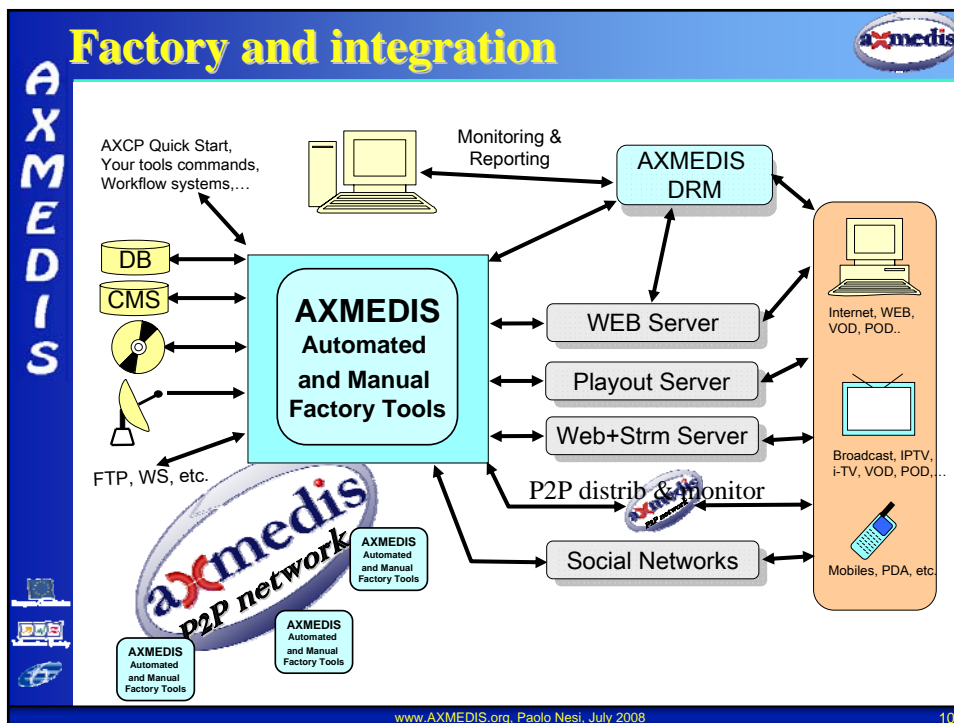
 DVB-T
 P2P
 Internet
 UMTS
 GPRS
 DVB-S
 Downloading

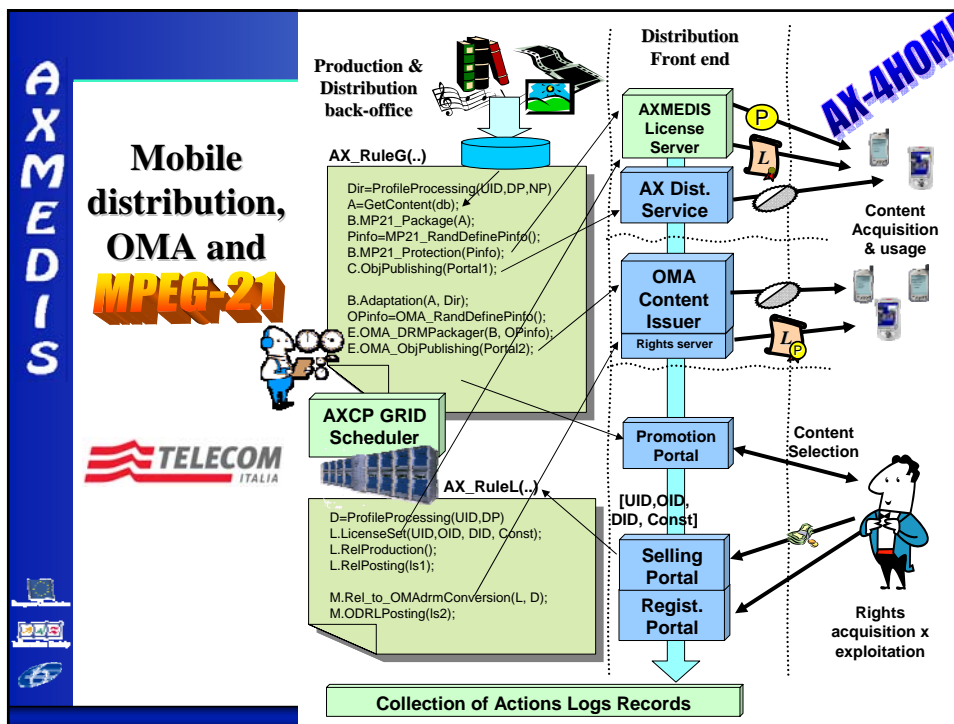
 Streaming

 VOD

 P2P


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USERS production and distribution

- **Content production tools for final users, SIAE trial**
- **Set up a service for final users', producers**
 - ◆ content acquisition and collection from the final user would,
 - Definition of the DRM rules from the final users
 - ◆ automated content production, protection and adaptation
 - ◆ automated license creation
 - ◆ License production on demand, different models
 - ◆ Content distribution via distribution portal with/without DRM
 - ◆ Automated counting of consumed rights


 Società Italiana degli Autori ed Editori

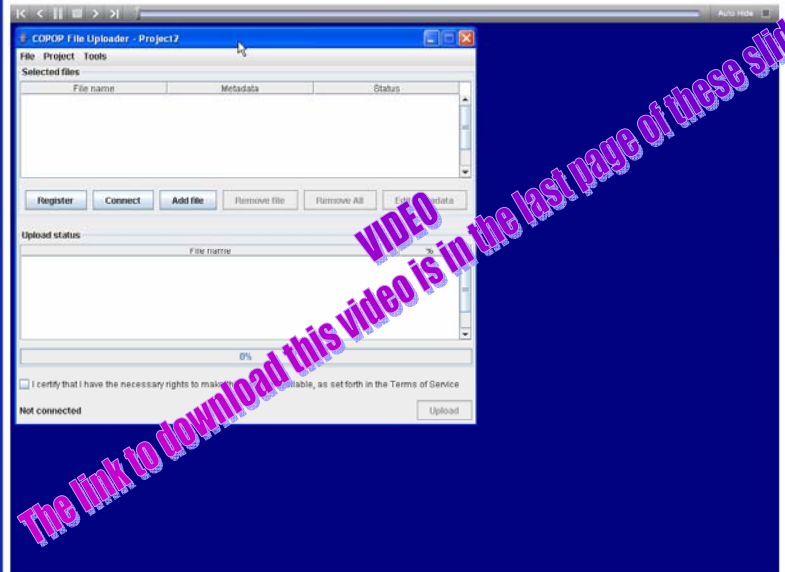
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Fase 1: file upload with COPOP client




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VIDEO
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Distribution of cultural content, AV guides




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- At MUSA: instrument museum at Accademia Nazionale di Santa Cecilia, Roma
- Usable for AV guides, even with RFID
- Production of content for continuous formation, in medical area or for other interactive guides
- Monitoring of the user activities



ACCADEMIA NAZIONALE DI SANTA CECILIA
Fondazione



AXCP Editors

AXCP Quick Start, Your tools commands, Workflow systems,...

FTP, WS, etc.

AXCP GRID

AXCP Scheduler

AXCP Node


WEB Server

AX P2P Servers

AX P2P

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AXMEDIS



Content Enrichment with final users

- **Content Enrichment with AXMEDIS**
- **VARIAZIONI e-ContentPlus**
- www.variazioni.org
- **Content**
 - ◆ enrichment, several forms
 - ◆ produced and reproduced on demand at each enrichment
 - ◆ production with DRM
 - ◆ distribution from VARIAZIONI portal and from AXMEDIS P2P
- **> than 10 partners + communities**
 - ◆ Partners from Spain, Lithuania, Belgium, Portugal, Italy, Finland, Portugal

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Content Enrichment and social network

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









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AXMEDIS




Summary

- Coverage
- AXMEDIS Model
- AXMEDIS DRM
- AXMEDIS Editor and Players
- AXCP: Automating Content Management
- AXMEDIS P2P
- Multichannel Support
- **AXMEDIS Framework** 

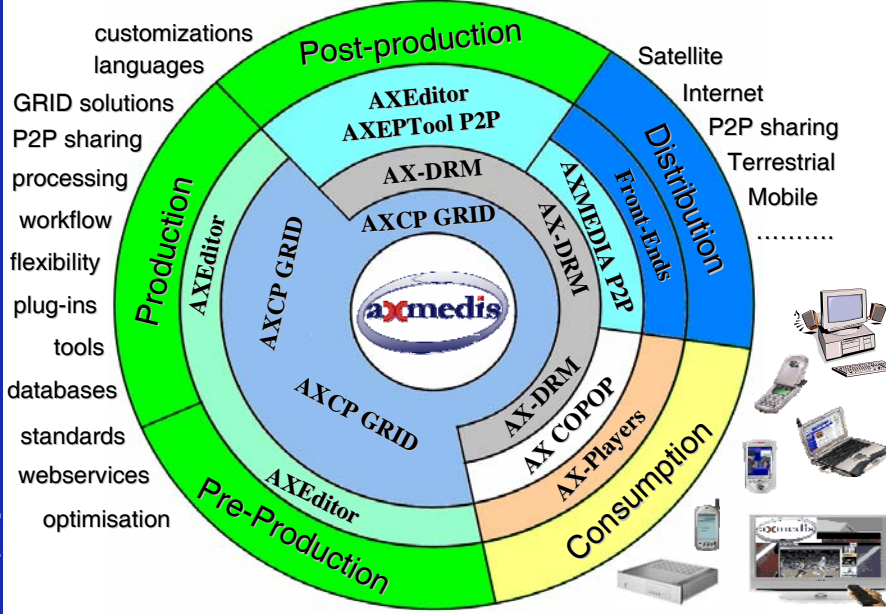
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AXMEDIS



Mapping Main AXTools on Life-Cycle



The diagram illustrates the mapping of AX tools across the life-cycle stages: Pre-Production, Production, Post-production, Distribution, and Consumption. The tools are organized into concentric rings:


- Outer Ring (Production/Post-production):** AXEditor, AX-DRM, AXCP GRID, AX-DRM, AXMEDIA P2P, AX-DRM, AX COPOP, AX-Players.
- Inner Ring (Production/Post-production):** AXCP GRID, AXCP GRID, AX-DRM, AX-DRM, AX-DRM, AX-DRM.
- Center:** axmedis logo.

Surrounding the diagram are various icons representing different media and devices: Satellite, Internet, P2P sharing, Terrestrial, Mobile, Front-Ends, and Consumption (including a laptop, mobile phone, and TV).

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Applications and scenarios

- **In most of the cases there is:**
 - ◆ Usage of the AXMEDIS Editors and Players
 - ◆ Massive usage of the AXCP GRID for managing back office issues, defining specific scripts for:
 - Automated content production and adaptation (MPEG-21, OMA, etc.)
 - Automated creation of licenses (MPEG-21, OMA, etc.)
 - Automated regeneration of new versions of the objects
 - Automated object acquisition and posting on DataBases
 - ◆ Support of the AXMEDIS PMS and AXCS for the DRM aspects
 - ◆ Support of the CAMART and All for collecting reporting data
 - ◆ Usage of the AXMEDIS Editors and Players
 - ◆ Front ends for selling and distributing of the Distributors involved so that to maintain their plate and relationships with their customers
- **In some cases there is the usage of:**
 - ◆ The P2P tools, for B2B and B2C2C
 - ◆ Some specific tools for content posting on the databases
 - ◆ Some specific player tools for final users
 - ◆ Some specific tools for Home and Factory Domain Management
 - ◆ Workflow support

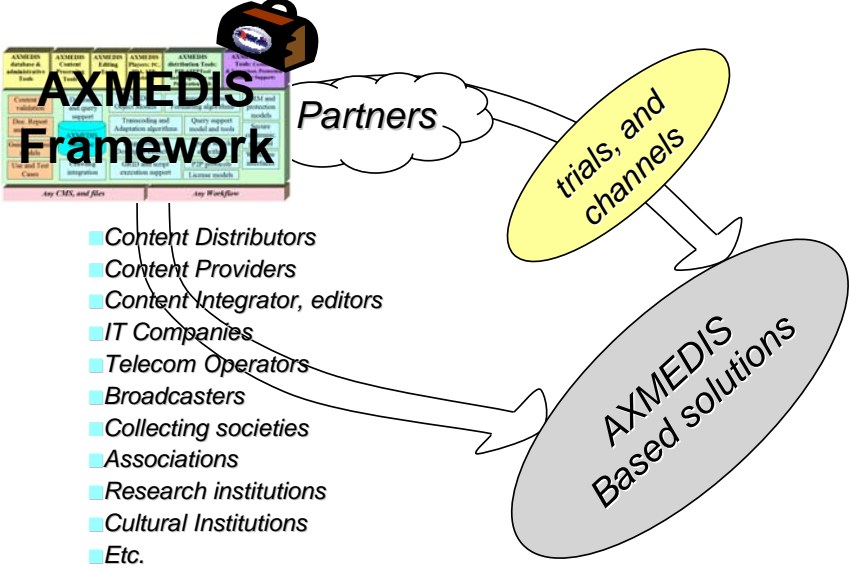
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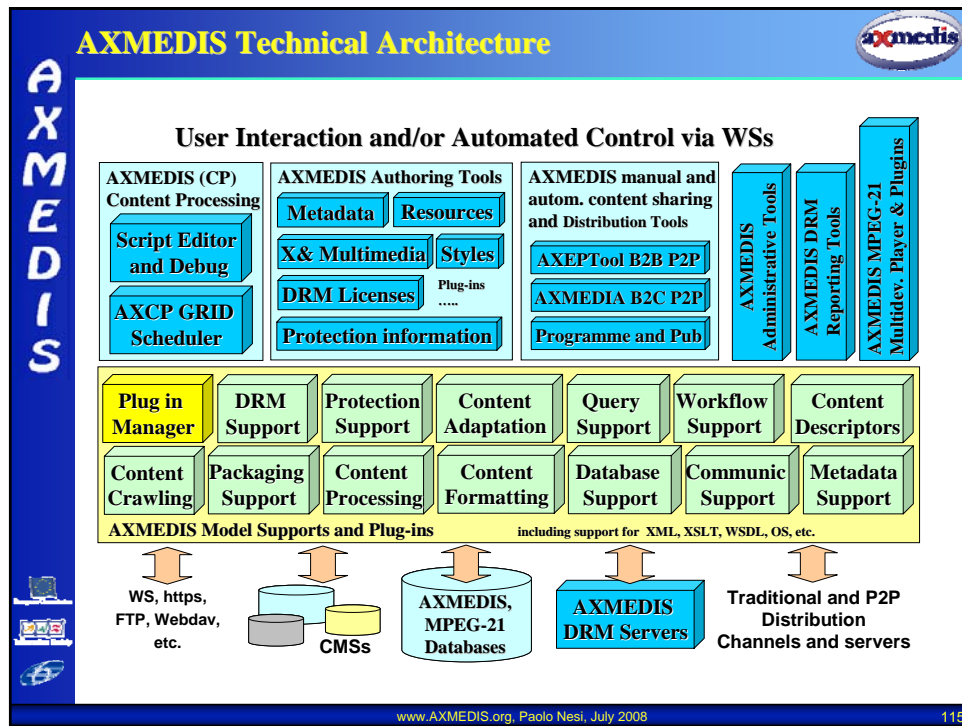
AXMEDIS Framework for all



- ◆ Content Distributors
- ◆ Content Providers
- ◆ Content Integrator, editors
- ◆ IT Companies
- ◆ Telecom Operators
- ◆ Broadcasters
- ◆ Collecting societies
- ◆ Associations
- ◆ Research institutions
- ◆ Cultural Institutions
- ◆ Etc.

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Coverage


Device for player	Models	CAS	DRM	Accounting, rep.	Player	Down., Stream., PDown.	Automated back office	
PC	VOD, PPV, Counting, Periodic, subscription,	--	Yes	Yes	Yes	D,S,PD	Yes	
STB/PVR		Yes	Yes	Yes	AXOM	D,S,PD	Yes	
PDA		--	Yes	Yes	Yes	D	Yes	
Mobile		Yes	Yes	Yes	Yes	D, PD	Yes	
IPTV/STB		Yes	Yes	Yes	AXOM	any	Yes	
webTV		--	Yes	Yes	Yes	D, PD	Yes	
Social network		--	Yes	Yes	Yes	Yes	D, PD	Yes
UGC		--	Yes	Yes	Yes	Yes	--	Yes
P2P	--	Yes	Yes	Yes	Yes	D, PD	Yes	


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- **A unique framework for all**
 - ◆ *Cross Media Content and tools*
 - ◆ *Backoffice Automation*
 - ◆ *Standards*
 - ◆ *Open platforms*
 - ◆ *Interoperability on content*
 - ◆ *Interoperability on devices/players*
 - ◆ *Interoperability on DRM*
- **The added value to your business!**





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Click on these links to download the videos

- **editor-new5b.wmv**
 - ◆ http://www.axmedis.org/documenti/view_documenti.php?doc_id=3643
- **play5-N.wmv**
 - ◆ http://www.axmedis.org/documenti/view_documenti.php?doc_id=3645
- **play5-VIDEO-NESI.wmv**
 - ◆ http://www.axmedis.org/documenti/view_documenti.php?doc_id=3671
- **new-xim-ansc-objects-with-audio.wmv**
 - ◆ http://www.axmedis.org/documenti/view_documenti.php?doc_id=3669
- **pda-player-medium.wmv**
 - ◆ http://www.axmedis.org/documenti/view_documenti.php?doc_id=3668
- **sat-dist-with-audio.wmv**
 - ◆ http://www.axmedis.org/documenti/view_documenti.php?doc_id=3667
- **kiosk.wmv**
 - ◆ http://www.axmedis.org/documenti/view_documenti.php?doc_id=3848
- **AXELTEO-TEO-STB-demo.wmv**
 - ◆ http://www.axmedis.org/documenti/view_documenti.php?doc_id=3670
- **ELION-enduser-nesi.wmv**
 - ◆ http://www.axmedis.org/documenti/view_documenti.php?doc_id=3649
- **bbc-user4.wmv**
 - ◆ http://www.axmedis.org/documenti/view_documenti.php?doc_id=3672
- **siae-presentation-short-July2007-new-nov07.wmv**
 - ◆ http://www.axmedis.org/documenti/view_documenti.php?doc_id=3651






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Technical Notes

- **AXMEDIS for all**
 - ◆ http://www.axmedis.org/documenti/view_documento.php?doc_id=3108
- **AXMEDIS Object model**
 - ◆ http://www.axmedis.org/documenti/view_documento.php?doc_id=3845
- **AXMEDIS Automated Content processing**
 - ◆ http://www.axmedis.org/documenti/view_documento.php?doc_id=3624
- **AXMEDIS P2P**
 - ◆ http://www.axmedis.org/documenti/view_documento.php?doc_id=3612
- **AXMEDIS DRM**
 - ◆ http://www.axmedis.org/documenti/view_documento.php?doc_id=3616
- **AXDRM how to use on a portal**
 - ◆ http://www.axmedis.org/documenti/view_documento.php?doc_id=3616
- **Video on demand and STB, TEO show case**
 - ◆ http://www.axmedis.org/documenti/view_documento.php?doc_id=3738
- **Content on demand on Internet, ELION show case**
 - ◆ http://www.axmedis.org/documenti/view_documento.php?doc_id=3745
- **Content distribution via Satellite Data broadcast EUTELSAT Case**
 - ◆ http://www.axmedis.org/documenti/view_documento.php?doc_id=3820

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Please download AXMEDIS Tools

- **AXMEDIS PC player:**
 - ◆ http://www.axmedis.org/documenti/view_documento.php?doc_id=3715
- **AXMEDIS PC player with SKIN**
 - ◆ http://www.axmedis.org/documenti/view_documento.php?doc_id=3716
- **AXMEDIS PC player, Active X and .Net**
 - ◆ http://www.axmedis.org/documenti/view_documento.php?doc_id=3717
- **AXMEDIS PC player for EUTELSAT OPENSKY:**
 - ◆ http://www.axmedis.org/documenti/view_documento.php?doc_id=3767
- **AXMEDIS Editor:**
 - ◆ http://www.axmedis.org/documenti/view_documento.php?doc_id=3720
- **AXMEDIS content production tools (includes the above AXMEDIS Editor):**
 - ◆ http://www.axmedis.org/documenti/view_documento.php?doc_id=3722
- **PDA player:**
 - ◆ http://www.axmedis.org/documenti/view_documento.php?doc_id=3842
- **PDA content:**
 - ◆ http://www.axmedis.org/documenti/view_documento.php?doc_id=3748
- **P2P Client tool AXEPTool:**
 - ◆ http://www.axmedis.org/documenti/view_documento.php?doc_id=3840

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Contact Information

- ***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***
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