



*Automating Production of Cross Media Content
for Multi-channel Distribution*

www.axmedis.org

AXMEDIS Innovations and the Last 12 Months, May 2009

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

version 2.5

- **AXMEDIS Model**
 - ◆ MPEG-21, ISOMEDIA file format
 - ◆ Packaging/protecting any digital essences with metadata
 - ◆ Intelligent content
- **AXMEDIS Editor and Players**
 - ◆ Authoring tools, MPEG-21, packaging, PC, Mobile, PDA
 - ◆ Players for PC, Mobile, PDA, STB, webTV, E-learning, etc..
- **AXMEDIS AXCP:**
 - ◆ Managing content and back office automatically
 - ◆ Automated content protection, licensing
 - ◆ Integrating workflow management systems
 - ◆ Automated content management system and content processing
 - ◆ Integration with multiple formats, transcoding, adaptation, ...
 - ◆ Integration with any channel, web portal, applications, CMSs, ..
 - ◆ Fault tolerant and high reliability: schedulers in fail over, re-dundated notes, replicated roles, etc.
 - ◆ Monitoring, integration with social networks, ...
 - ◆ Easy to be programmed
- **Multichannel support and distribution**
 - ◆ webTV, IPTV, VOD, PPV, PPP, P2P, mobile, etc.
 - ◆ Automated multichannel management and production

- **AXMEDIS DRM:**
 - ◆ Business models, B2B/B2C, MPEG-21 and OMA DRM
 - ◆ Download, streaming, progr. download, P2P, HD streaming protection
 - ◆ Large file distribution, ISO images: DC Channel
 - ◆ Multiple players: PC, PDA, Mobile, STB, WEB,
 - ◆ Integration with Learn eXact of Giunti
 - ◆ Supported protection and certification
 - ◆ B2B DRM, query on rights, DRM on value chain
 - ◆ Domain management
 - ◆ Reporting and billing
 - ◆ DRM and User Generated Content, UGC
- **AXMEDIS P2P:**
 - ◆ Controlled P2P, bitTorrent,
 - ◆ Integrated with Social Networking
- **AXMEDIS Mobile end-to-end:**
 - ◆ Automated production,
 - ◆ protection, distribution, etc..
- **AXMEDIS XMF: Cross Media Finder:**
 - ◆ A solution to set up Multichannel distribution with social networking capabilities: PC, PDA, Mobiles
 - ◆ <http://xmf.axmedis.org>

AXMEDIS

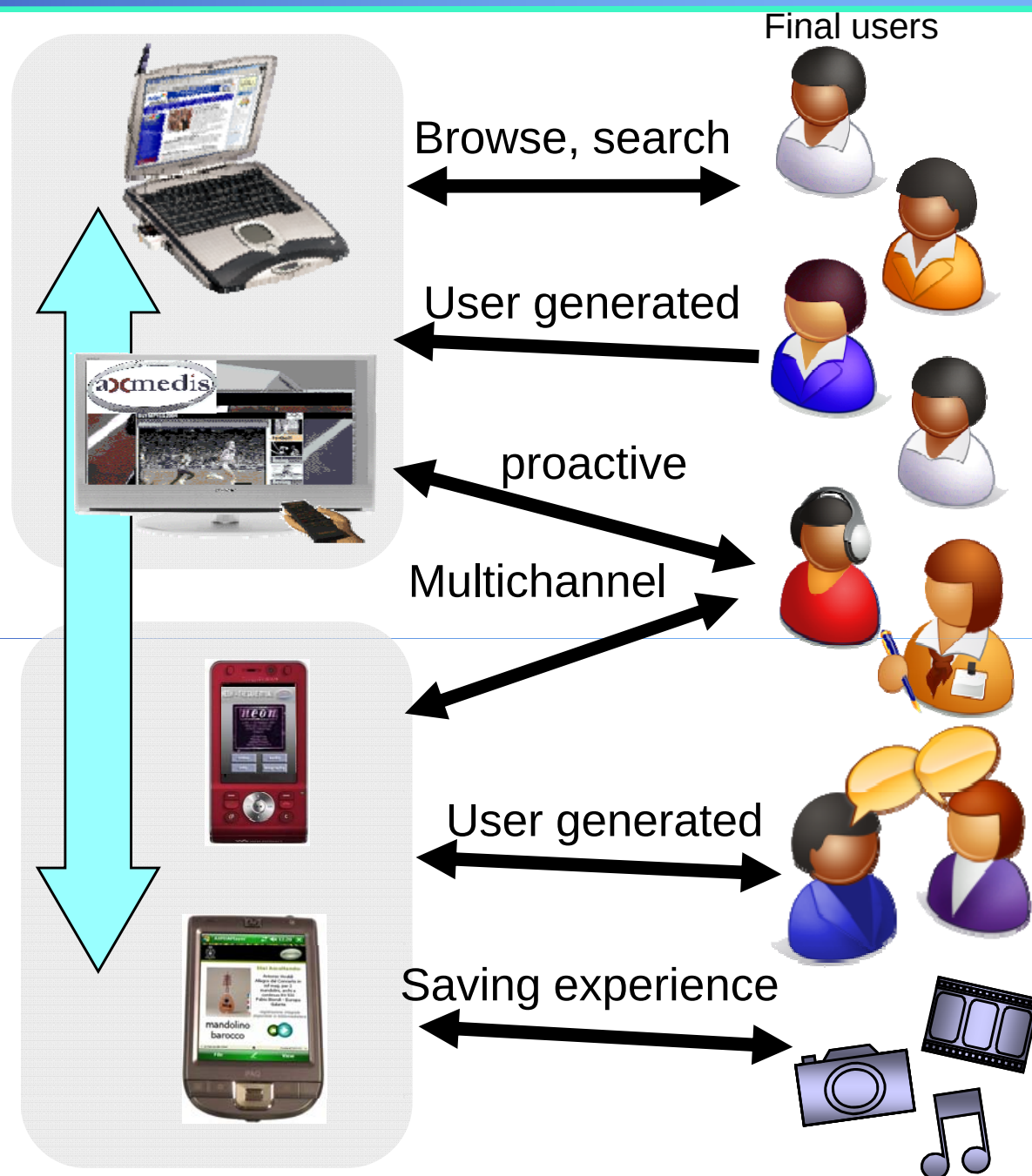


- **Players for cross media content:**
 - ◆ PC, PDA, STB, mobiles, etc.
- **Tools for DRM and protection**
- **Content Production tools**
 - ◆ Authoring tools for cross media content: AXMEDIS Editor
 - ➔ for content, protection and licenses
 - ◆ Automated production tools for content, protection packages 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 tool 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

Interactive and intelligent



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



Possible Intelligent Content

Single Files:

- ◆ audio, video, documenti, immagini, etc..

Interactive Content:

- ◆ HTML or SMIL as technology of User interaction
- ◆ Guides, games, etc.
- ◆ Valoriz. of Cultural Heritage content
- ◆ Educational Content

Proactive Wizard:

- ◆ Video messg. Recording
- ◆ Assisted upload
- ◆ Production of licenses
- ◆

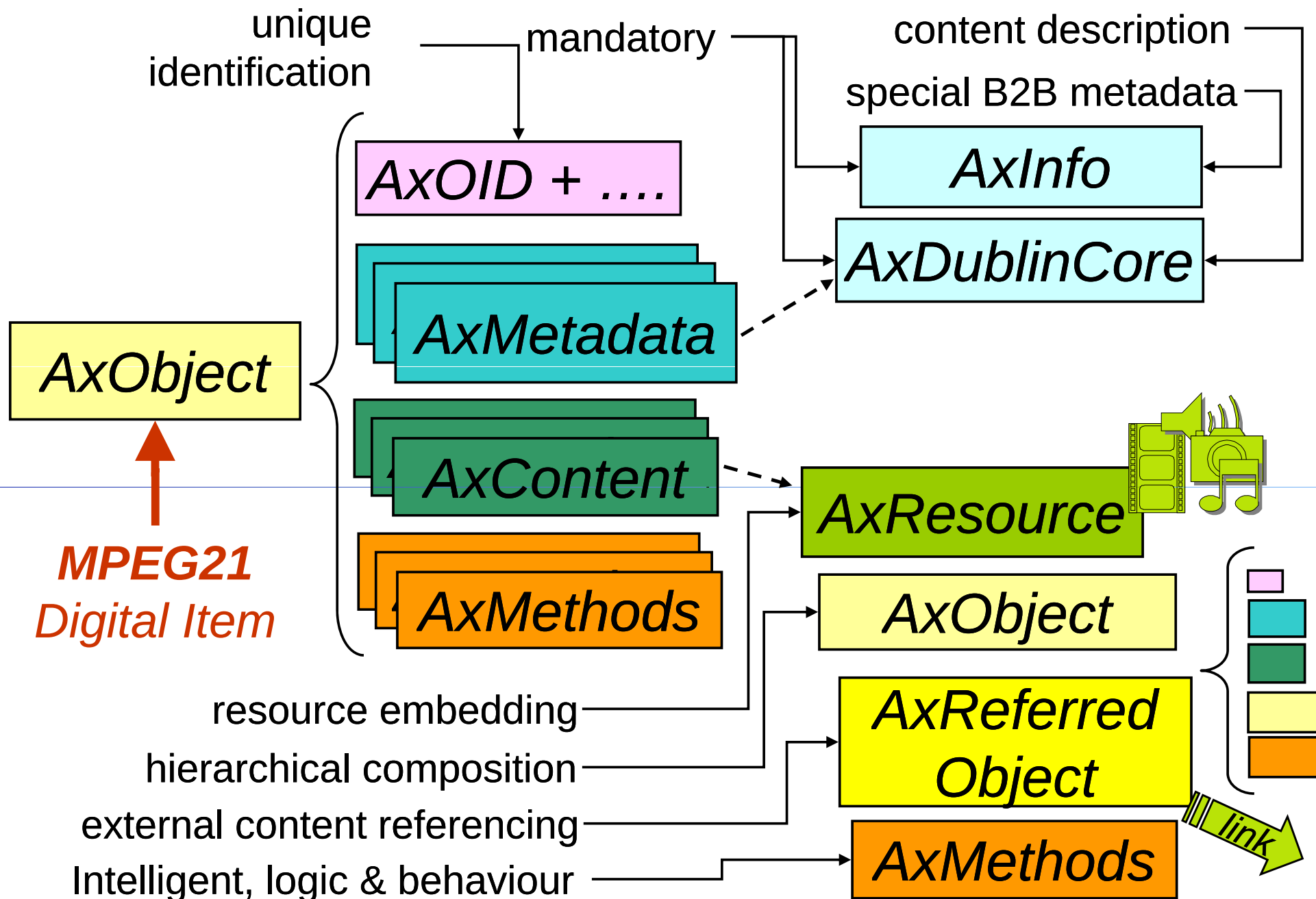


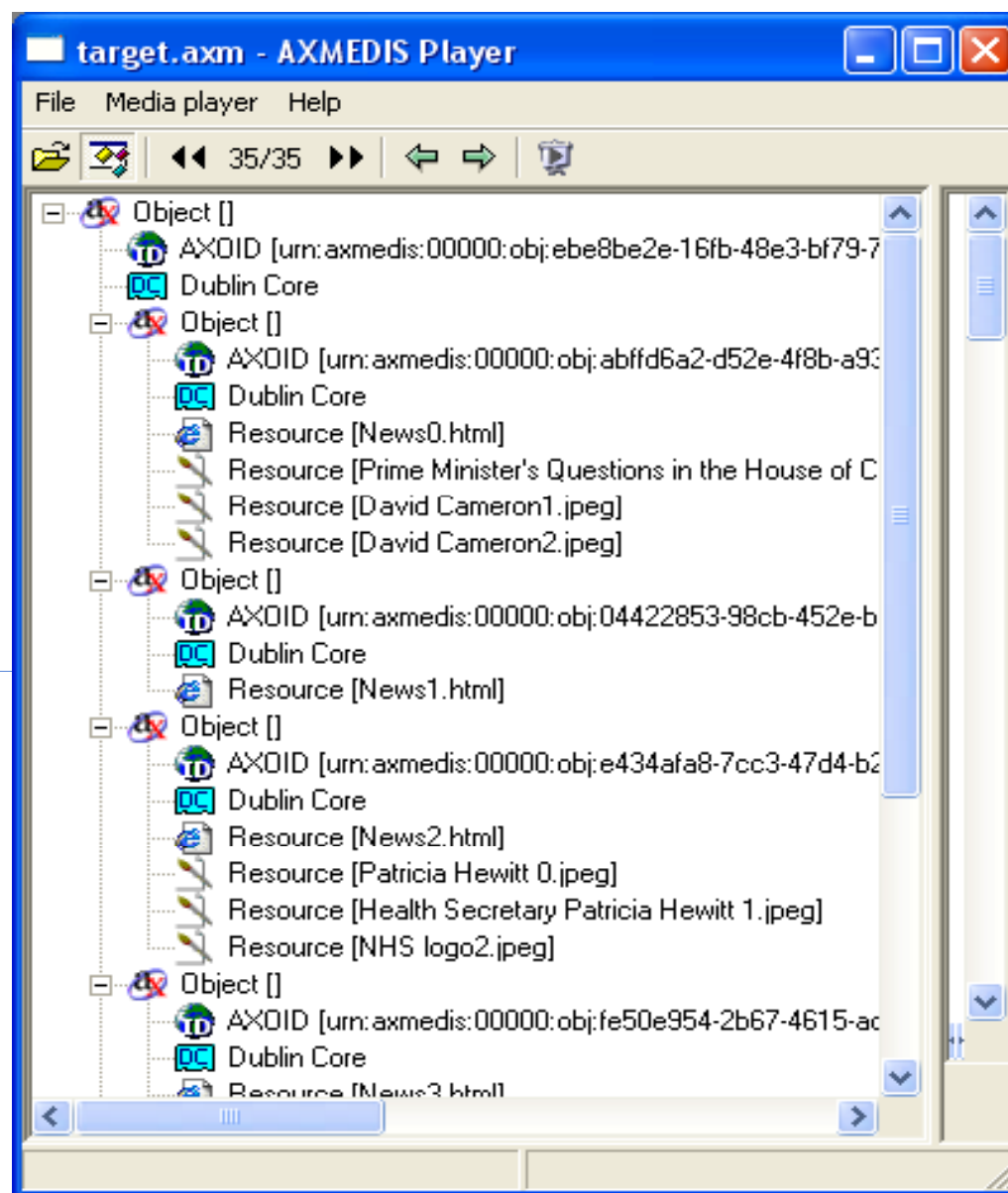
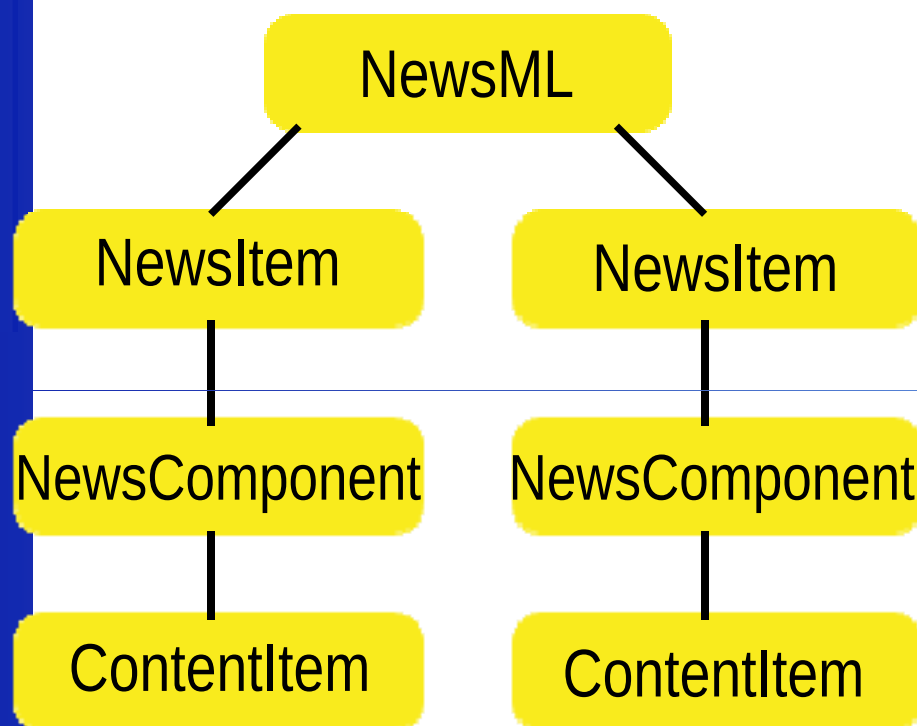
Active and proactive content

- **Interactive content**
 - ◆ Audio guide, audio collection, with menu
 - ◆ Video collection with menu
 - ◆ ...
- **Proactive content**
 - ◆ Lic ensing wizard
 - ◆ Video recorder
 - ◆ Searching inside the content object
 - ◆ Depackager for complex content
 - ◆ Extractor of content elements on demand
 - ◆ Collector of UGC
 - ◆ Etc.

AXMEDIS Object/Package Model

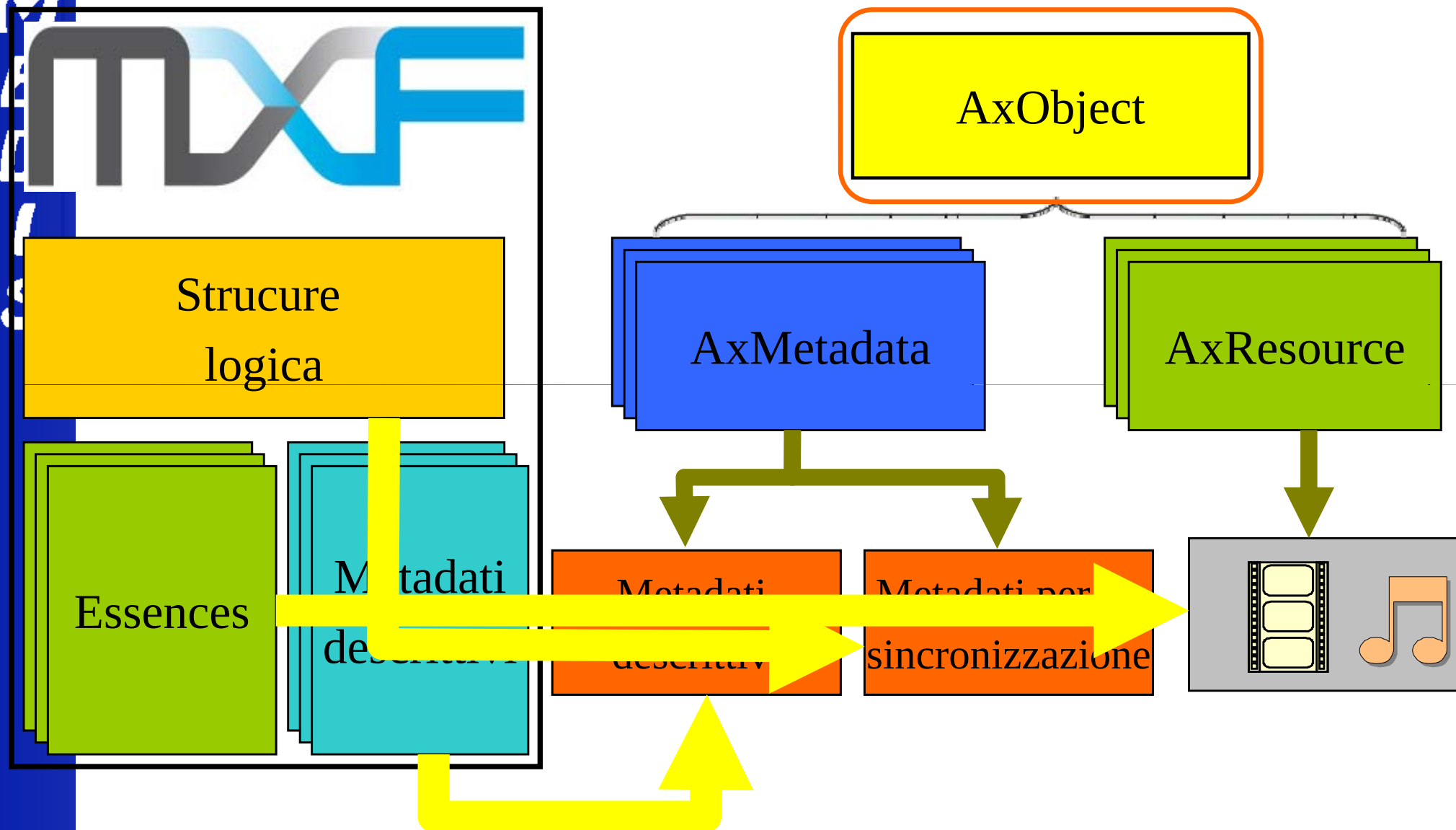
AXMEDIS





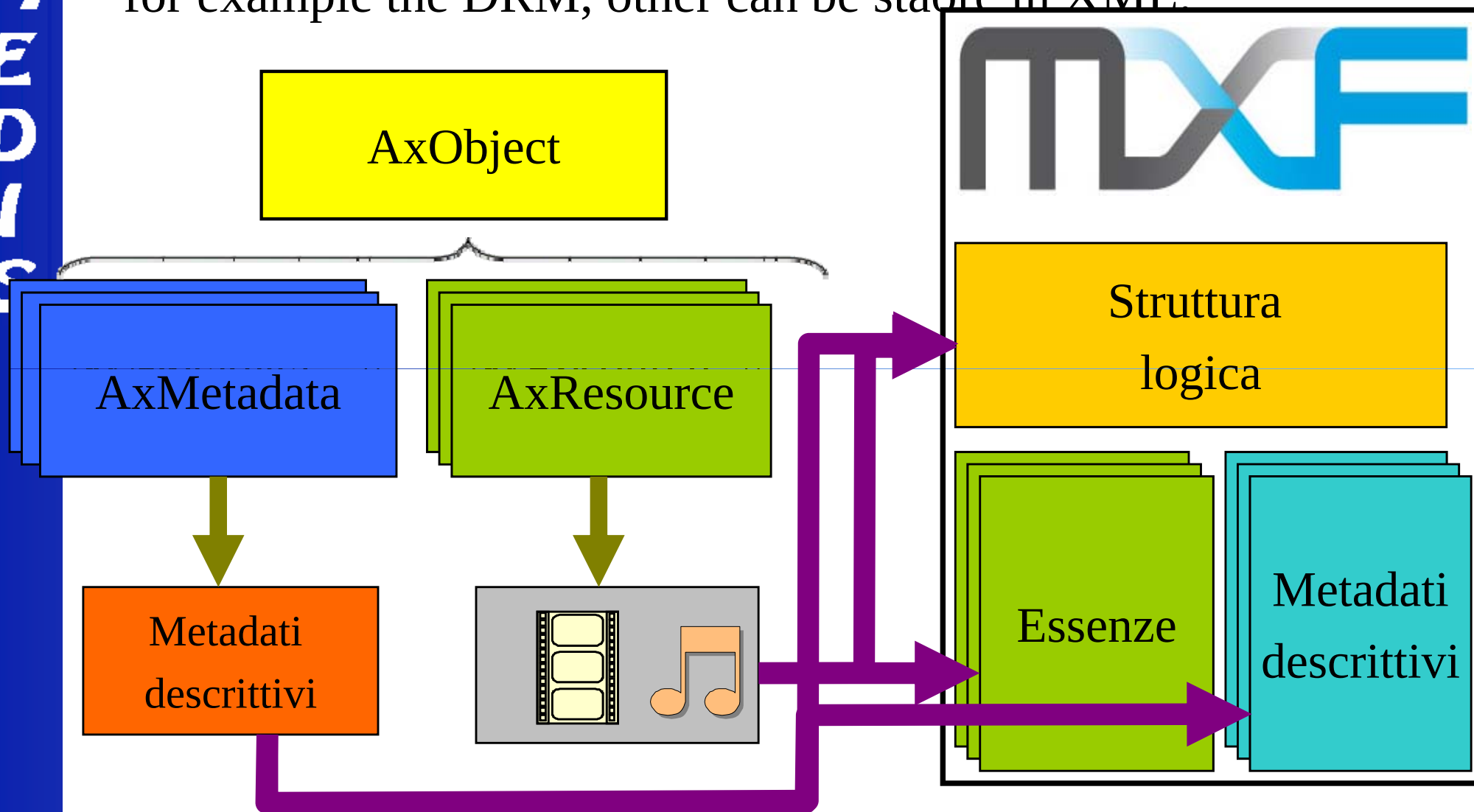
Conversion MXF → AxObject

elements of MXF are converted into an element of the 'AxObject',
Without loss of information



Conversion: AxObject → MXF

The MXF is limited to contain the essences without supporting native sync, many aspects of MPEG-21 are not coded into MXF for example the DRM, other can be store in XML.

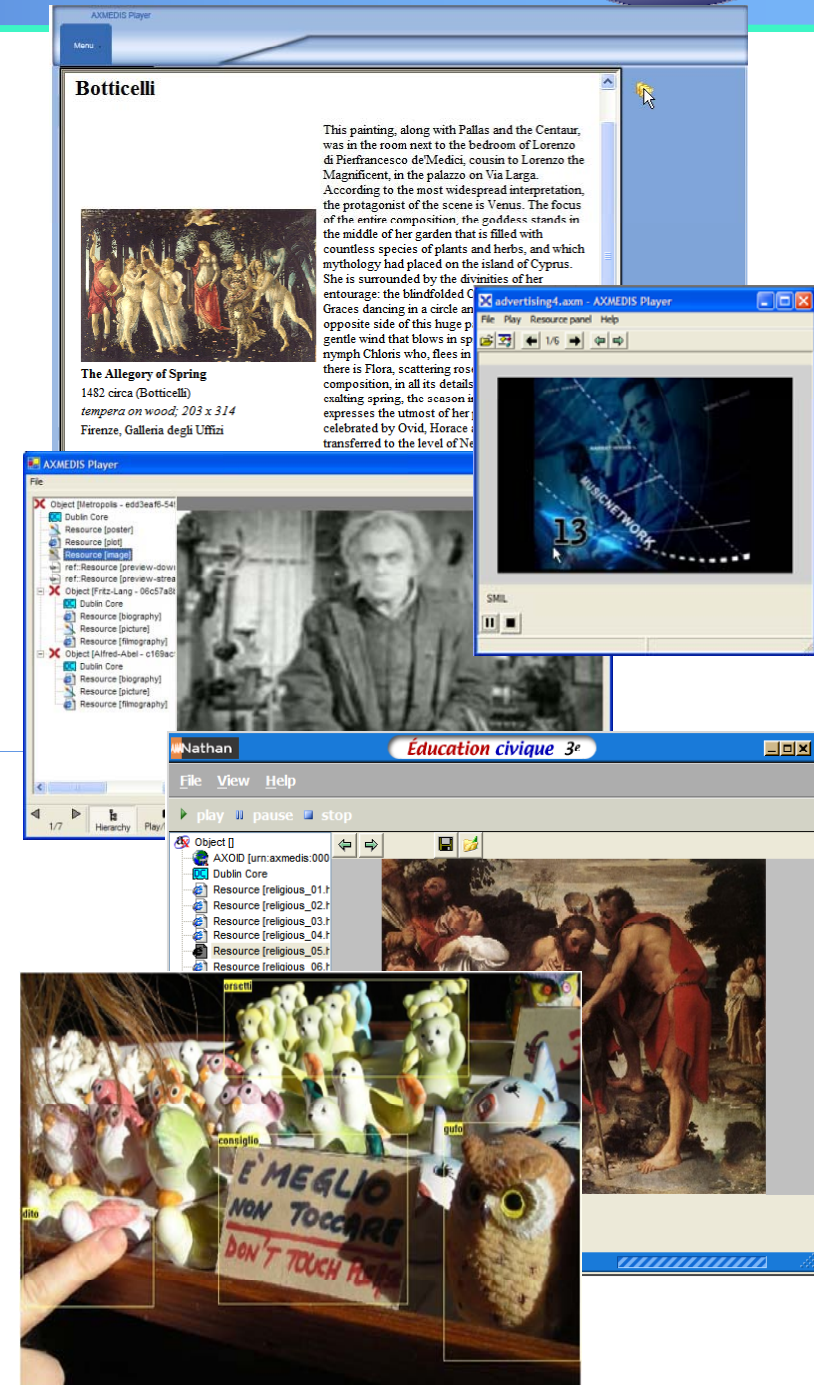


Any content inside a package:

- ♦ 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



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:

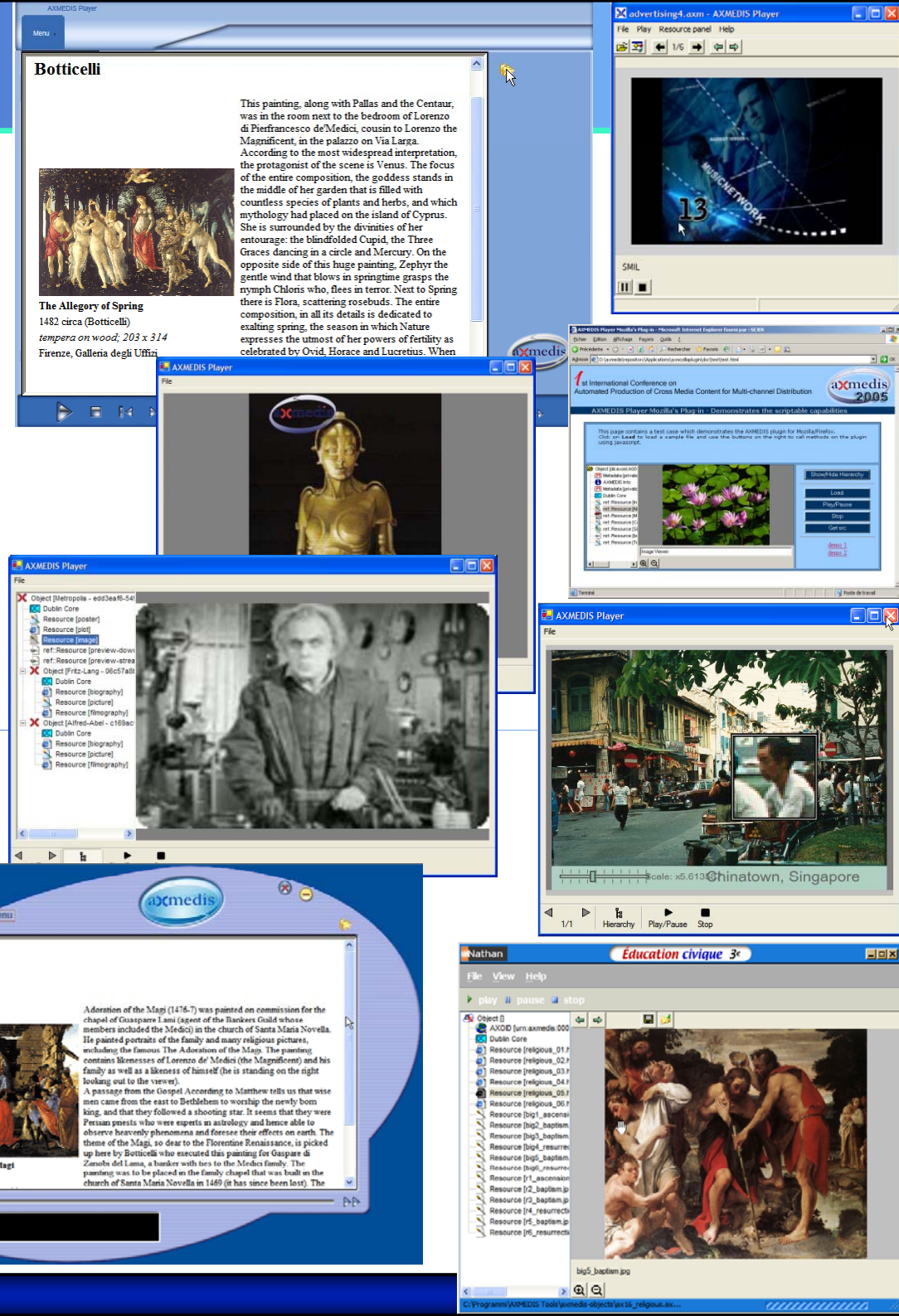
- ◆ MPEG-4, SMIL, HTML

STB player:

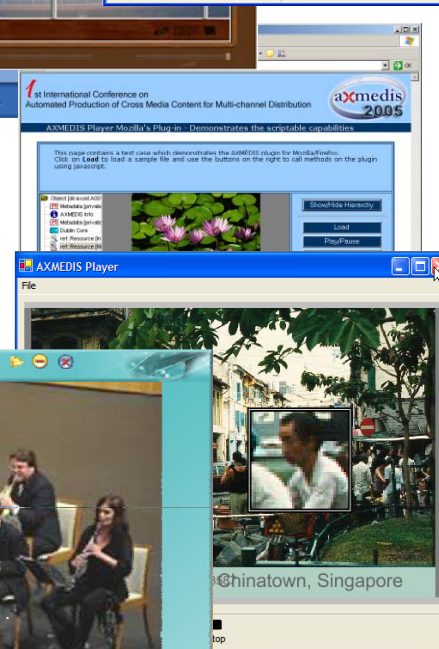
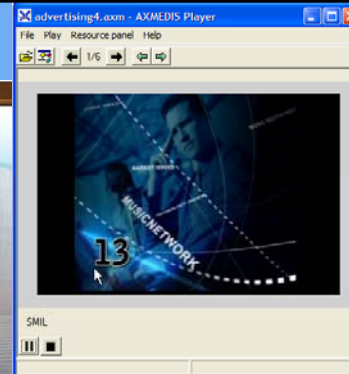
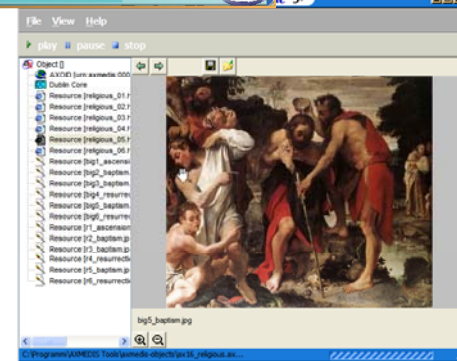
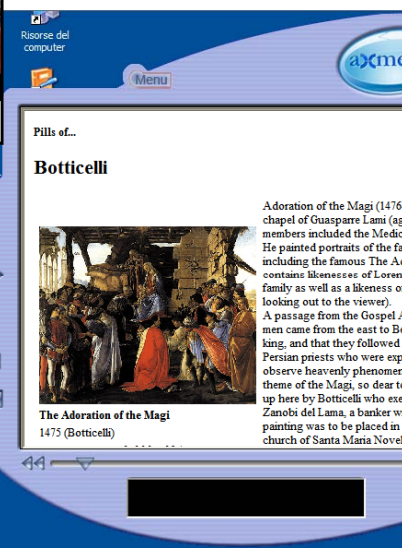
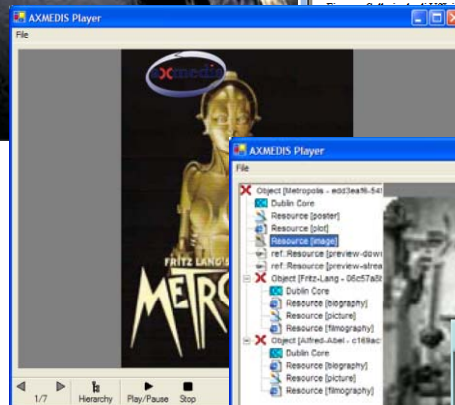
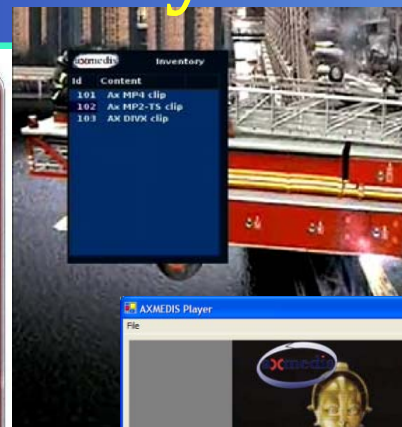
- ◆ for IPTV
- ◆ for DVB-S
- ◆ MPEG-2, MPEG-4

Mobile player:

- ◆ A pure Java player will be ready for Feb 2008
- ◆ SMIL support with Audio Visual, MMAPi of Java



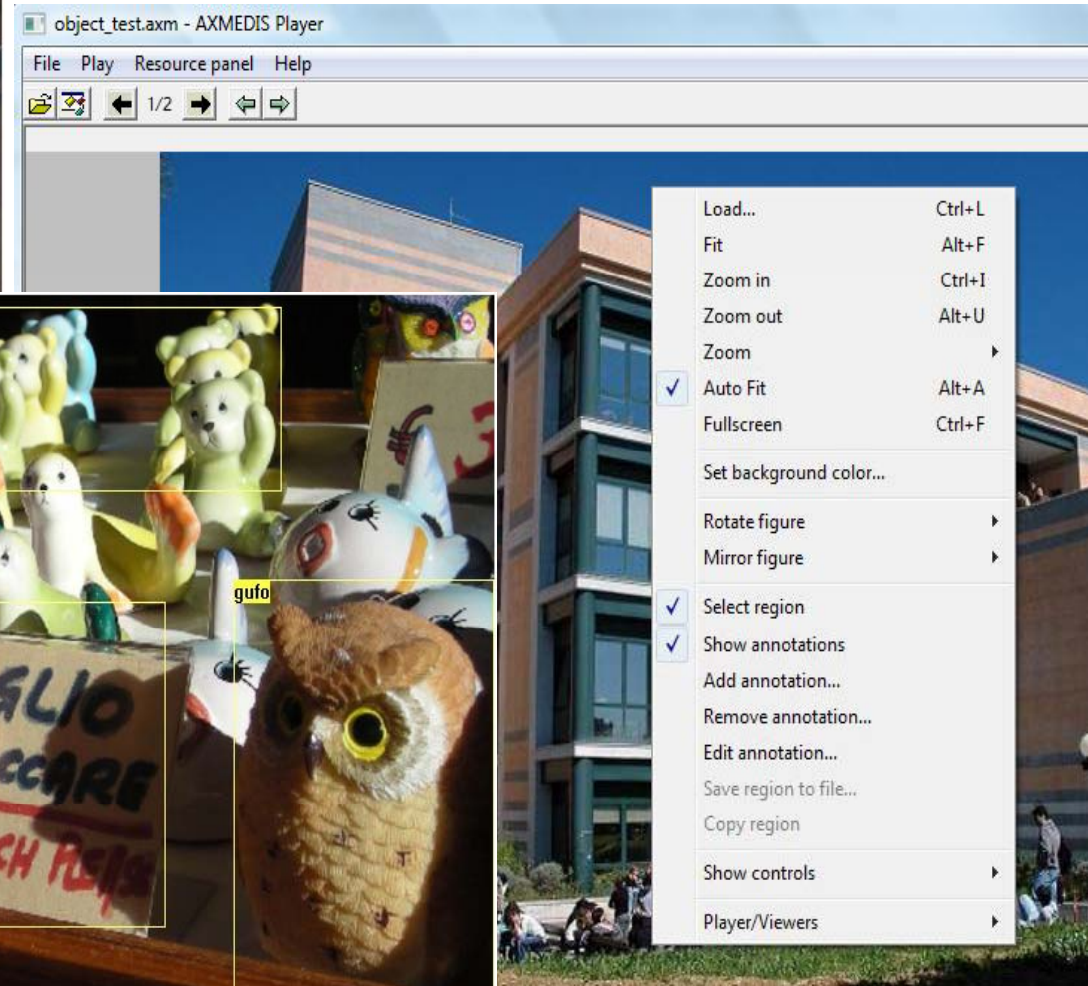
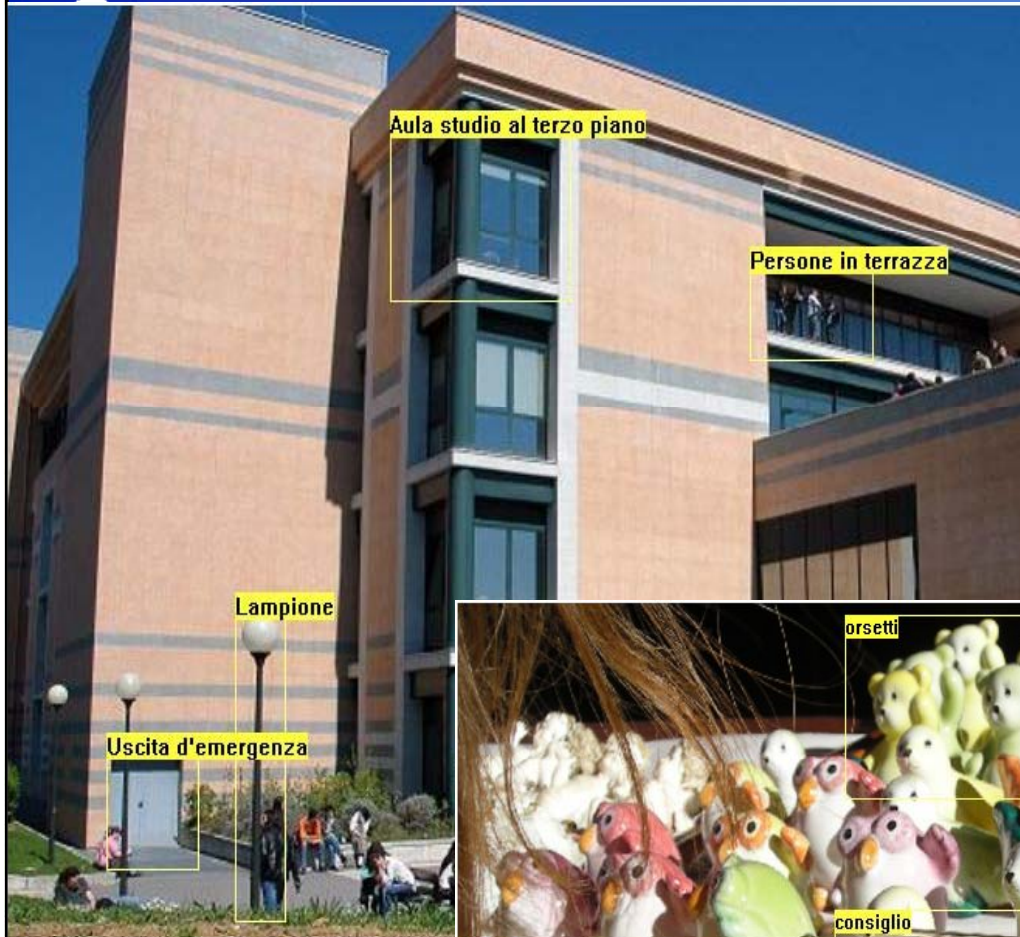
Interoperable Players



Players 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, P2P	Yes
STB/PVR		Yes	Yes	Yes	AXOM	D,S,PD, P2P	Yes
PDA		--	Yes	Yes	Yes	D, (S)	Yes
Mobile		Yes	Yes	Yes	Yes	D, PD, S	Yes
IPTV/STB		Yes	Yes	Yes	AXOM	Any	Yes
webTV, IP		--	Yes	Yes	Yes	D, PD, P2P	Yes
Social network		--	Yes	Yes	Yes	D, PD, P2P	Yes
UGC		Cas	Yes	Yes	Yes	Any	Yes
P2P		Cas	Yes	Yes	Yes	D, PD	Yes

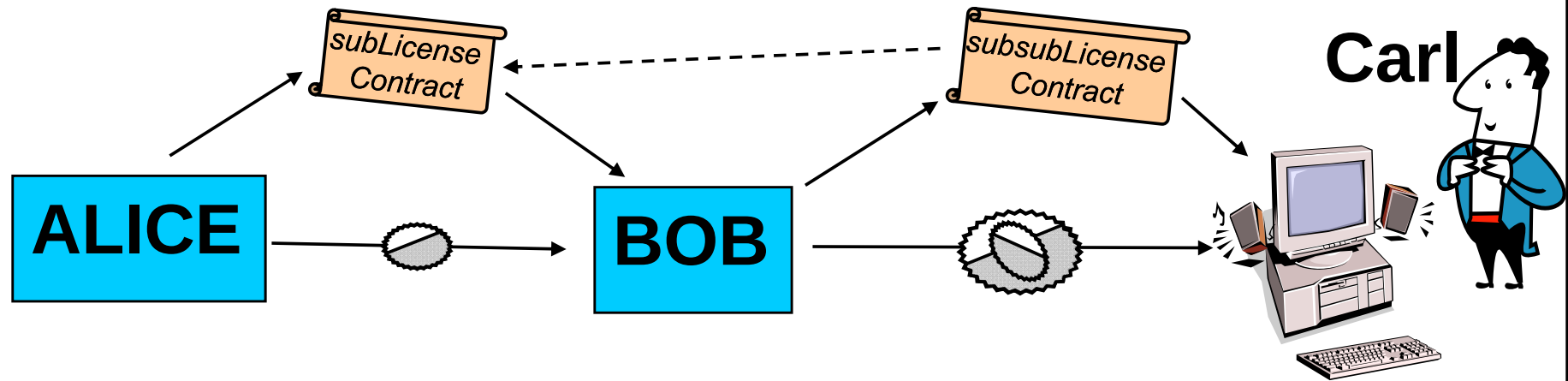
AXMEDIS player with annotations



AXMEDIS DRM

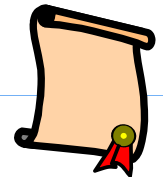
AXMEDIS

- **Package as a container for anything**
- **Intelligent content**
- **Large range of players**
- **Large range of Business models**
- **B2B and B2C**
- **Composition of content**
- **Domain management**
- **Etc.**



- **Alice states:** *"Bob has the right to issue a license to anyone to print the book in Italy"*

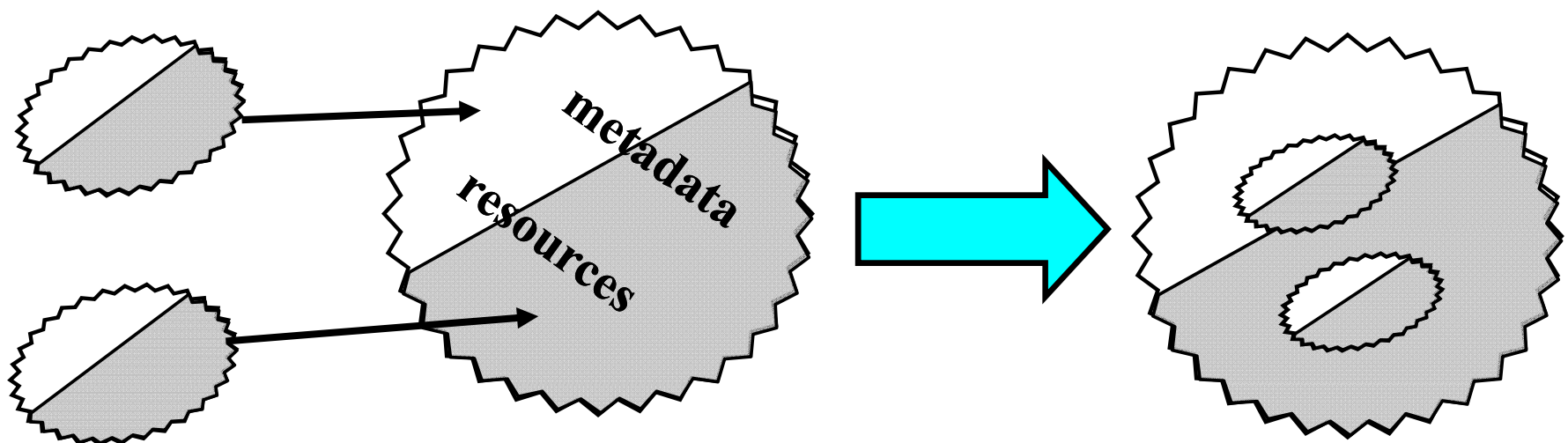
- **Bob states:** *"Carl has the right to print the book in Italy"*



- 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

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



AXMEDIS



Make easier the B2B market of digital content

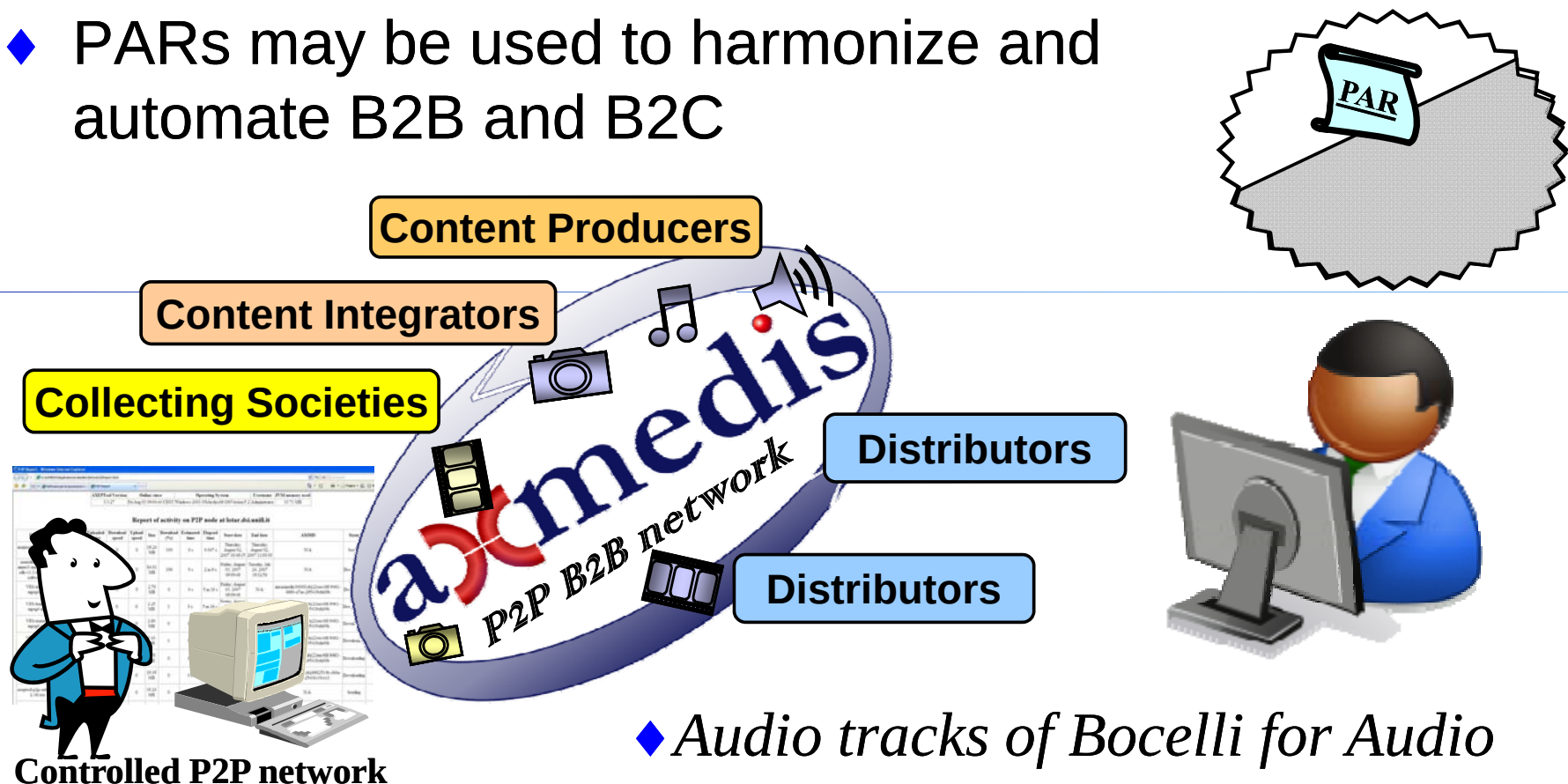


AXMEDIS

PAR: Potentially Available Rights into AXMEDIS objects

The PAR can be used to make queries

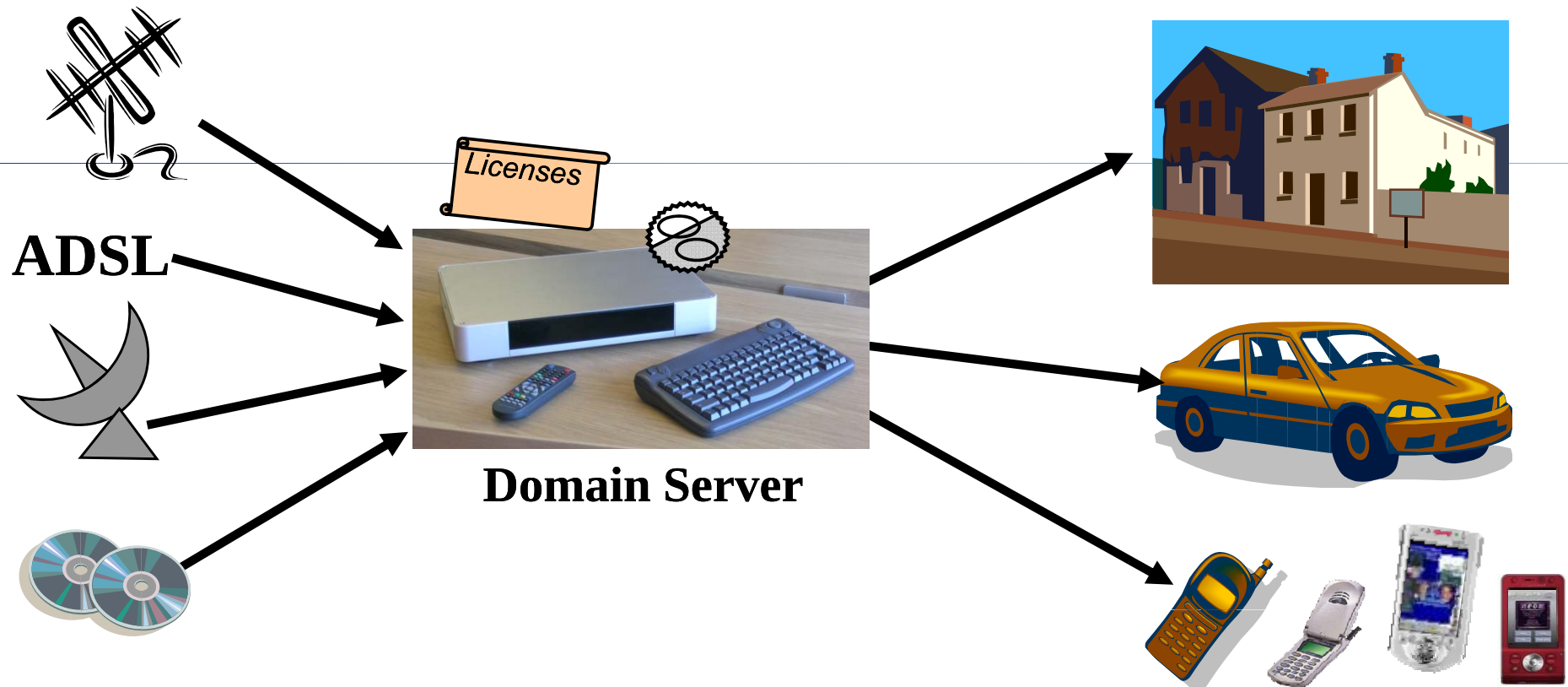
- ◆ PARs based content trading, Customers may know directly which rights they could buy and by who
- ◆ PARs may be used to harmonize and automate B2B and B2C



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

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





DRM Model Editing

[Home](#) [Settings](#) Sat, 05 Jul 2008 20:11:42 GMT

Creation of mother license and end user license

Password:	
Grant:	Business Model ☒ pay per use forever ☐ pay per play ☐ pay per play, constrained
Amount:	

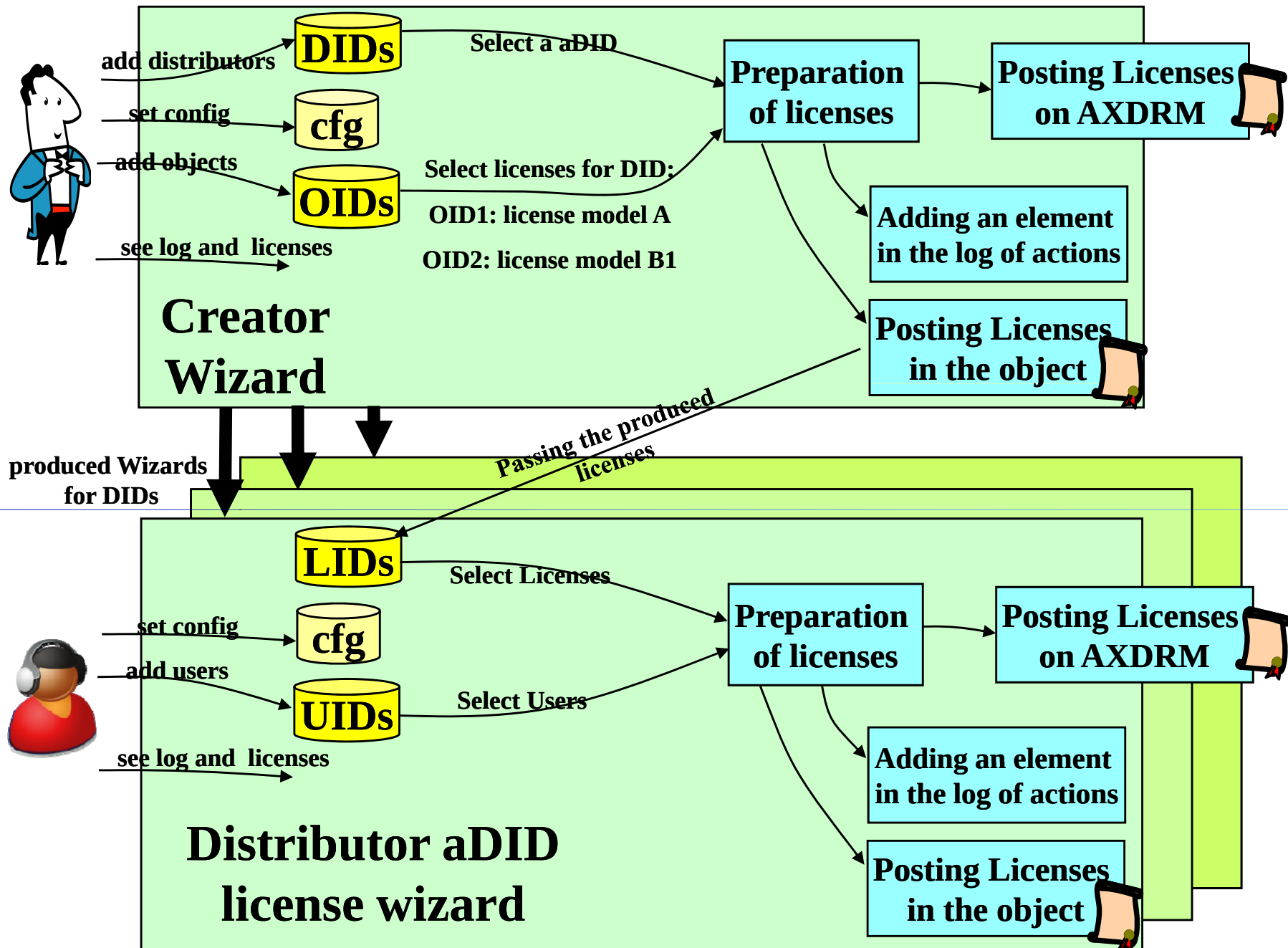
Object Creator ID (AXCID):	Creator ID
Object Distributor ID (AXDID):	
End User ID (AXUID):	
Object ID(AXOID):	

Options

☐ Only Mother License
☐ Only End User License
☒ Both Licenses

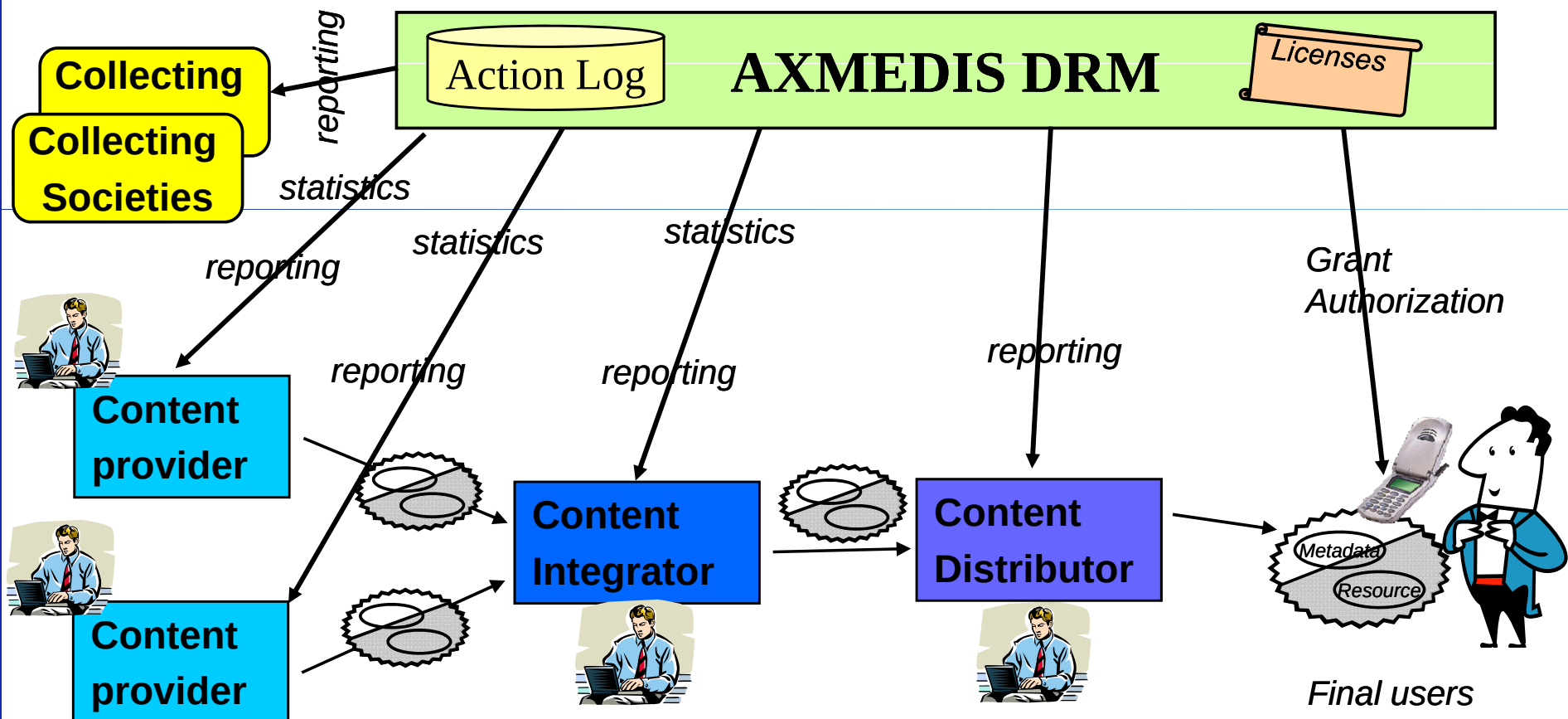
Issue license

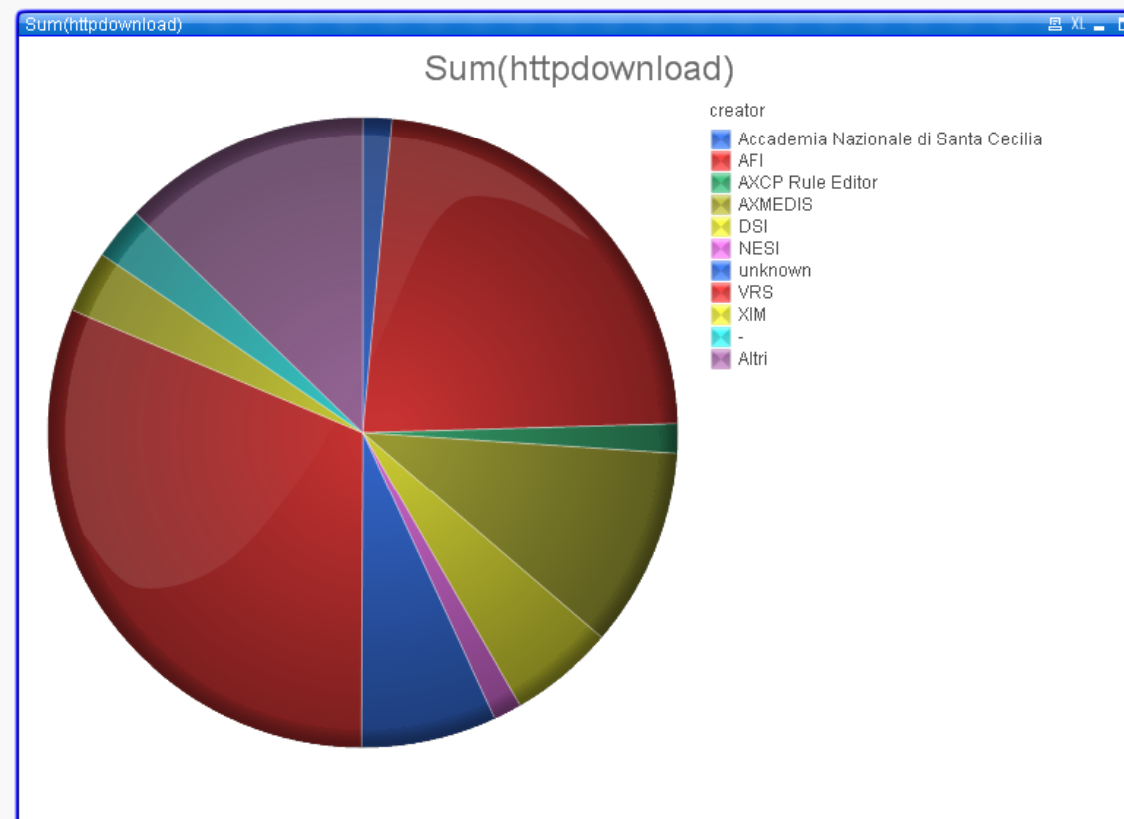
CreatorLicenseWizard



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.





creator		
Accademia Nazionale...	DSI	Mice Parade
AFI	dsi	Micheline Durocher
Alexander Robotnick	Electric Six	MobileFeeder
Alf Bab	Elena Taurke Joseph	MotorShow
Amanda Baker	ELION, Telecom Esto...	MUSICNETWORK
Amy McCosh Leonard	FNB IMAESTRO DEDI...	NASA
Andre Scucato and Cr...	Fondazione Museo D...	nasa
Andrea Fieschi	Fritz Lang	Neal Dhand
ANSC	Funkstøerung	NESI
ANSC and ILABS	Gea	Ninfa
ANSC with Axmedis A...	Gianni Morandi	pa.press.net
Arnon Moskowitz	GIUNTI	Promedia
Ax4Home client recor...	Grip Inc	Rebecca Conroy
AXCP	HD	Roberto Minervini
AXCP Rule Editor	i-Maestro EC IST proj...	Ronnie Cramer
AXCP Tool	ILABS	Ruggero Mantovani
AXMEDIS	ILABS through AXCP ...	Sara Purgatorio
axmedis	IMAESTRO	Sevendust
AXMEDIS MobileFeeder	Ivan Bruno	SIAE
BBC	Jeppo Rubino	Sigur Ros
biagi	Joe Medeiros	Silvia Mancini
Biagi & Bruno	Kaleidoscopio	Simone De Ascentis
Bocelli	Kataklysm	Sunrise Production
Christoph Hoerner	Kyung Lee	TEO
CocoRosie	Luigi Speranz e Iko ...	The Grimm Sisters
Danny Losito	Madrugada	The Suntrack
David Wilson	Maler	The Zen Circus
Digichannel	Maria Kowalski	UIM SPES AQUABIKE
DISIT	Marko's	Unearth
disit	Martin Solveig	unifi

Total downloads: 11004
Total rights exp.: 272
Total Objects: 1038

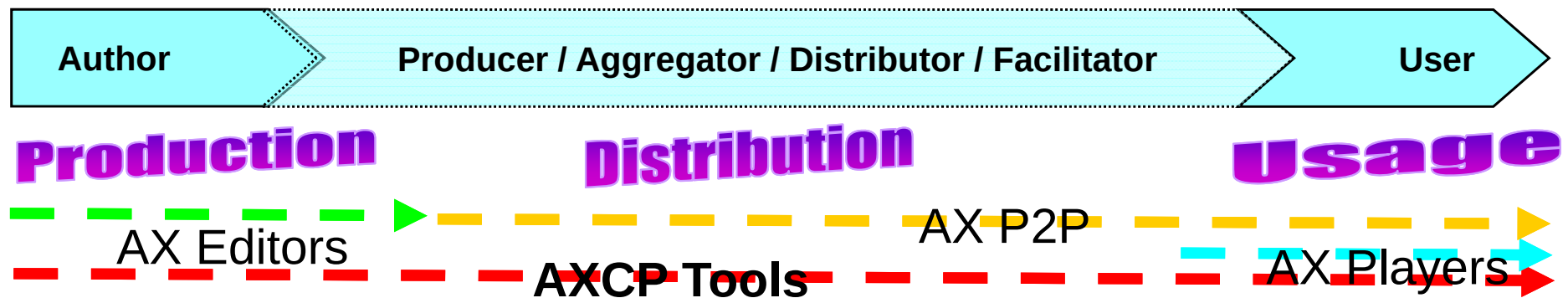


Distribution of exploited objects Playing in March

Per ottenere la Guida, premere F1

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 metdata, 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

Enabling massive content production and processing



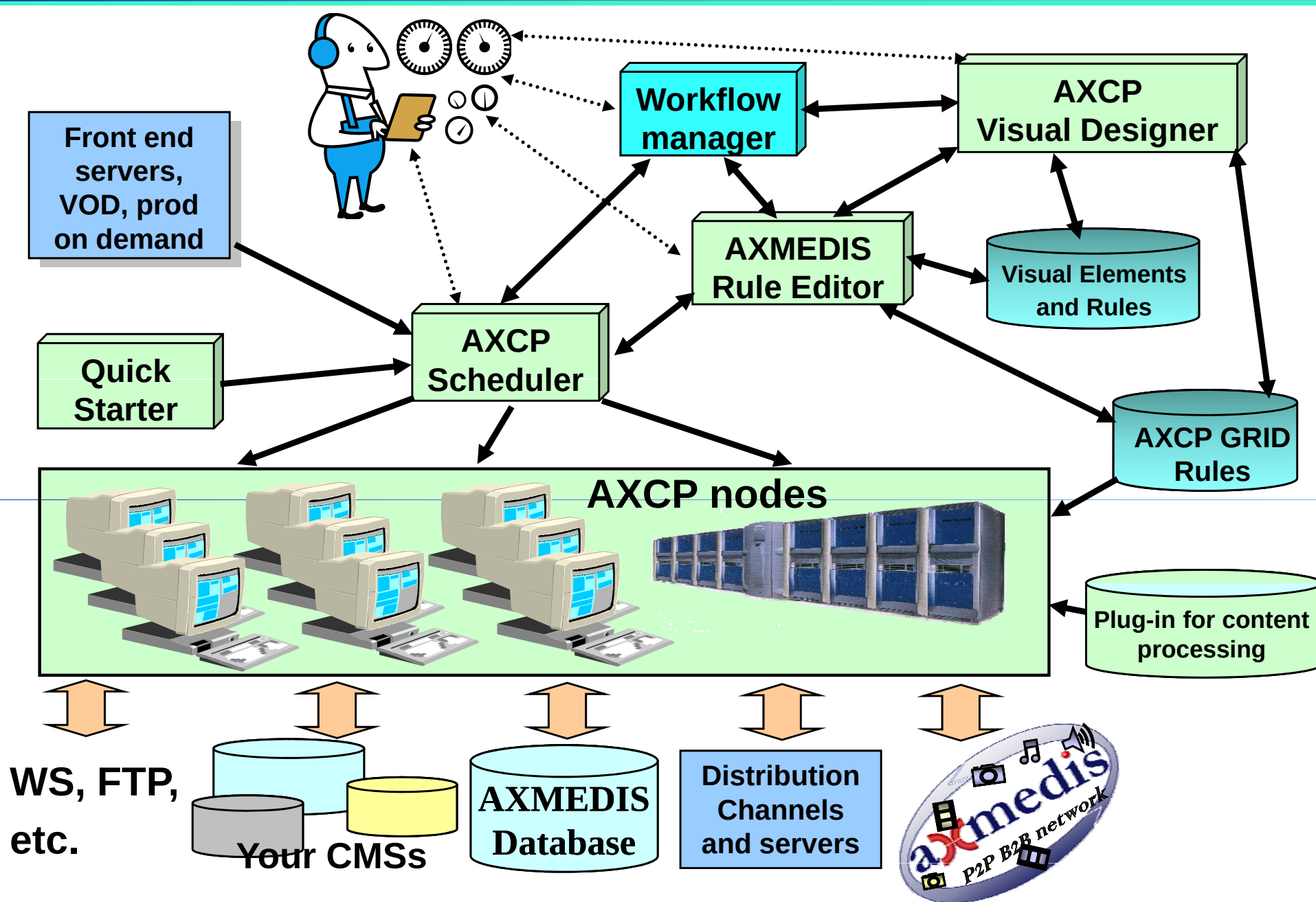
- **AXMEDIS GRID language and tools for**

- ◆ 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
- ◆

- **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.**

AXMEDIS Content Processing GRID

AXMEDIS



Some Snapshots from the examples shown

AXMEDIS

AXCP Rule Editor 1.0 - ANSC_instruments_photogallery_smil-notex-PDA-audio-4.axr - [JS Script Editor - _main]

```

1 // main
2 var tex = false;
3 if (globalPDA) // get the PDA-s
4 {
5     tex = false;
6     commonResourcesFilesDir = co
7 }
8 // see the arguments for the fol
9 instrumentsToProcess = imageFil
10 // this can be delated in releas
11 smilFileOutputRoot = "c:\\smilPh
12 // create SMIL sources
13 prepareSourceFiles (smilFileOutp

```

AXMEDIS Editor 1

Resource [263index.smil - 263index.smil]

Ciaramella

Visual Procedure Editor

Welcome on Axmedis AXCP Rule Editor Help

List of Contents

1. AXCP Rule Editor User Manual
2. [AXMEDIS Javascript Reference Manual](#)
3. [E4X Short Guide for Javascript v.1.6](#)

AXPDAPlayer

Ciaramella

File View

RuleView LibraryView

Call Stack Local Variables Watches Breakpoints

Output Search

Ln 34 Col 23 INS

AXCP Visual Designer

axcpProva.axv

File Edit View Build Command Help

Procedure List

- Java Script
 - AddFileToZip
 - CopyFile
 - CreatesFile
 - CreatesFolder
 - CreatesZip
 - Excute
 - Alert
 - RemoveDir
 - RemoveFile
 - Unzip
 - WriteFile
- AXCP Rule
 - axcpProva
 - compilations
 - CreatesDir
 - createsDirFile&Write
 - CreateTxtFile
 - CreatesZiWithFile
 - dirWithTxtFile
 - open
 - openNotepad
 - CreateTxtFile
 - proof
 - provaInstallAndRun
 - provaParam
 - provaScoop

Visual Procedure Editor

Project Table

Name	Type	ID	Date of Production	Last Modification	Affiliation	URL	Author
axcpProva	AXCP Rule Procedure	axcprule:3ae25f2e-1748-	2008-06-13	2008-10-11	disit - disit	url.com	antonio
CreateTxtFile	Java Script Procedure	axcprule:892e2e50-e70e-	2008-06-19	2008-06-19	disit	URL di prova	antonio
CreateZiWithFile	Java Script Procedure	axcprule:668f4ad2-f3df-4	2008-05-05	2008-05-05	z_affiliation	e_url	c_antonio
dirWithTxtFile	Java Script Procedure	axcprule:680490da-67da-	2008-06-17	2008-06-17	asd	url di prova	anto
provaScoop	Java Script Procedure	axcprule:6d4cb88d-1a5d-	2008-05-22	2008-05-22	z_affiliation	cvb_url	g_antonio
sample2	Java Script Procedure	axcprule:ccfa5f4e-1078-4	2008-06-04	2008-06-04	s_affiliation	url_di_prova	antonio

Workflow Management, OpenFlow

AXM

IS

17 Welcome to AXMEDIS Content Uploader!

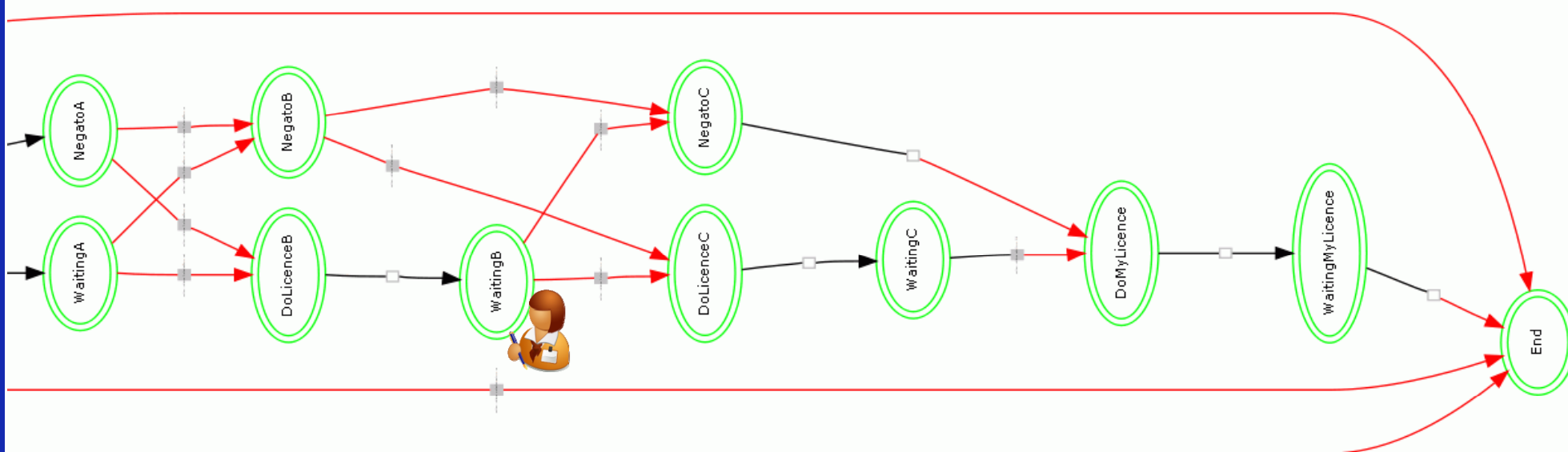
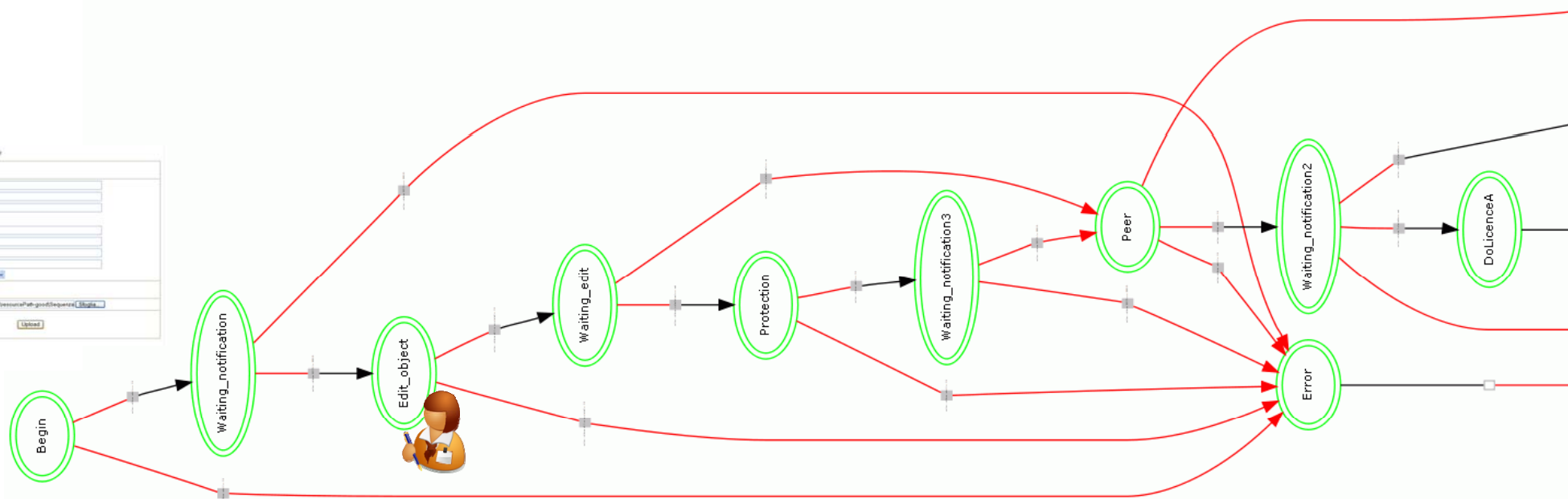
Metadata Section

Title	My title
Creator	Paolo Nesi
Description	This file
Format	video
Subject	File on
Date	17-06-2008
Publisher	VIDEO PUBAA
Language	English
Type	community

Digital Resource Section

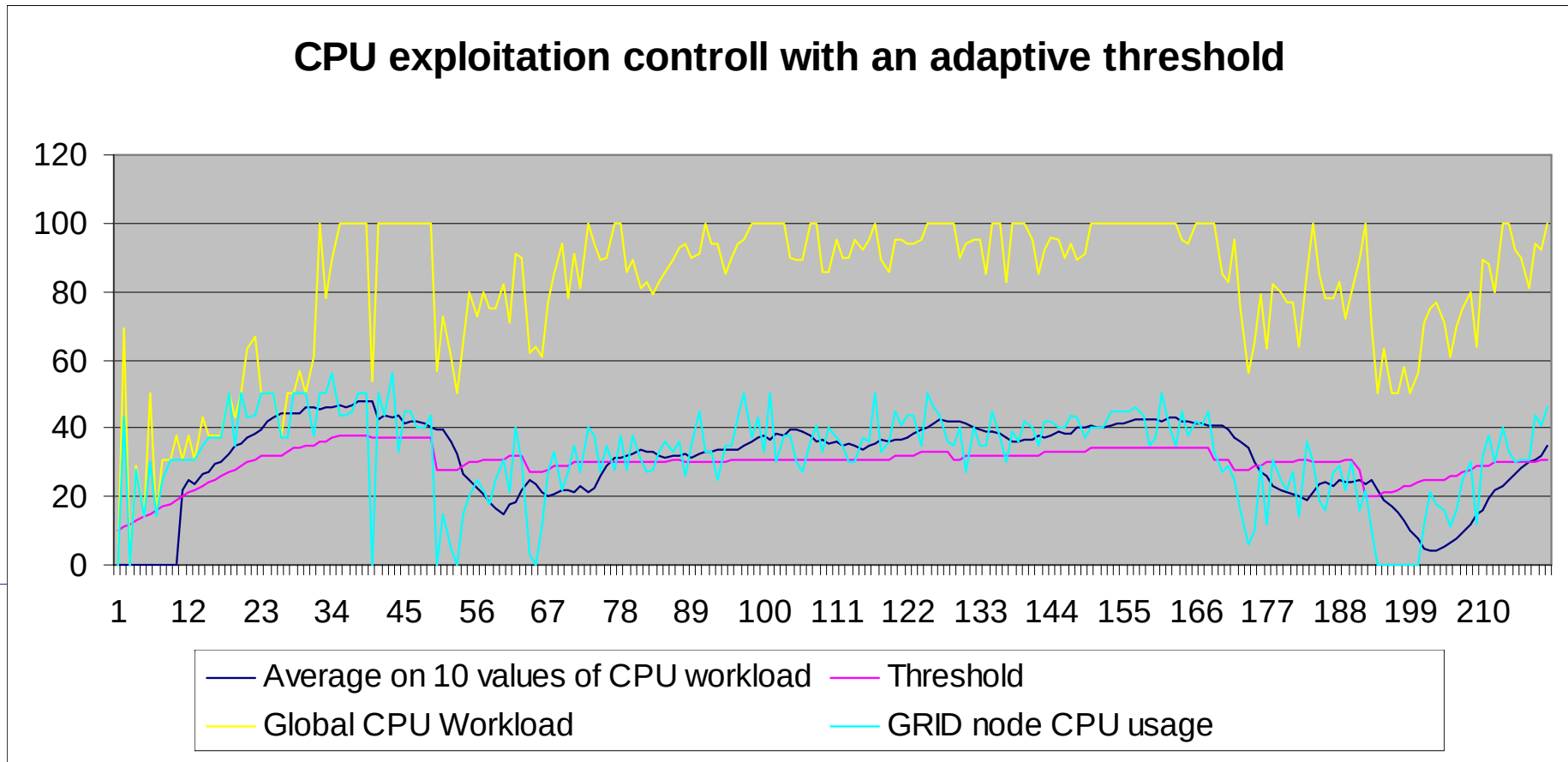
Select resource C:\AR-6\PROJECT\Browsers\Path-prod\sequence Upload

Upload



Planning and Exploiting Node capabilities

CPU exploitation control with an adaptive threshold



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

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**



The diagram illustrates the AXMEDIS P2P Network architecture, showing the flow of data and control between various components. The network is composed of two main parts: the AXMEDIS P2P Network (top) and the AXMEDIS P2P Network (bottom).

Legend:

- AXMEDIA P2P (Gray circle)
- AXEPTTool P2P (White circle with black border)

Top Network (AXMEDIS P2P Network):

- Metadata:** A yellow cylinder representing the central metadata store.
- Query Support:** A box that interacts with the Metadata and the network.
- AXTracker:** A box that interacts with the network and the AXMEDIS DRM.
- AXMEDIS DRM:** A box representing the Digital Rights Management system.
- AXCP P2P Control:** A box that manages the network's control.
- Distributor:** A box that provides content to the network.

Bottom Network (AXMEDIS P2P Network):

- AXCP P2P Control:** A box that manages the network's control.
- Distributor:** A box that provides content to the network.
- AXEPTTool:** Multiple nodes that act as peers in the network, facilitating the distribution of content.

Key Interactions:

- Automated Indexing and Query:** A thick arrow from the Metadata to the Query Support.
- Query:** An arrow from the Query Support to the network.
- Publishing:** An arrow from the network to the AXTracker.
- Control:** Dashed arrows from the AXCP P2P Control to the network nodes.
- Monitoring:** Dashed arrows from the network nodes to the AXCP P2P Control.
- Download:** Solid arrows from the network nodes to the AXEPTTool nodes.

AXMEDIS P2P Network: The overall network structure, showing the flow of data and control between the various components.

Accelerated Seeding Controlled P2P network: A large, stylized text overlay indicating the network's purpose.

Example of AXEPTool monitoring



P2P Report - Windows Internet Explorer

File Edit View Favorites Tools Help

Google G Go Bookmarks Popups okay Check AutoLink AutoFill Send to Settings

P2P Report P2P Report

Summary of AXMEDIS P2P Node Status

Node Profile (.....)

AXEPTool Version	Online since	Operating System	Username	JVM memory used
3.2.30	Wed Oct 24 18:48:46 CEST	Windows 2003 OSArch:x86 OSVersion:5.2	Administrator	291.24 MB

Report of activity on P2P node at

Object n.	Filename	Size	Download (%)	Start date	End date	AXOID	Status	Number of seeds	Number of peers
1	VRS-1-0c.axm	246.40 MB	100	Monday, October 22, 2007 17:18:23	Monday, October 22, 2007 20:27:11	urn:axmedis:00002:obj:e6ac1ee5-7be8-38bc-b17a-29688acee123	Seeding	6	8
2	raw_ec3.axm	262.24 MB	100	Monday, October 22, 2007 18:21:17	Monday, October 22, 2007 20:18:12	urn:axmedis:00000:obj:dd43b5be-f6c6-4bcf-9091-65ccba0b807f	Seeding	12	74
3	Xim-garden-P6201687-Mobile.axm	51.05 KB	100	Monday, October 22, 2007 17:10:50	Monday, October 22, 2007 19:36:18	urn:axmedis:00000:obj:02ad02c9-1c66-4803-bd39-c73f6129721e	Seeding	10	48
4	VRS-059-Signalers.axm	54.78 MB	100	Monday, October 22, 2007 18:21:32	Monday, October 22, 2007 18:59:54	urn:axmedis:00002:obj:7596a254-552b-3790-92d7-82564d6ba46a	Seeding	134	348
5	Xim-garden-P6201658-HiRes.axm	677.01 KB	100	Monday, October 22, 2007 17:10:22	Monday, October 22, 2007 18:50:17	urn:axmedis:00000:obj:55033b54-63fc-48ba-af77-c8d025b8785e	Seeding	390	456
6	Xim-garden-P6201675-PDA.axm	116.89 KB	100	Monday, October 22, 2007 17:10:40	Monday, October 22, 2007 18:34:33	urn:axmedis:00000:obj:2f476004-b695-4187-a4e9-cea51bee189d	Seeding	5	9
7	Xim-garden-P6201663-PDA.axm	120.11 KB	100	Monday, October 22, 2007 17:10:27	Monday, October 22, 2007 18:26:23	urn:axmedis:00000:obj:2bf0c77c-4f6f-4cbf-adfc-459a8141015c	Seeding	456	563
8	REVIEW2007_18_OCT_REVIEW2007_18_Oct_tiscalitest_Akkordzither.axm	546.71 KB	100	Monday, October 22, 2007 18:21:43	Monday, October 22, 2007 18:24:33	urn:axmedis:00000:obj:0db9bf4d-2b00-43ac-b39e-61ab118aba88	Seeding	76	82
9	REVIEW2007_15_OCT_B002_4_image.jpg_MASTER_REVIEW2007_IvanOCT_15.axm	255.96 KB	100	Monday, October 22, 2007 18:21:20	Monday, October 22, 2007 18:24:07	urn:axmedis:00000:obj:e5fe2d44-979c-4611-993f-9d2c145a5652	Seeding	45	58
10	VRS-demo-0c-mpeg4.axm	61.27 MB	100	Monday, October 22, 2007 17:09:47	Monday, October 22, 2007 18:13:28	urn:axmedis:00000:obj:e4497340-ff6c-4c4d-b6f9-2c86f3826823	Seeding	12	85
...	...	...	...	...	...	...	...	...	...

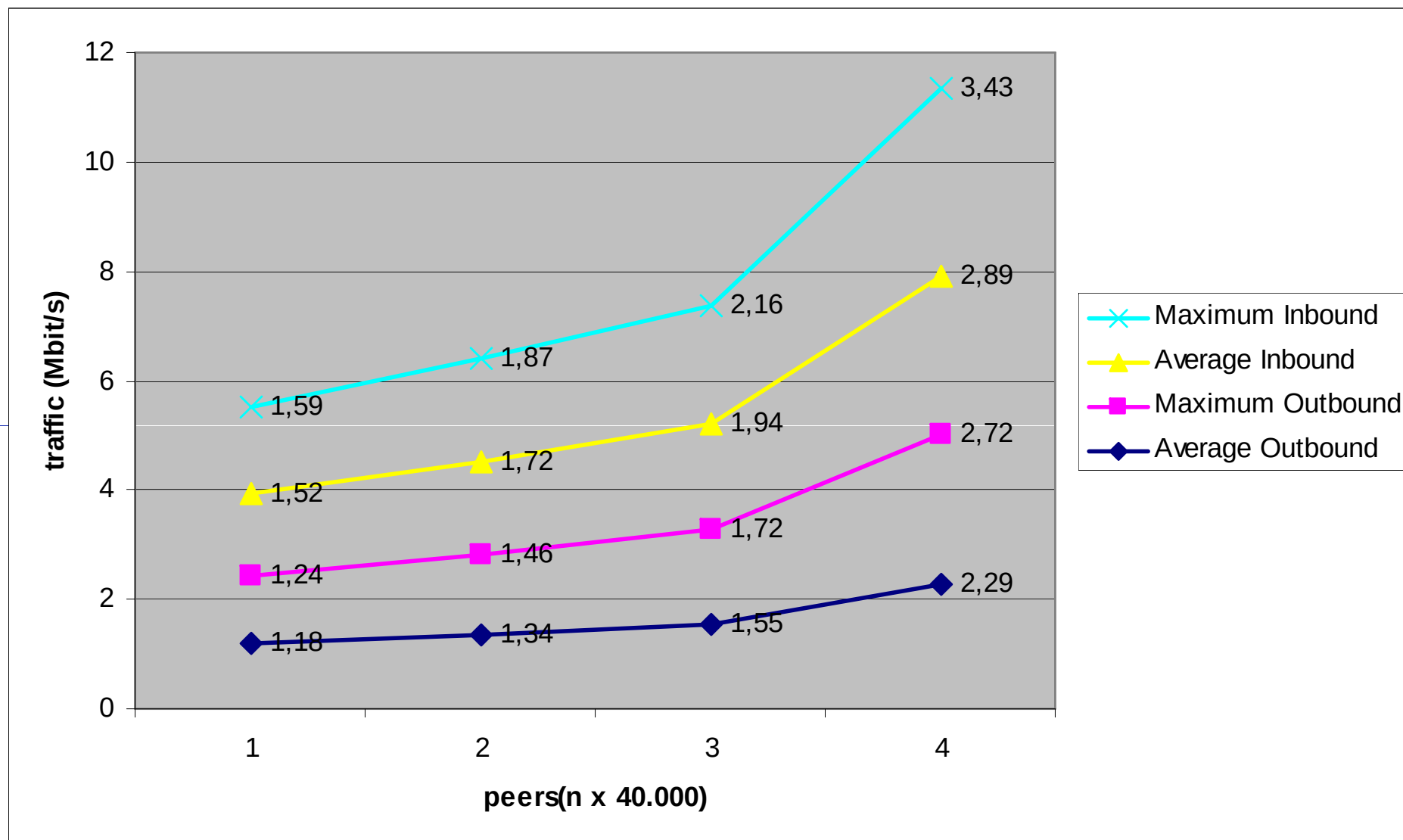
Number of objects	Total Disk Space	Free Disk Space	Total Objects Size
2172	219.83 GB	192.82 GB	14.63 GB

AXMEDIS 2007 - Thu Oct 25 2007 12:48:42 GMT+0200 (ora legale Europa occidentale)

Done My Computer 100%

Network results

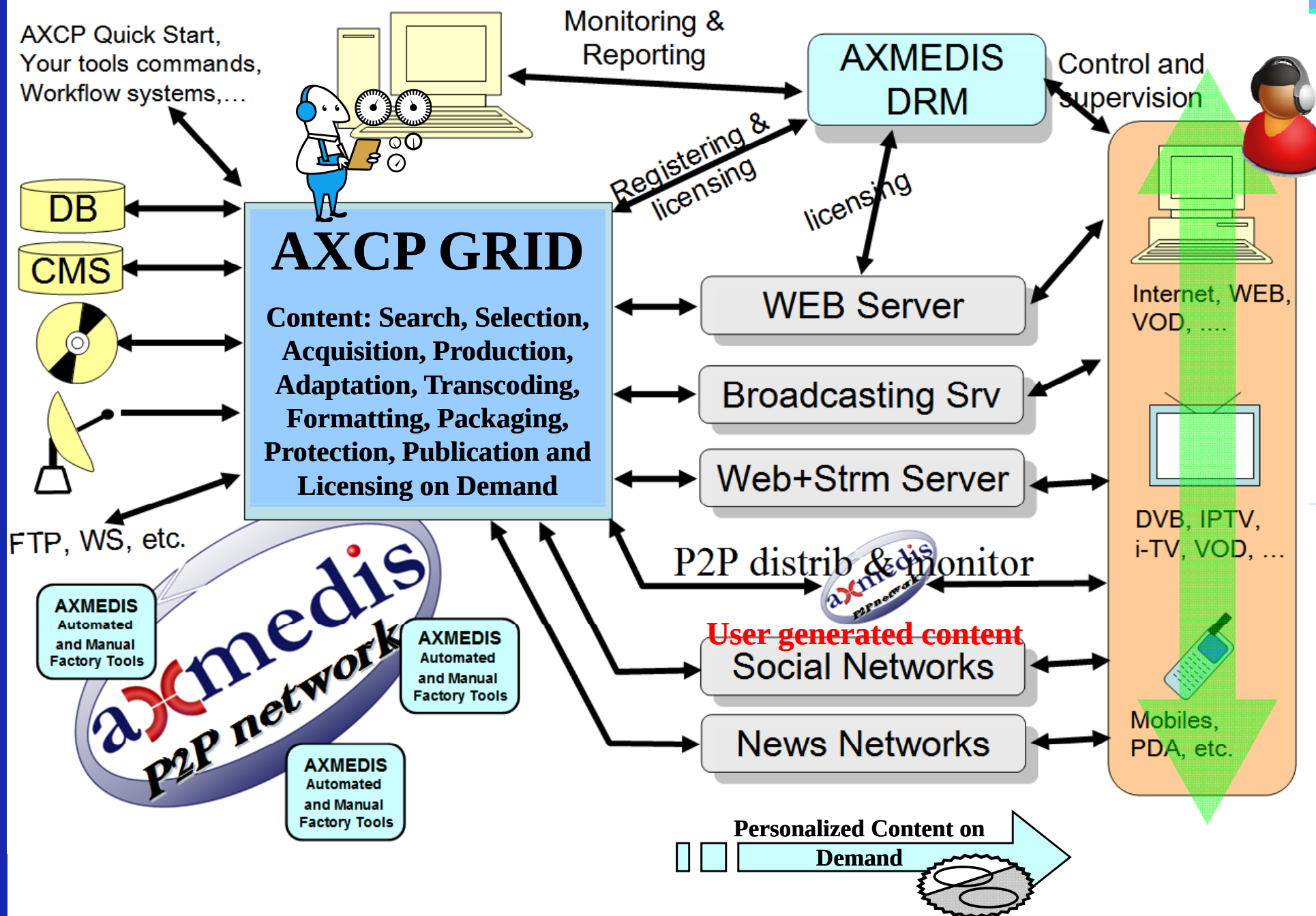
AXTrack's traffic

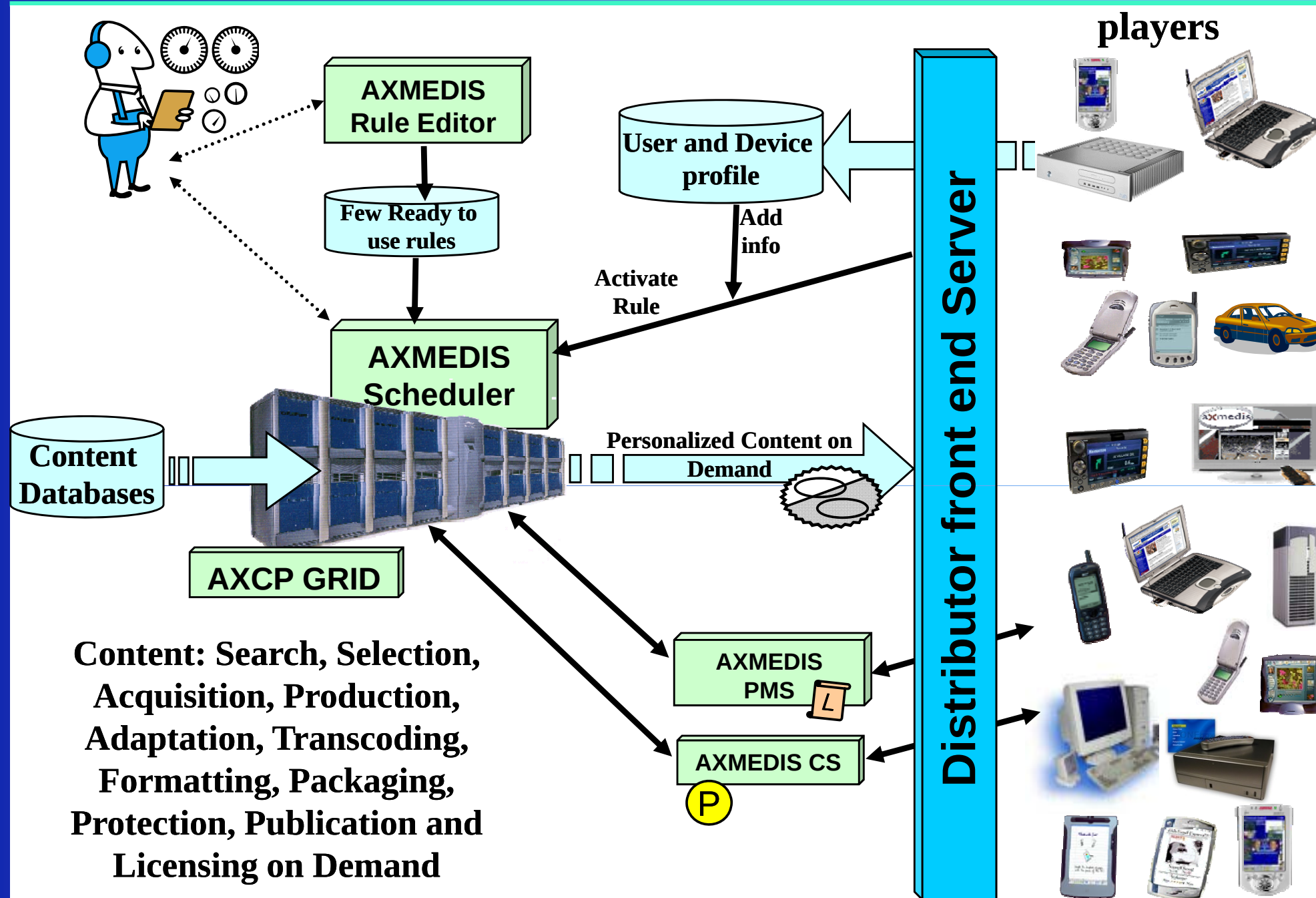


- **VOD, Video or Content on Demand:**
 - ◆ Internet P2P, PC, mobile
 - ◆ IPTV streaming: STB Motorola
 - ◆ Streaming of AXMEDIS MPEG-21, audio/video
 - ◆ Progressive download of AXMEDIS MPEG-21, audio/video
- **Satellite data broadcast**
 - ◆ Distribution in Push, STB/PVR
- **DVB-T**
 - ◆ EPG + recording + intelligent content
 - ◆ HD protection in stream
- **PDA and Kiosks**
 - ◆ Push on Kiosks, Download on PDA
 - ◆ <http://XMF.axmedis.org>
- **Mobiles**
 - ◆ Interoperable MPEG-21 and OMA DRM production
 - ◆ AXMEDIS/MPEG-21 player for mobiles
 - ◆ Download and progressive download on mobiles, java
 - ◆ <http://XMF.axmedis.org>
- **UGC, user generated or posted content**
 - ◆ Automated production, transcoding, licensing, etc.
 - ◆ Multichannel support
 - ◆ XMF, social network, ..
 - ◆ <Http://XMF.axmedis.org>
- **P2P as support for the above channels**
 - ◆ B2B and/or B2C networks
 - ◆ <http://XMF.axmedis.org>

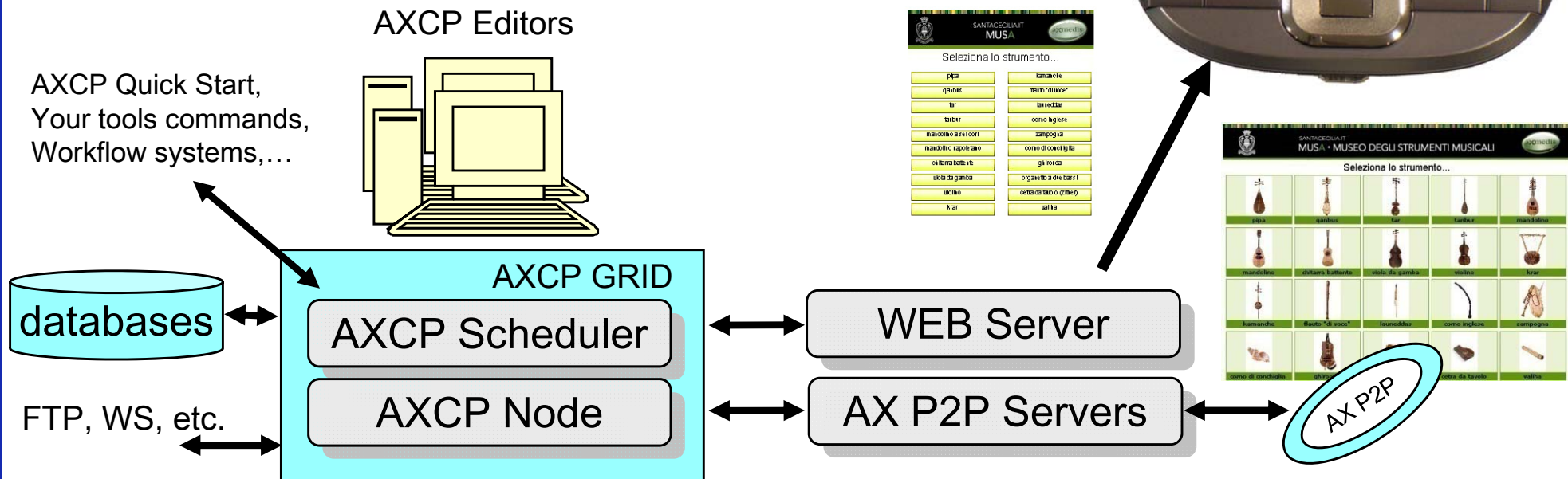
Factory and integration

AXMEDIS

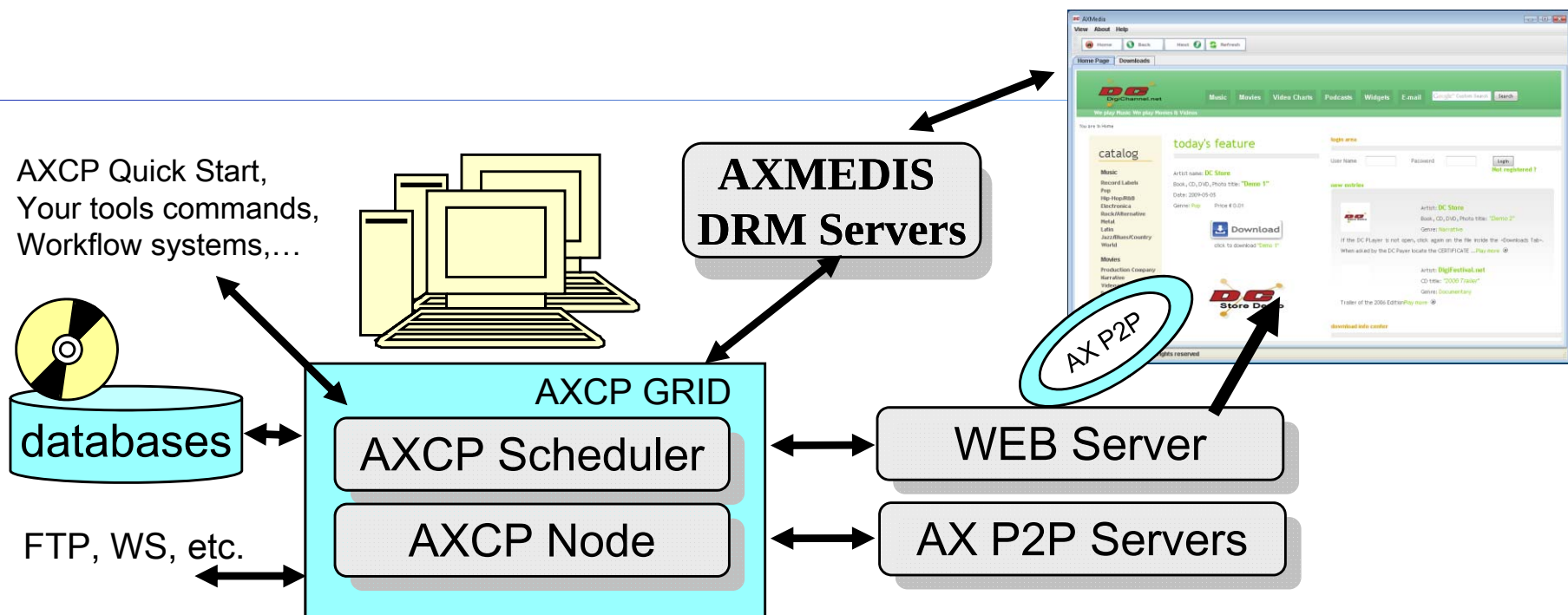




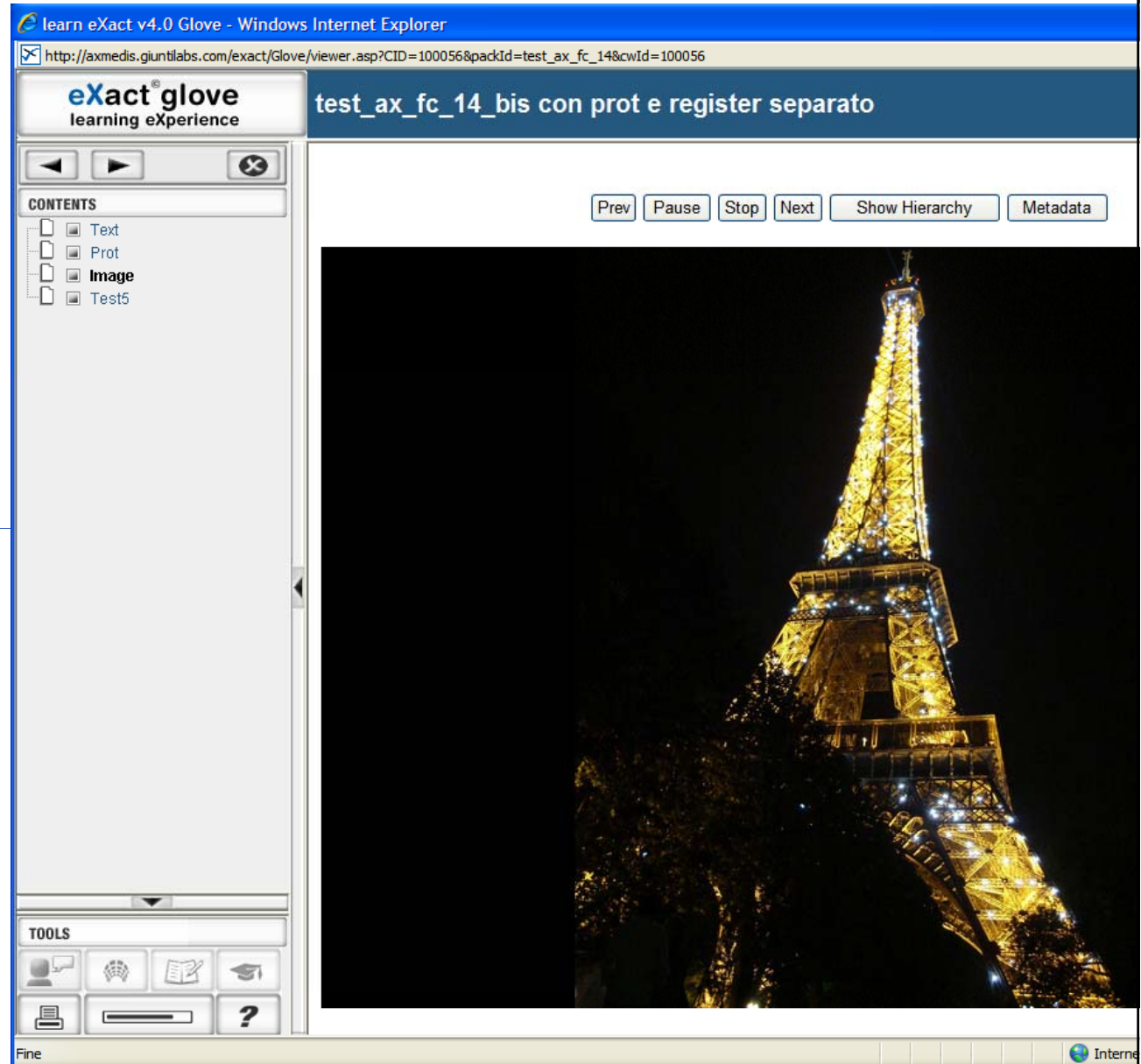
- At MUSA: instrument museum at Accademia Nazionale di Santa Cecilia, Roma
- Usable for AV guides, even with RFID
- Production of content for continuous formation, in medical area or for other interactive guides
- Monitoring of the user activities



- Distribution of large objects ISO of CD, DVD, etc. as protected intelligent content
- Distribution via P2P
- The intelligent content played into the AXMEDIS player helps the user to make registration, certification ...
- The Intelligent content extract the ISO on the disk



- **AXMEDIS**
 - ◆ Hiding complexity
- **AXMEDIS AXCP**
 - ◆ protection packager
- **AXMEDIS**
 - ◆ Active X Player
- **AXMEDIS DRM**
 - ◆ registration
 - ◆ License servers
 - ◆ AXCS



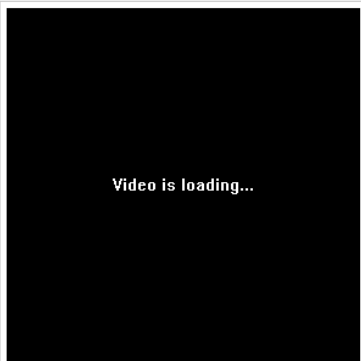
- <http://www.variazioniproject.org>
- **Content Enrichment**
 - ◆ produced and reproduced on demand
 - ◆ production with DRM
 - ◆ AXMEDIS web player

Variations Search

 **HOLST, G. The Planets Suite - Jupiter, ESMAC 2007**

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jSocialize   

General **File Metadata** **Event Data** **Musical Content** **Rights**

General

Type of content  Concert

Title  HOLST, G. The Planets Suite - Jupiter, ESMAC 2007

Description  HOLST, G. The Planets Suite - Jupiter by ESMAC Sinfonietta in EUROPARQUE

Keywords  HOLST, ORCHESTRA, ESMAC, PLANETS

Performer 

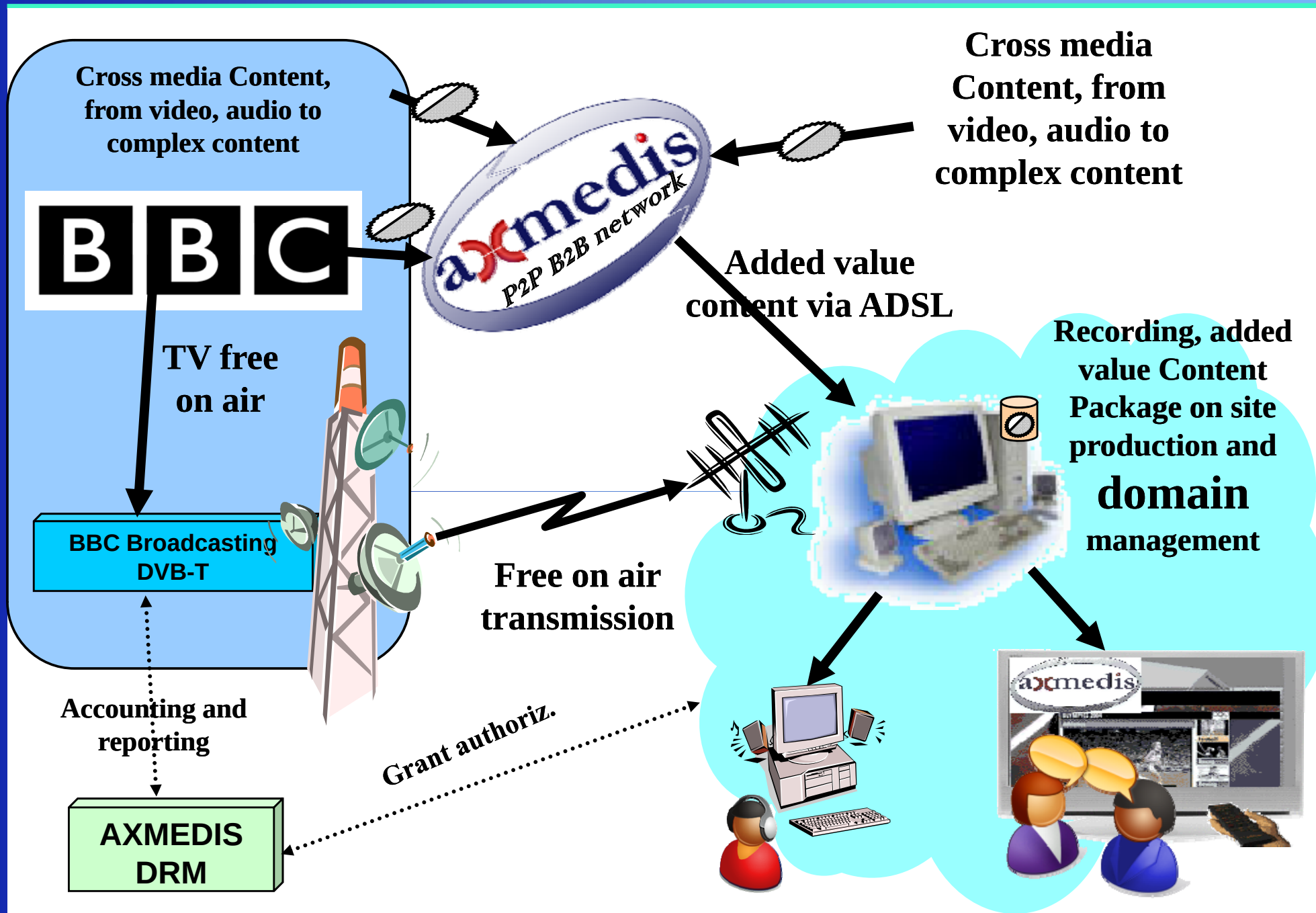
Arranger 

Conductor 



Content Production on the Consumer Side

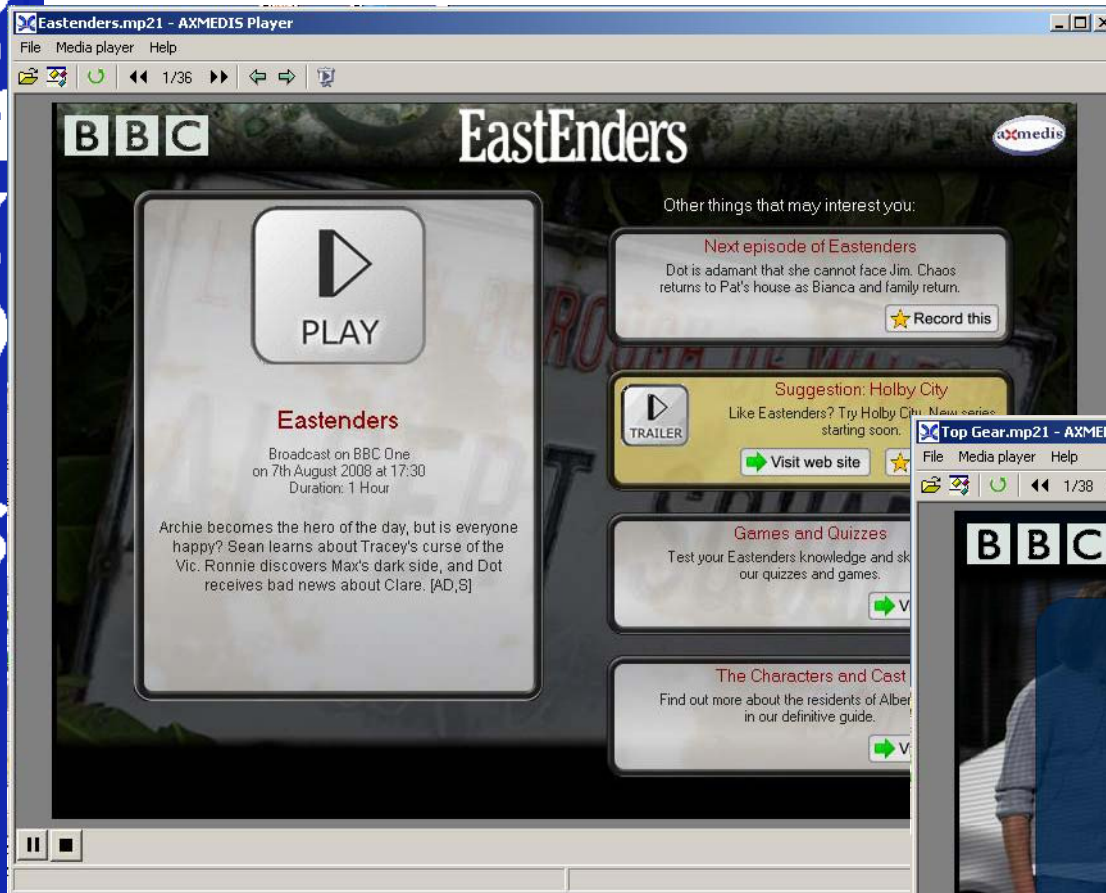
AXMEDIS



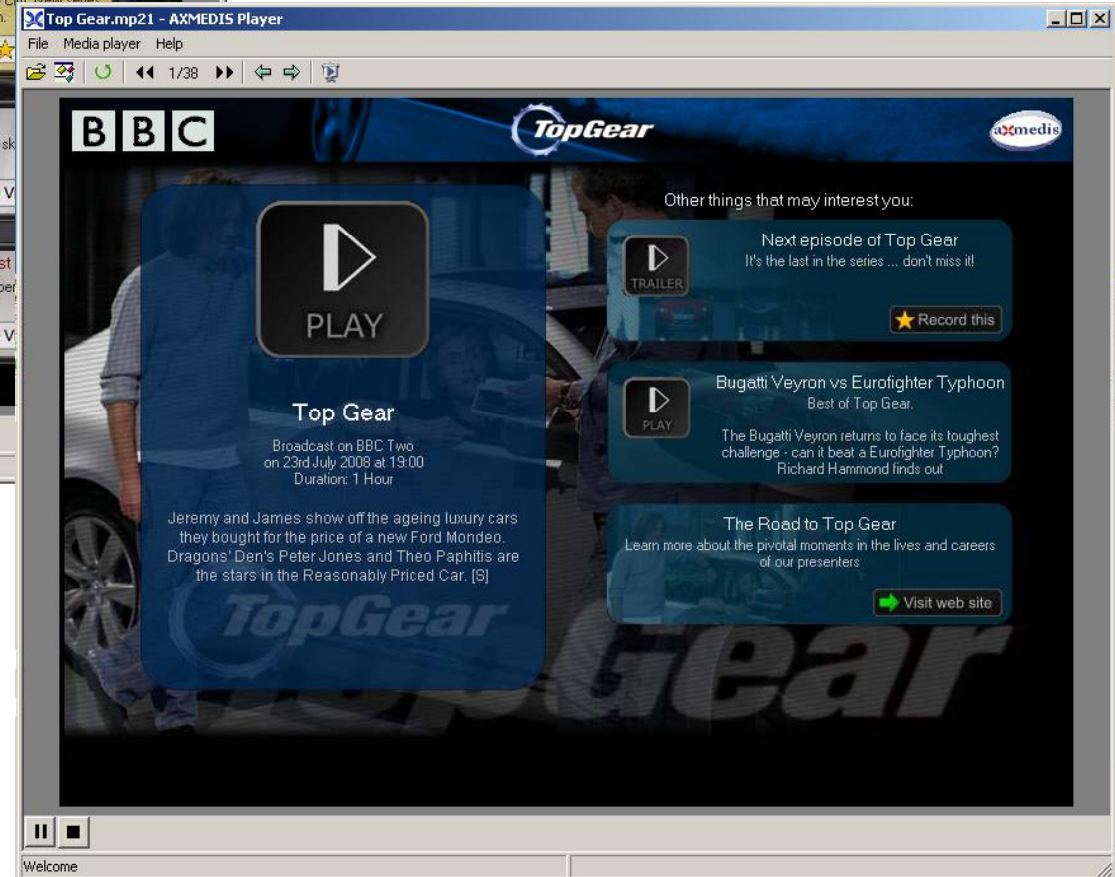
Examples Content from AX4HOME

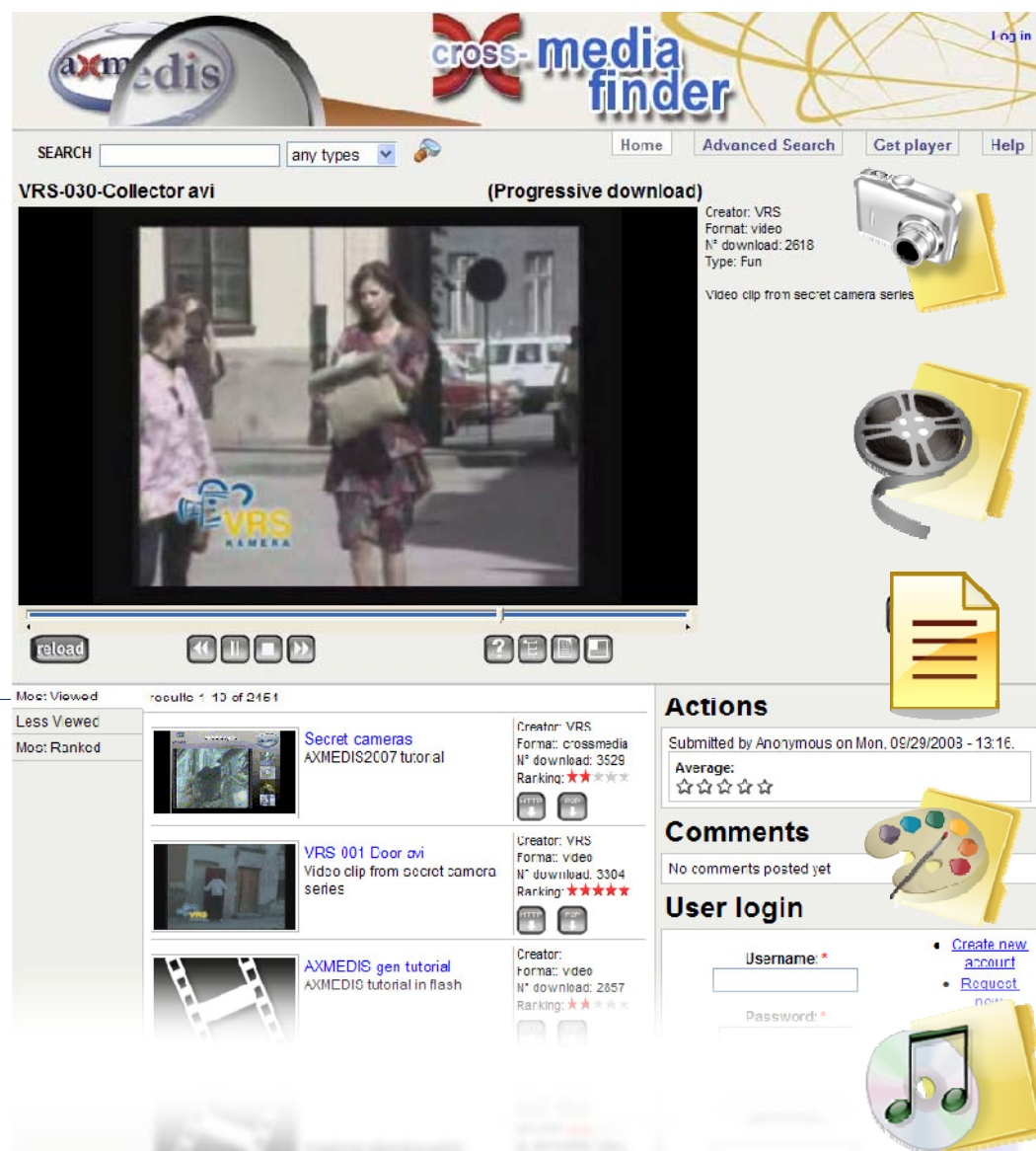


AXMEDIS



I contenuti per PC possono essere più potenti e graficamente più curati rispetto a quelli per i dispositivi mobili





SEARCH any types  Home Advanced Search Get player Help

VRS-030-Collector avi (Progressive download)

Creator: VRS
Format: video
N° download: 2618
Type: Fun

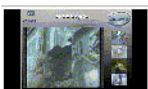
Video clip from secret camera series

reload      

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Less Viewed

Most Ranked

 Secret cameras
AXMEDIS2C07 tutorial
Creator: VRS
Format: crossmedia
N° download: 3529
Ranking: ★★☆☆

 VRS 001 Door avi
Video clip from secret camera series
Creator: VRS
Format: video
N° download: 3304
Ranking: ★★★★★

 AXMEDIS gen tutorial
AXMEDIS tutorial in flash
Creator: VRS
Format: video
N° download: 2857
Ranking: ★★☆☆

Actions

Submitted by Anonymous on Mon, 09/29/2003 - 13:16.

Average:
☆☆☆☆

Comments

No comments posted yet

User login

Username: *

Password: *

[Create new account](#)
[Request name](#)

XMF permette di visionare qualsiasi tipo di contenuto:

- Immagini
- Video
- Documenti
- Audio
- Contenuti complessi e proattivi che richiedono l'intervento dell'utente

<http://xmf.axmedis.org>

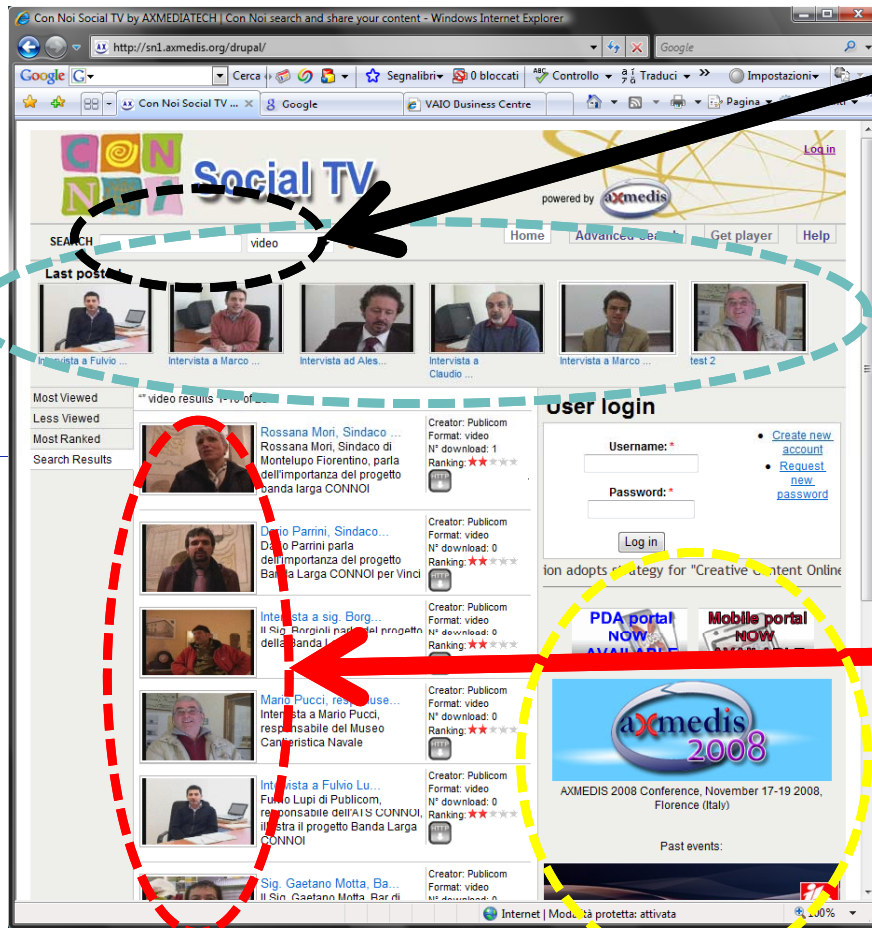
- E' una soluzione tecnologia che permette di

Effettuare ricerche
sui contenuti inseriti

Visionare gli ultimi contenuti
inseriti con immagini animate
per mostrare il tipo di
contenuto

Visionare i risultati delle
ricerche con immagini
animate per mostrare il
tipo di contenuto

Inserire contenuti pubblicitari
e promozionali



Recommendations

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26

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1 2 [next](#) [last](#)

phistestasla proximity details

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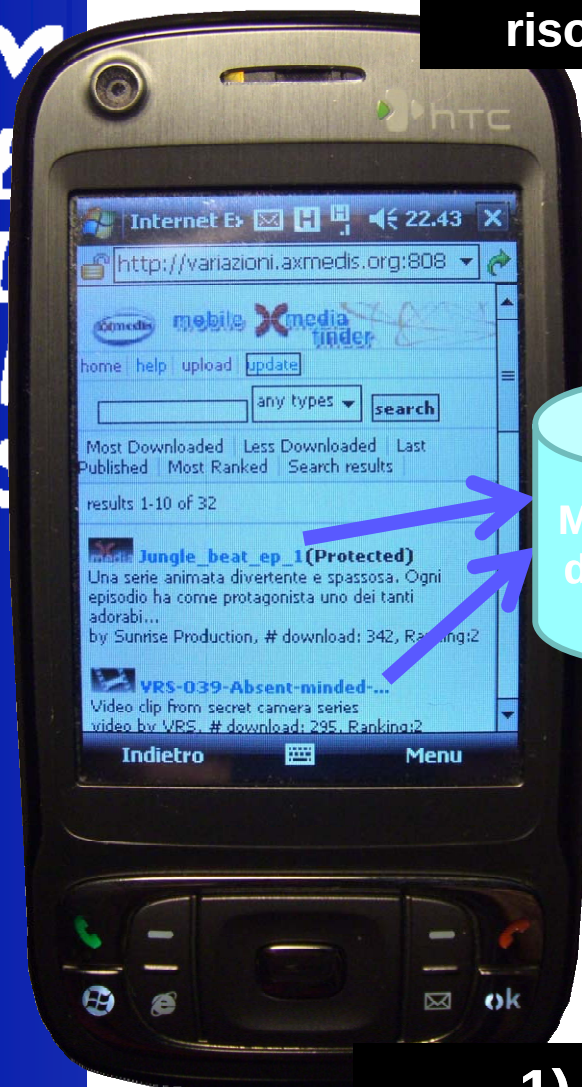
activity:

age:

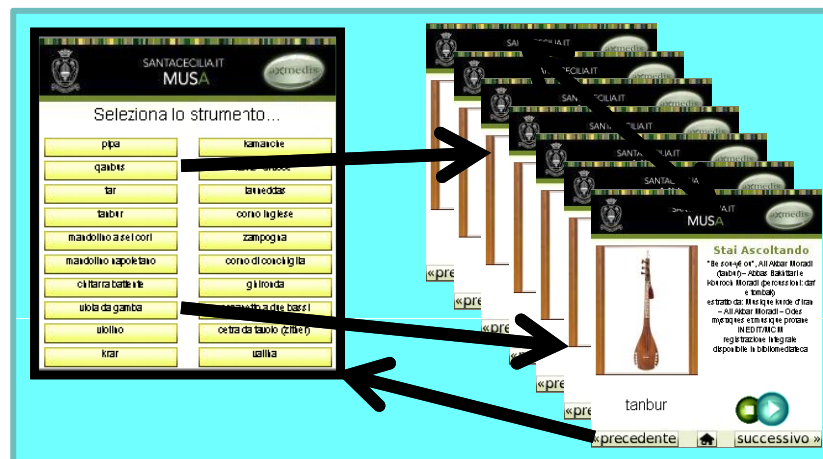
school_job:

Accesso al sito e visione dei contenuti con dispositivi palmari (PDA)

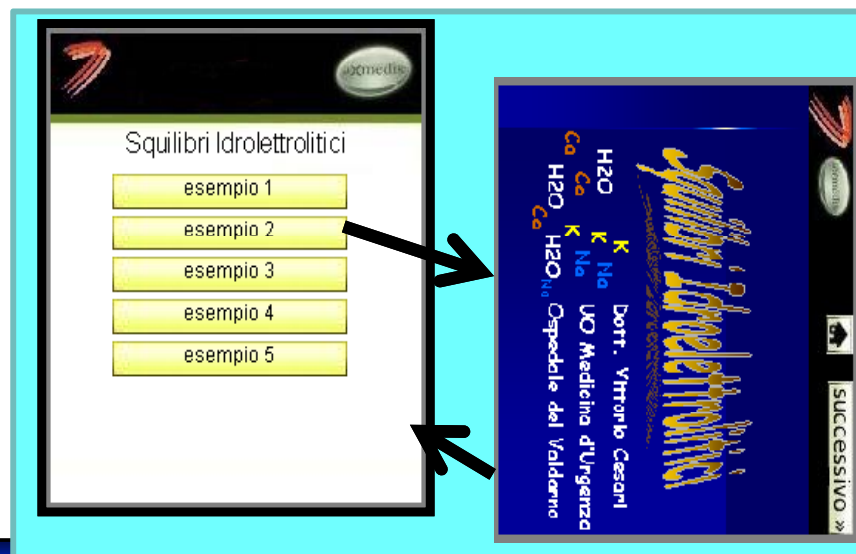
Il contenuto scaricato può essere complesso, cioè formato da molte risorse concatenate tra loro per arricchire l'esperienza dell'utente



Memoria del PDA



2) Visione del contenuto scaricato su PDA



1) Scelta e scaricamento del contenuto sul PDA

Contenuti per cellulari

AXM

Gli stessi contenuti disponibili sul portale principale, sono disponibili sul portale per dispositivi mobili in versione adattata alle capacità del dispositivo



Memoria del cellulare

play

play

2) Visione del contenuto scaricato sul cellulare



L'utente visiona i contenuti collegati tra loro utilizzando semplici bottoni di navigazione

http://mobmed.axmedis.org/drupal/

File Modifica Visualizza Preferiti Strumenti ?

Google G Cerca 10 bloccati Controllo Traduci Impostazioni

AX CrossMediaFinder

Home Advanced Search Help Update player

Mobile Medicine  powered by **axmedis**

Università degli Studi di Firenze

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SEARCH any types

Last posted



Di Centa Conferenza



WAD2007, Sergio ...



la spirome...



Di Cente Storia



probabil...



Asma flash corso d...

Most Viewed

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results 1-10 of 14



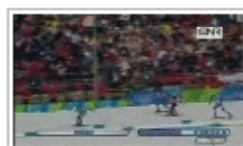
probabilita' Embolia P...
Calcolo della probabilita' di embolia polmonare per (PDA), PC e (mobile), modello 1

Creator: Miniati Pisa, mi...
Format: crossmedia
N° download: 18
Ranking: ★★☆☆☆



Contropulsazione Intra...
Contropulsazione intra-Aortica

Creator:
Format: document
N° download: 13
Ranking: ★★☆☆☆



Di Centa, Conferenza
Di Centa, Conferenza

Creator: unifi
Format: video
N° download: 3
Ranking: ★★☆☆☆



User login

Username: *

Password: *

Log in

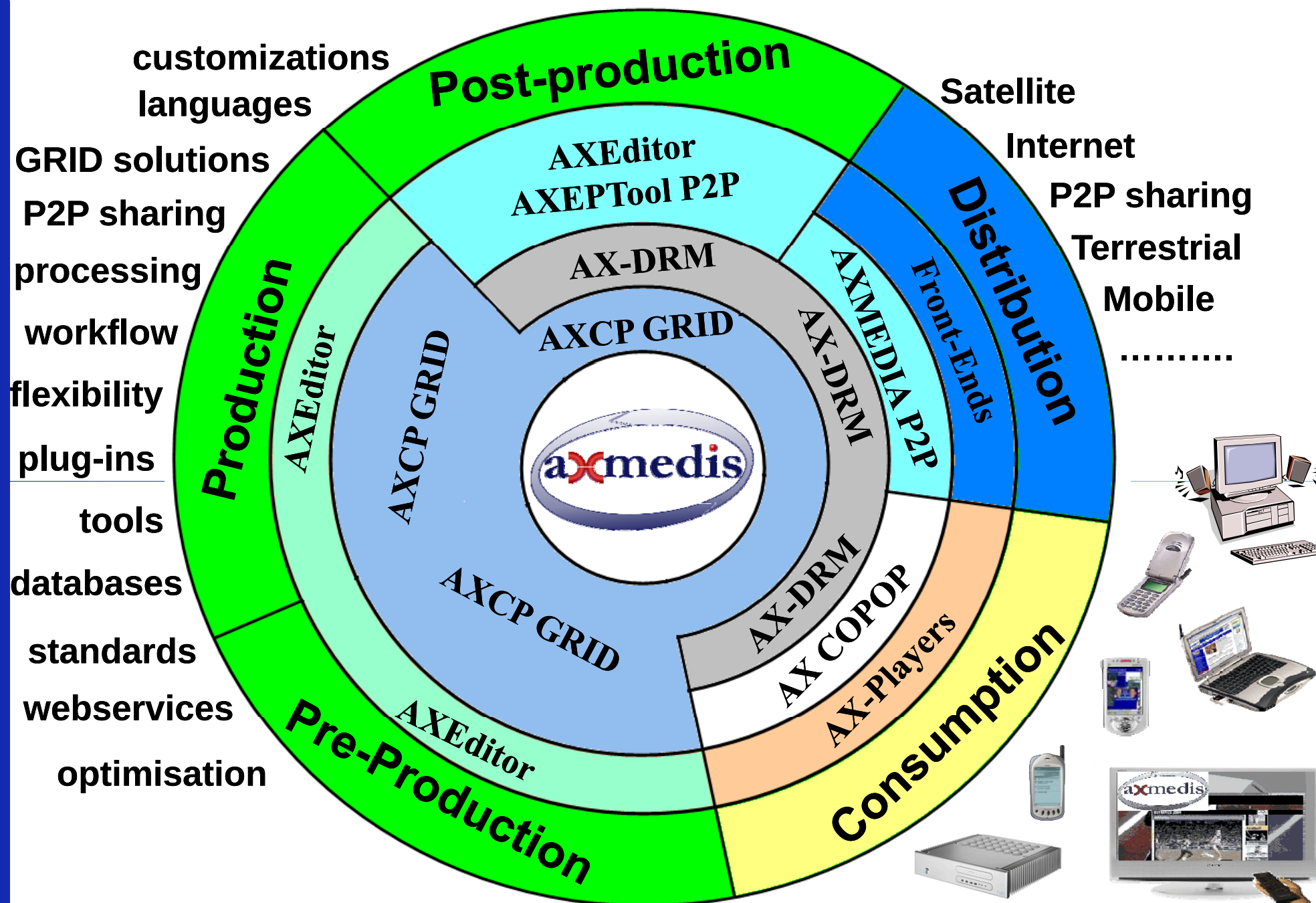
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- [Request new password](#)

-21: TELSEY has signed the affiliation agreement



Mapping Main AXTools on Life-Cycle

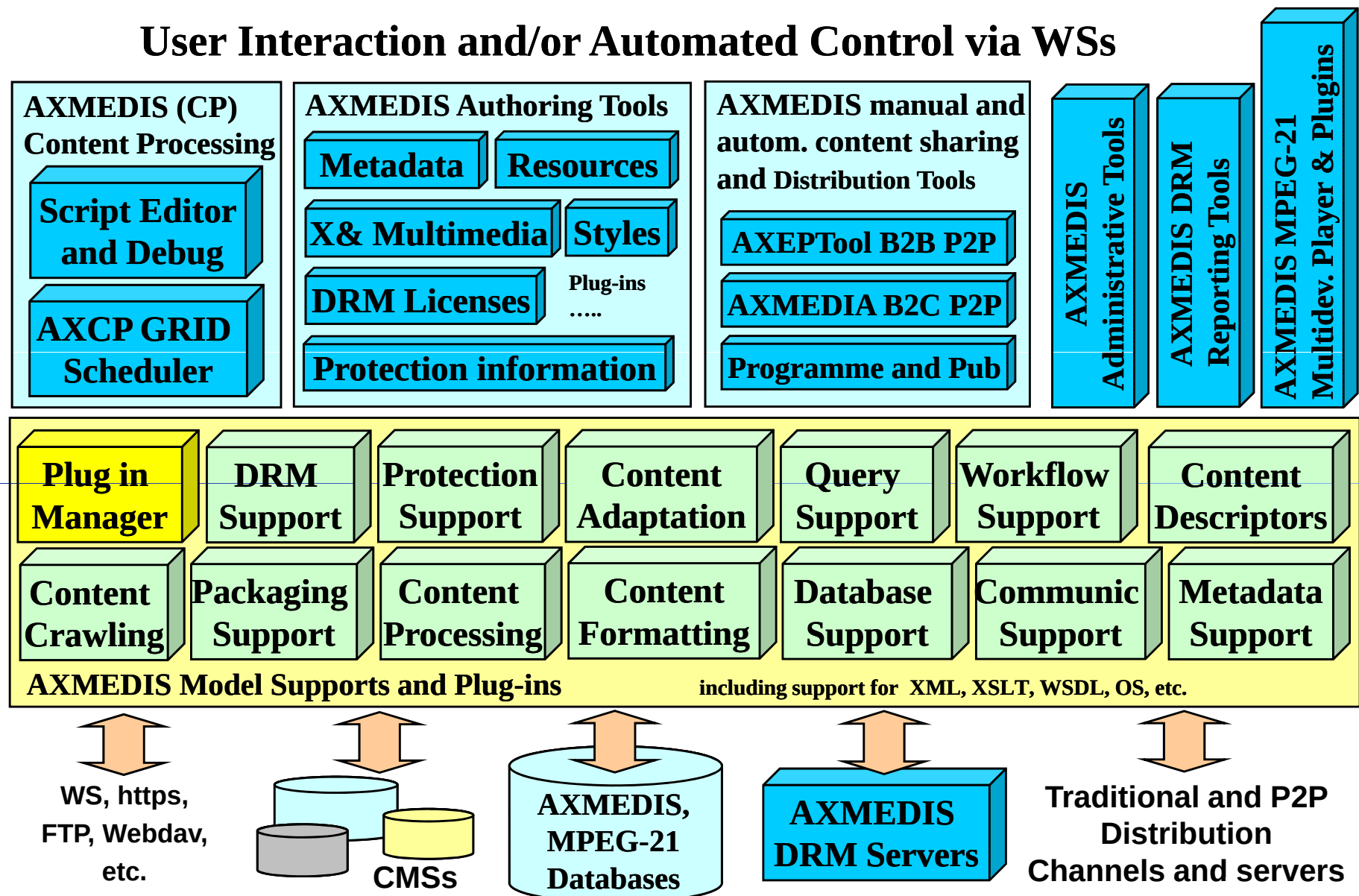
AXMEDIS



AXMEDIS Technical Architecture

AXMEDIS

User Interaction and/or Automated Control via WSs



Contact Information

A
X
M
E
D
I
S

- *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.*

*DISIT-DSI, Department of Systems and Informatics
Distributed Systems and Internet Technology Lab
University of Florence*

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Email: nesi@dsi.unifi.it

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

