


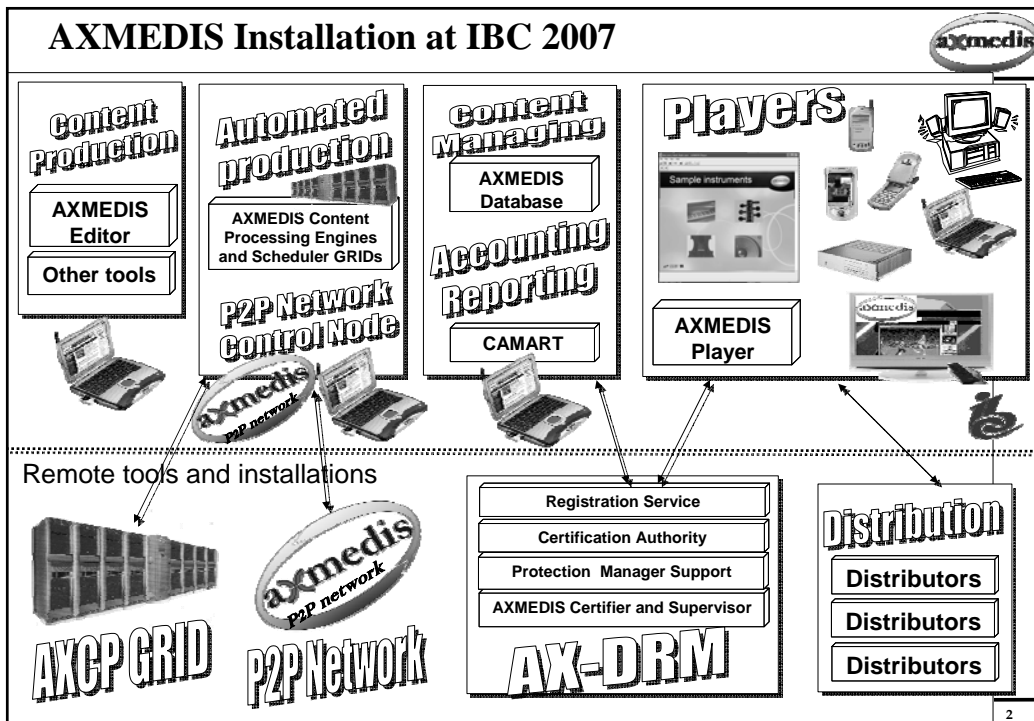
**Automating Production of
Cross Media Content
for Multichannel Distribution**

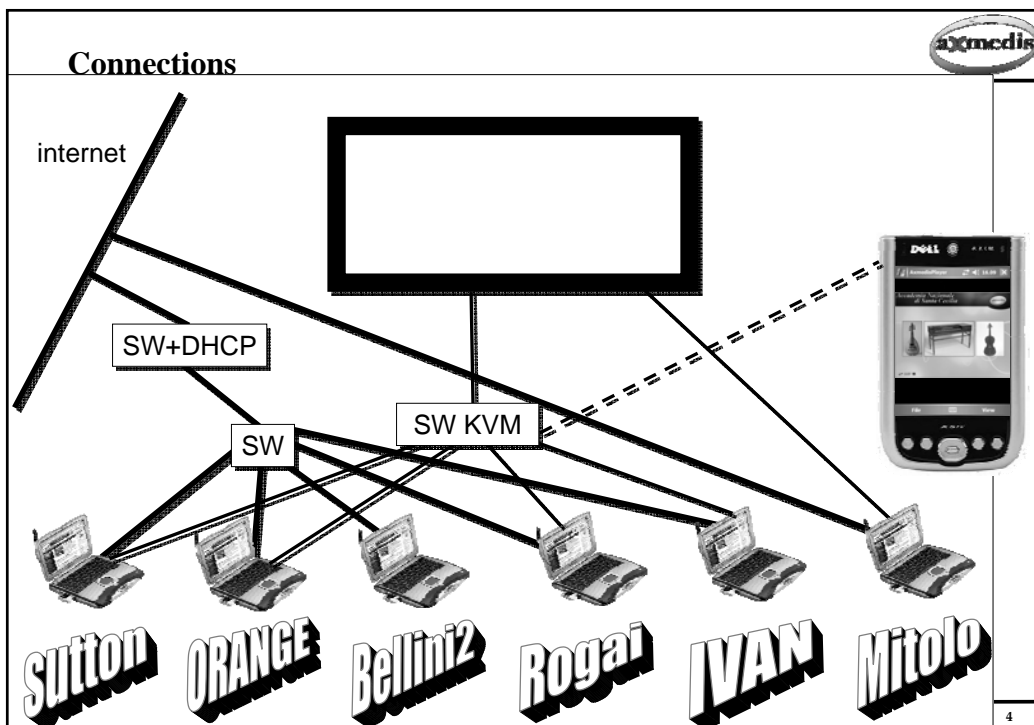
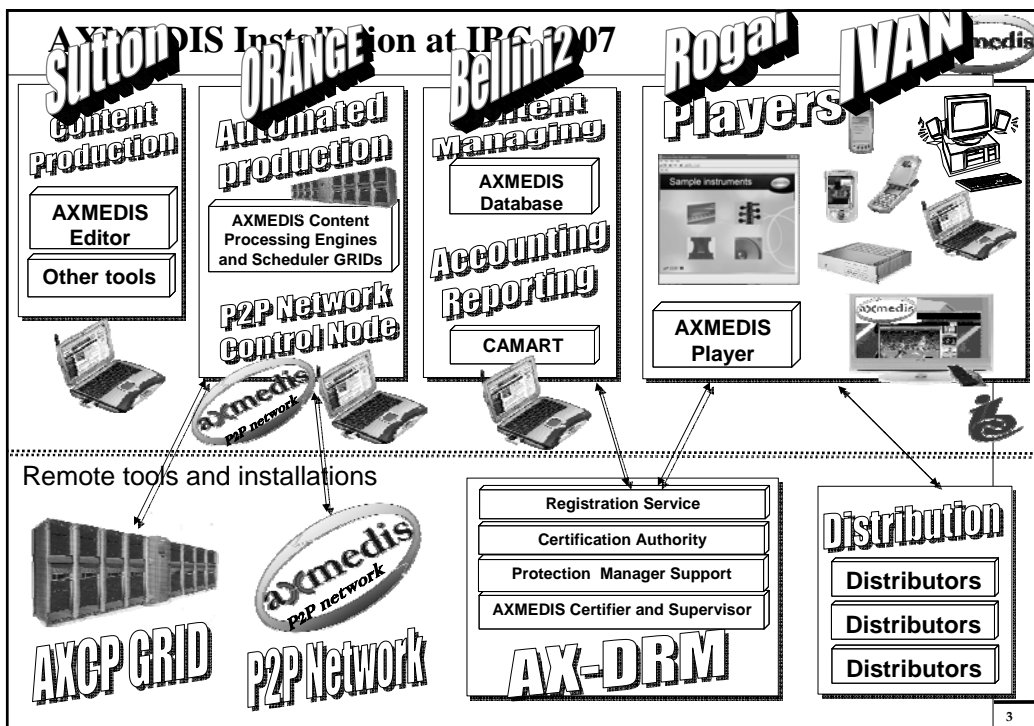
Some Integrated DEMOs


www.AXMEDIS.org
at IBC 2007



AXMEDIS at IBC 2007 1








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Manual Content Production and tools

- | **Content posted on the database with Title containing:**
 - ♣ IBC
 - ♣ IBC_PDA
- | **The same Content has been posted on the P2P and replicated to the main other P2P nodes so that to provide performances needed**
- | **Protection can be performed by using protection tools according to the help added recently on the computers for the IBC ad posted on the SVN**
- | **Certification has been done for all the comptuers involved**
- | **Registration has been performed for all the user involved**
- |



AXMEDIS at IBC 2007

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IDs: AXDID,, ... AXUID


```
// Id of the Creator/Myself (AXCP/Ivan)
AXCID = "URN:AXMEDIS:00002:BUS:D6D45C52-602E-3AC2-995E-EF9097C784A4";

// Id of the Distributor/Myself (AXCP/Ivan)
AXDID = "URN:AXMEDIS:00002:BUS:D6D45C52-602E-3AC2-995E-EF9097C784A4";

// Id of the Final User/Myself (AXCP/Ivan)
AXUID = "URN:AXMEDIS:00002:BUS:D6D45C52-602E-3AC2-995E-EF9097C784A4";


//other users
users[0] = "URN:AXMEDIS:00002:BUS:D6D45C52-602E-3AC2-995E-EF9097C784A4"; //DSI (Ivan) pc-smr
users[1] = "URN:AXMEDIS:00002:BUS:9B58B3D8-3894-31F6-8BF9-F93E333BC992"; //DSI(Piero)
users[2] = "URN:AXMEDIS:00002:USR:9931CAE2-9EB4-3C77-BF75-E7DDC5FE2305"; //Eutelsat(Campo)
users[3] = "URN:AXMEDIS:00002:BUS:72511F38-274E-3FFF-9DE9-A86F2583B572"; //Tiscali(Nateri)
users[4] = "URN:AXMEDIS:00002:BUS:1F9A88C2-8960-34D7-B802-ABF924B991F1"; //DSI) Davide
users[5] = "URN:AXMEDIS:00002:BUS:DD998008-6E83-3EC0-ABC4-882122A0654C"; //DSI (Bellini 2,
blackmachine)

PDA:
users[6] = "URN:AXMEDIS:00002:BUS:9B58B3D8-3894-31F6-8BF9-F93E333BC992";
```



AXMEDIS at IBC 2007

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AXMEDIS Editor, authoring tool

- | **Manual production of AXMEDIS/MPEG-21 objects**
- | **Editing MPEG-21 objects**
 - ♣ Object composition and production
 - ♣ Hierarchical view of MPEG-21 and/or AXMEDIS
 - ♣ Visual and Behavioral Editor for SMIL editing of presentation aspects including time line
 - ♣ Metadata Editor
 - ➔ General metadata
 - ➔ AXInfo metadata
- | **DRM aspects**
 - ♣ Registering the objects with a Unique ID
 - ♣ Define the PAR: Potentially Available Rights
 - ♣ Protection Editor: to protect the objects with Protection Tools plugins
 - ♣ Create DRM licenses: mother and client licenses
- | **Access to the database:**
 - ♣ Store and load
 - ♣ Make query into database
- | **Processing Content**
 - ♣ Activate and test Content Processing Plug Ins, the same accessible from the AXCP GRID tool

AXMEDIS at IBC 20077




A
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Examples of Protection paramters

- | **Protection tools params**
- | `var toolID = "urn:axmedis:ipmp:tool:id:0003"; // Caeser`
- | `params[0]=20; //shift`
- | `var blowfishId = "urn:axmedis:ipmp:tool:id:0004"; // Blowfish`
- | `blowfish[0]="0123456789ABCDEF"; encryption key`
- | `blowfish[1]="01234567"; initialization vector key`
- | `blowfish[2]=16; // length of encnription key`
- | `blowfish[3]=8; // length of initialization vector`

AXMEDIS at IBC 20078




AXMEDIS

Notes on Licenses

- I **License type A:**
 - ♣ play forever, each play is counted in the AXCS
 - ♣ The price per play is not given so that it can be a play forever.
- I **License type B1:**
 - ♣ pay per play
 - ♣ each play has a price
- I **License type B3:**
 - ♣ pay per play limited in a period of time
 - ♣ not before, not after with a limited numbers of times

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AXMEDIS

Mother License A


```
<?xml version="1.0" encoding="UTF-8" standalone="yes" ?>
<r:license xmlns:r="urn:mpeg:mpeg21:2003:01-REL-R-NS" xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance"
xsi:schemaLocation="urn:mpeg:mpeg21:2003:01-REL-R-NS ./schemas/rel-r.xsd urn:mpeg:mpeg21:2003:01-REL-SX-NS
./schemas/rel-sx.xsd urn:mpeg:mpeg21:2003:01-REL-MX-NS ./schemas/rel-mx.xsd">
  <r:grantGroup>
    <r:grant>
      <r:keyHolder>
        <r:info>
          <dsig:KeyName
xmlns:dsig="http://www.w3.org/2000/09/xmldsig#">URN:AXMEDIS:00002:BUS:D6D45C52-602E-3AC2-995E-
EF9097C784A4</dsig:KeyName>
        </r:info>
      </r:keyHolder>
      <r:issue />
    </r:grant>
  </r:grantGroup>
  =
  <r:grantGroup>
    <r:grant>
      <mx:play xmlns:mx="urn:mpeg:mpeg21:2003:01-REL-MX-NS" />
      <mx:diReference xmlns:mx="urn:mpeg:mpeg21:2003:01-REL-MX-NS">
        <mx:identifier>URN:AXMEDIS:00002:OBJ:0D5E5DAA-82C2-3579-A7BF-
5C8E064D7A9F</mx:identifier>
        </mx:diReference>
      </r:grant>
    </r:grantGroup>
  </r:grantGroup>
  <r:issuer>
    <r:keyHolder>
      <r:info>
        <dsig:KeyName
xmlns:dsig="http://www.w3.org/2000/09/xmldsig#">URN:AXMEDIS:00002:BUS:D6D45C52-602E-3AC2-995E-
EF9097C784A4</dsig:KeyName>
      </r:info>
    </r:keyHolder>
    <r:details>
      <r:timeOfIssue>2007-08-08T16:44:00</r:timeOfIssue>
    </r:details>
  </r:issuer>
</r:license>
```

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Licence A





```
<?xml version="1.0" encoding="UTF-8" standalone="yes" ?>
<r:license xmlns:r="urn:mpeg:mpeg21:2003:01-REL-R-NS" xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance"
xsi:schemaLocation="urn:mpeg:mpeg21:2003:01-REL-R-NS ./schemas/rel-r.xsd urn:mpeg:mpeg21:2003:01-REL-SX-NS
./schemas/rel-sx.xsd urn:mpeg:mpeg21:2003:01-REL-MX-NS ./schemas/rel-mx.xsd">
<r:grantGroup>
  <r:grant>
    <r:keyHolder>
      <r:info>
        <dsig:KeyName
xmlns:dsig="http://www.w3.org/2000/09/xmldsig#">URN:AXMEDIS:00002:BUS:D6D45C52-602E-3AC2-995E-
EF9097C784A4</dsig:KeyName>
        </r:info>
      </r:keyHolder>
      <mx:play xmlns:mx="urn:mpeg:mpeg21:2003:01-REL-MX-NS" />
      <mx:diReference xmlns:mx="urn:mpeg:mpeg21:2003:01-REL-MX-NS">
        <mx:identifier>URN:AXMEDIS:00002:OBJ:0D5E5DAA-82C2-3579-A7BF-5C8E064D7A9F</mx:identifier>
        </mx:diReference>
      </r:grant>
    </r:grantGroup>
  <r:issuer>
    <r:keyHolder>
      <r:info>
        <dsig:KeyName
xmlns:dsig="http://www.w3.org/2000/09/xmldsig#">URN:AXMEDIS:00002:BUS:D6D45C52-602E-3AC2-995E-
EF9097C784A4</dsig:KeyName>
        </r:info>
      </r:keyHolder>
      <r:details>
        <r:timeOfIssue>2007-08-08T16:44:07</r:timeOfIssue>
        </r:details>
      </r:issuer>
    </r:license>
```




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Automated Content Production



- **Script 1: ObjectCollection**
 - Create an Collection
- **Script 2: PublishOnP2P**
 - DRM, production, publication on P2P, licensing
- **Script 3: ObjectProductionOnMultichannel**
 - DRM, production on demand, adaptation, licensing
- **Script 4: CreateLicenseOnDemand**
 - DRM, production on demand of LICENSE
- **Script 5: NodeProfile**
 - P2P, monitoring of the single AXEPTool P2P node
- **Script 6: P2PNetwork**
 - P2P, monitoring of the whole AXEPTool P2P Network
- **Script 7: DownloadFromP2P**
 - automated P2P downloading from the P2P Network
- **Script 8: SUTTON da vedere**
 - Crawling, production, adaptation, delivering
- **Many other Scripts to program your AXCP GRID are accessible from the AXMEDIS portal and WIKI pages.**
- **You can use them as sources of examples and solutions.**



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SCRIPT 1

ObjectCollection

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Script 1: Create an Collection

Purpose

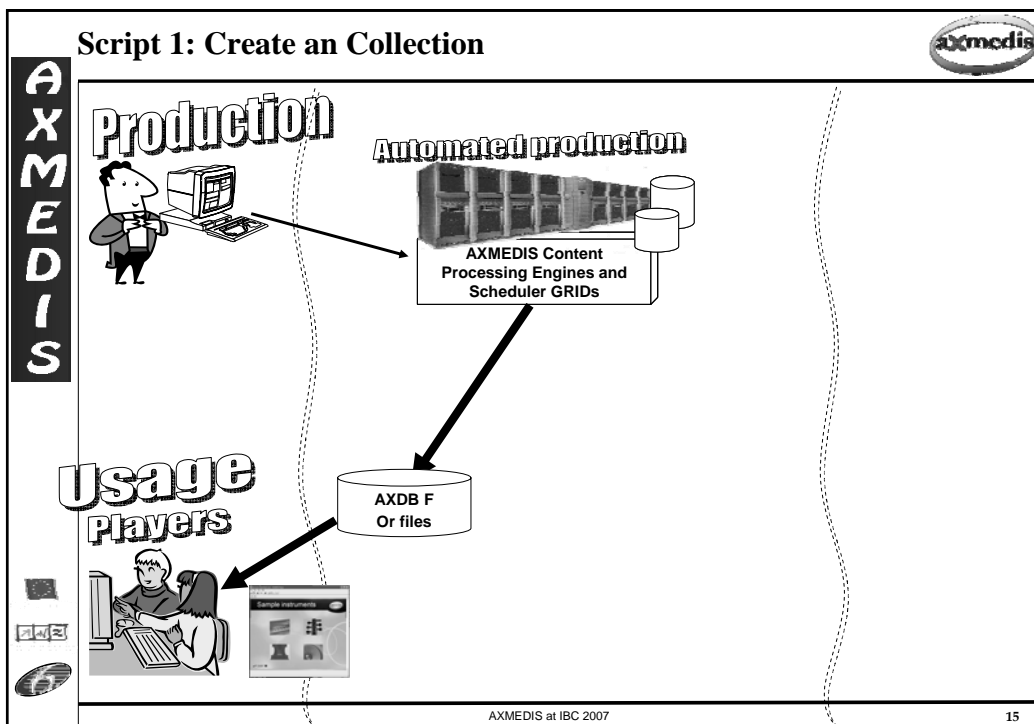
- ♣ Usage of an automated customizable process to create an object from a collection of other content elements, glued with HTML.
- ♣ advantages:
 - Actualisation of queries
 - Fully automation of the content production
 - Fully constomization in terms of metadata and composition
 - Make one use MANY MANY times for many many objects
 - Expandable for automatically protecting and distributing the produced objects

What is shown (can be shown)



- ♣ AXMEDIS model (MPEG-21)
- ♣ Automated Content Production
- ♣ Usage of the AXCP Quick Start for GRID simple usage
- ♣ Query on database, selection of objects
- ♣ AXCP Rule activation
 - Eventual usage of the AXMEDIS Scheduler
 - Eventual usage of the AXMEDIS Rule Editor
- ♣ Usage of the AXMEDIS Editor
- ♣ Usage of one or more AXMEDIS Players

AXMEDIS at IBC 2007

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- ### Steps of Script 1: Create an Collection
-
- AXMEDIS**
- axmedis
- | Explain the purpose: to make query to select a set of objects, select them and automatically produce a collection of them with HTML presentation level.
 - | Usage of the AXCP Quick Start
 - | Make a selection, for example "IBC" (not simple "a"), get the result
 - | See the list of objects as results
 - | Select some of them, ask to the person
 - | Activate rule "objectcollection" for the production of composed objects
 - ♣ Creation of the objects on the AXCP
 - | The object containing the collection is posted into the database and thus a query can get them putting "collection" into the description
 - ♣ See the object COMPOSED on the file systems
 - ♣ Double click and thus PLAY of the object
 - ♣ See the hierarchy of the objects and digital resources inside
- AXMEDIS at IBC 2007
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SCRIPT 2

PublishOnP2P



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Script 2: DRM, production, publication on P2P, licensing

I Purpose

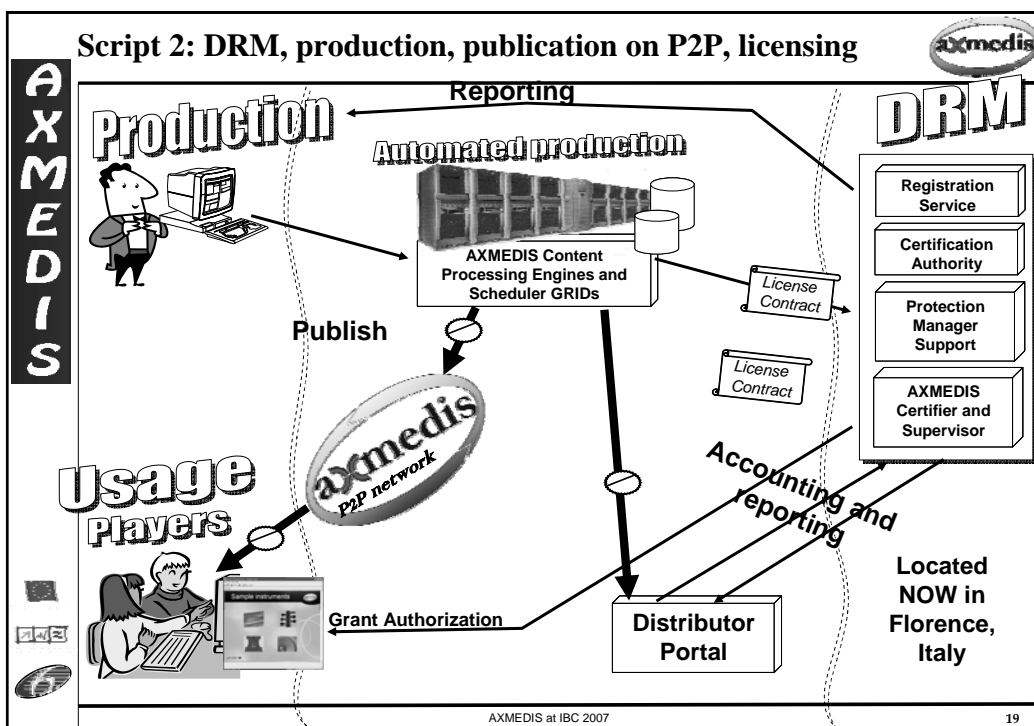
- ♣ Usage of a customizable process to automatically create content objects, protect, DRMed, distribute them via P2P, poste on databases, etc., play them.
- ♣ Advantages:
 - Fully automation of the content production, protection and publication
 - Fully constomization in terms of metadata and composition
 - Make one use MANY MANY times for many many objects

I What is shown

- ♣ AXMEDIS model (MPEG-21)
- ♣ Automated Content Production, protection and publication
- ♣ Usage of the AXCP Quick Start for GRID simple usage
- ♣ Query on database, selection and actualisation
- ♣ AXCP Rule activation
 - Eventual usage of the AXMEDIS Scheduler
 - Eventual usage of the AXMEDIS Rule Editor
- ♣ Show the AXMEDIS p2p: AXEPTool client tool
- ♣ Usage of one or more AXMEDIS Players
- ♣ Usage of the DRM
 - Eventual usage of the CAMART for the evidence of the consumption



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Script 2: DRM, production, publication on P2P, licensing

AXMEDIS

- Explain the purpose and show the P2P Client in which the content will be published
- Usage of the AXCP Quick Start
- Make a query with "IBC", get the result
- Select some of them (at least 3 of them), ask to the person
- Activate rule "PublishOnP2P". The rule create the objects and the mother licenses for them according to Play Forever (each play is tracked into the AXCP event reporting database)
 - ♣ Production of mother licenses and final user licenses for AXUIDs of computer A, B and C ONLY
 - ♣ For example: one of our players has not been licensed
 - ♣ Script4 can be used to create a license for that user for the produced objects
- show the progress of the rule if needed
- show the publication of the objects on the P2P Tracker catalogue
- show the list of objects into the local AXEPTool
- Double click and thus PLAY of the object
- Show the object hierarchy with its inside digital resources


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SCRIPT 3

ObjectProductionMultichannel



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Script 3: DRM, production on demand, adaptation, licensing

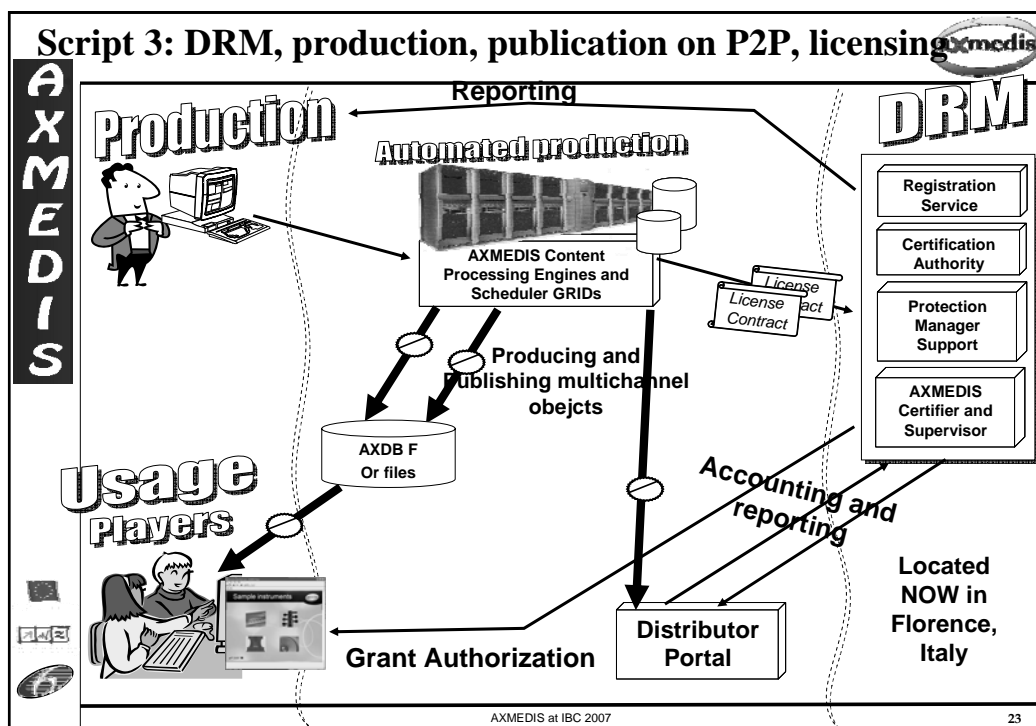
I Purpose

- ♣ Usage of a customizable process to create automatically produce content objects for different terminals/devices (multichannel) (different size for Audio, Video and Images, different format for Text), protect them, DRMize them, distribute them, and usage them.
- ♣ Advantages:
 - Fully automation of the content production, protection and publication, for multichannel distribution
 - Fully customization in terms of metadata and composition, production and protection
 - Make one use MANY MANY times for many many objects



I What is shown

- ♣ AXMEDIS model (MPEG-21)
- ♣ Automated Content Production, protection and publication
- ♣ Usage of the AXCP Quick Start for GRID simple usage
- ♣ Query on database, make selection
- ♣ AXCP Rule activation
 - Eventual usage of the AXMEDIS Scheduler, AXMEDIS Rule Editor
- ♣ Usage of one or more AXMEDIS Players
 - Players for different channels
- ♣ Usage of the DRM
 - Eventual usage of the CAMART for the evidence of the consumption

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- ### Script 3: DRM, production on demand, adaptation, licensing
- AXMEDIS**
- | Explain the purpose of the script and show the DIRECTORY (may be empty or with few objects) in which the content will be published and the CONTENT that will be USED
 - | Usage of the AXCP Quick Start
 - | Select the content to be used for the production, the content is selected from a directory, it could be taken from a CMS, or other channel
 - | Activate the RULE for the production of the object(s) in their adapted versions (IMG, VIDEO, AUDIO, TXT)
 - | The Rule perform object production and also
 - ♣ Production of mother licenses
 - ♣ Production of final user licenses for AXIUDs of computer A, B ONLY, for the production of other licenses use SCRIPT 4
 - | Show the progress of the rule if needed
 - | Show the list of objects created into the Directory
 - | Double click and thus PLAY of the object
 - | Show the object hierarchy with its inside digital resources
- AXMEDIS at IBC 2007 24





SCRIPT 4

CreateLicenseOnDemand




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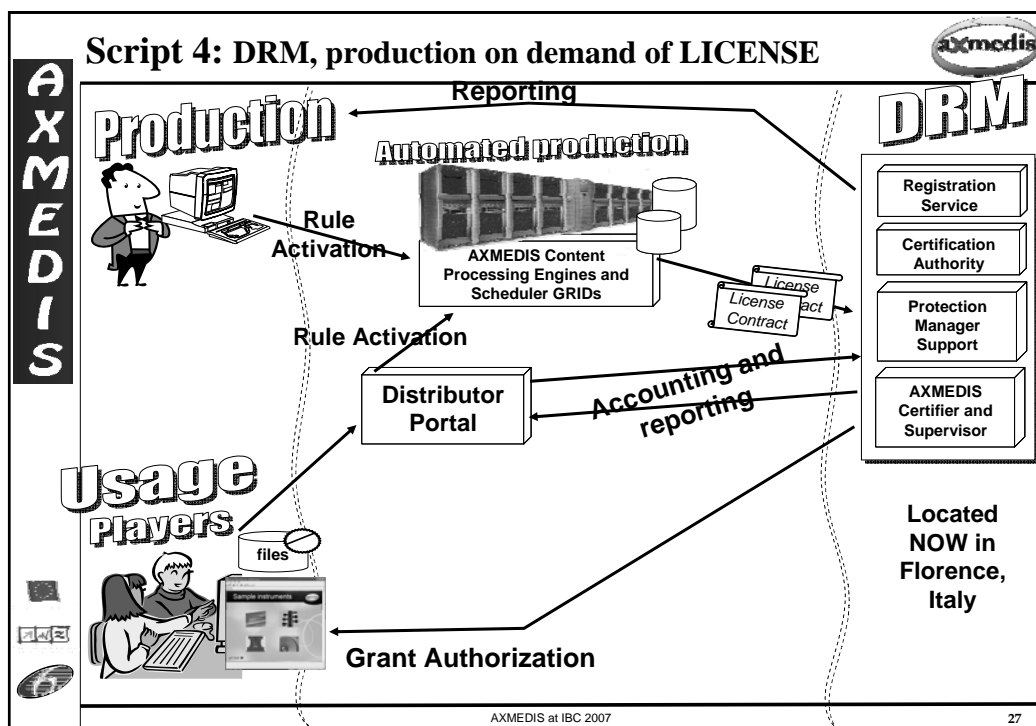


Script 4: DRM, production on demand of LICENSE




- I **Purpose**
 - ♣ Usage of a customizable process to automatically create Additional and/or on demand DRM LICENSES for already produced objects
 - ♣ Advantages:
 - Fully automation of LICENSES production for single and/or multichannel distribution
 - Fully open in terms of business models and DRMs
 - Make one use MANY MANY times for many many objects
- I **What is shown (can be shown)**
 - ♣ AXMEDIS model (MPEG-21), License model also
 - ♣ Automated Production and publication of licenses
 - ♣ Usage of the AXCP Quick Start for GRID simple usage
 - ♣ AXCP Rule activation
 - Eventual usage of the AXMEDIS Scheduler, AXMEDIS Rule Editor
 - ♣ Usage of one or more AXMEDIS Players
 - Evidence that before licensing is not working and after licensed the user can play the object.
 - ♣ Usage of the DRM
 - Eventual usage of the CAMART for the evidence of the consumption



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- ### Script 4: DRM, production on demand of LICENSE
-
- AXMEDIS
- | **Explain the purpose of the script**
 - ♣ Before the activation the play is not possible on that object
 - | **Usage of the AXCP Quick Start**
 - | **Activation of a script for the creation of licenses of different kind for a list of objects for a specific AXUID**
 - ♣ Take the AXIUD from the file or list
 - | **The script is posting the license on the AXMEDIS PMS in Florence, Italy**
 - | **After the licensing the play is possible**
 - | **Double click and thus PLAY of the object**
 - | **Show the object hierarchy with its inside digital resources**
- AXMEDIS at IBC 2007
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SCRIPT 5

NodeProfile

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Script 5: P2P, monitoring of the single AXEPTool P2P node

Purpose

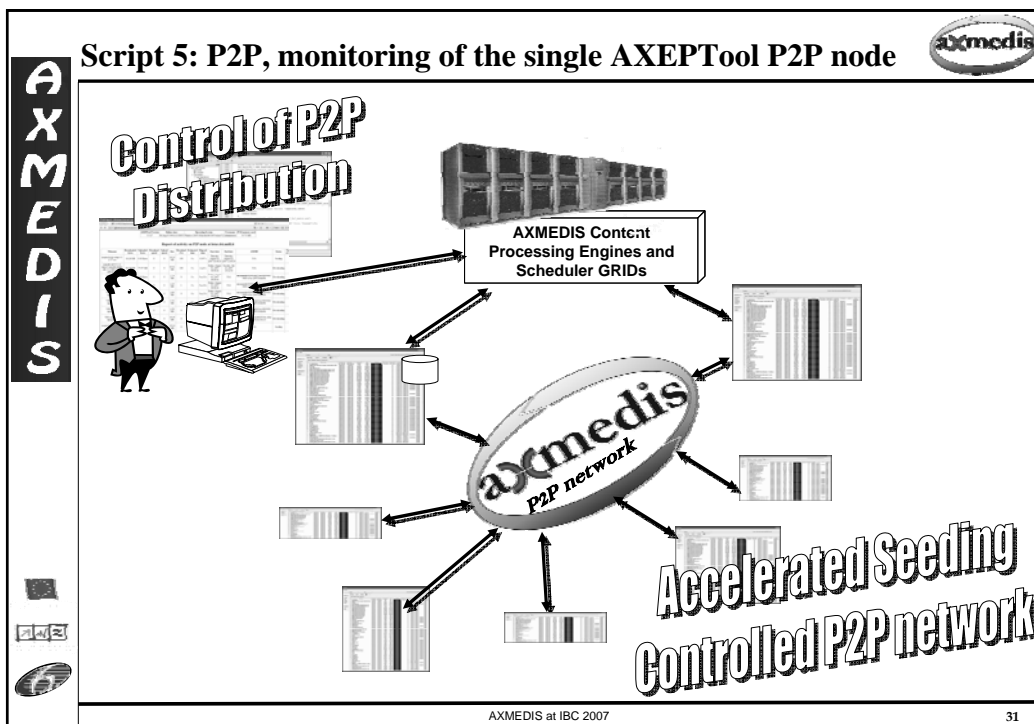
- ✦ Usage of a customizable process to automatically control and monitor a single P2P node, in this case monitoring the status
- ✦ Advantages:
 - Usage of a P2P network as publication channel, reduction of publication costs
 - Monitoring and controlling the P2P network via Super Nodes (AXEPTools)
 - BitTorrent Technology, very effective for large files sharing

What is shown (can be shown)

- ✦ Read the AXEPTool flyer to see the issues to claim
- ✦ Show of the AXEPTool, P2P tool
 - AXMEDIA tool is a simplified version without control capabilities
- ✦ Control/monitor of the P2P network
- ✦ Usage of the AXCP Quick Start or of the AXMEDIS Editor
- ✦ AXCP Rule activation
 - Eventual show of the AXMEDIS Scheduler
- ✦ Monitoring of one or more AXEPTools Nodes, by changing the IP,
 - it could be a parameter of the RULE

AXMEDIS at IBC 2007

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Last status of the P2P Network

AXMEDIS P2P Node Status


Node Profile (lotar.dsi.unifi.it)

AXEPTool Version	Online since	Operating System	Username	JVM memory used
3.2.21	Tue Aug 28 09:25:04 CEST	Windows 2003 OS/Arch:386 OS/Version:5.2	Administrator	64.59 MB

Report of activity on P2P node at lotar.dsi.unifi.it

Filename	Size	Download (%)	Start date	End date	AXOID	Status	Number of seeds	Number of peers
ce-did-inputs.zip	28.17 MB	0	Monday, August 27, 2007 18:57:55	N/A	N/A	Downloading	0	8
IBC2007_DEMO_s_Gekkin_IBC_PDA.azm	80.10 KB	100	Monday, August 27, 2007 20:21:11	Tuesday, August 28, 2007 09:24:28	urn:axmedis:00002:obj:848b230c-5b3d-37de-0a11-d4663ba818009	Seeding	0	8
IBC2007_DEMO_s_test_image_Leeds.azm	4.57 MB	100	Monday, August 27, 2007 20:22:32	Tuesday, August 28, 2007 09:25:30	urn:axmedis:00002:obj:dd7446a3-9477-3bd2-a110-465d83c4e45a	Seeding	0	8
IBC2007_TESTCaspasodi_a_nastiera.azm	609.46 KB	0	Monday, August 27, 2007 18:58:59	N/A	urn:axmedis:00002:obj:9938e6ef-e3ee-7ab6-bc0a-982356ac3f25	Downloading	0	9
001_chikara Lapi photo gallery.azm	137.21 KB	100	Tuesday, August 28, 2007 02:34:12	Tuesday, August 28, 2007 09:25:31	urn:axmedis:00000:obj:c7842d0-0b6f-4e59-a0a7-446dfc-7ba	Seeding	0	9
IBC2007_TESTPiero_della_Francesca.azm	203.76 KB	0	Monday, August 27, 2007 19:00:04	N/A	urn:axmedis:00002:obj:34c3a9bb-c174-337e-9631-9a431d4d2e26	Downloading	0	9
Nim-garden-P6281696-H.azm	496.02 KB	100	Tuesday, August 28, 2007 04:32:07	Tuesday, August 28, 2007 09:25:32	urn:axmedis:00000:obj:95016b6-3c7a-4592-ad70-d27c85ab485e	Seeding	0	9
IBC2007_TESTCivelli_Carlo.azm	165.78 KB	0	Monday, August 27, 2007 19:00:59	N/A	urn:axmedis:00002:obj:d34c8822-9711-3323-a2d1-e35dcac5190f	Downloading	0	9
003_mandolino napoletano Viancino photo gallery.azm	204.90 KB	100	Tuesday, August 28, 2007 05:50:47	Tuesday, August 28, 2007 09:25:33	urn:axmedis:00000:obj:2c79b0de-1dd7-40bb-a393-dae6d872304	Seeding	0	9
084_viola d'amore Achare photo gallery(test timore).azm	130.55 KB	0	Monday, August 27, 2007 19:02:45	N/A	urn:axmedis:00000:obj:and5241-bd73-4a35-ba30-8e84a379176	Downloading	0	8


IBC2007 Amsterdam - Tue Aug 28 2007 13:59:23 GMT+0200 (ora legale Europa occidentale)

Script 5: P2P, monitoring of the single AXEPTool P2P node 


AXMEDIS

- | **Explain the purpose of the script:**
 - ♣ the monitoring of a single SUPER NODE of the P2P NETWORK for Publication and Download. The status has to report the profile of the node, the number of objects, the list of them, their status, etc....

- | **Using the AXCP Quick Start of AXCP Rule Editor**
- | **Loading of the RULE**
- | **Activation of the Rule**
- | **Execution of the RULE**
 - ♣ The rule produces automatically an HTML page with a selection of the collected information
- | **Show the results on the screen**
- | **Eventual Shown of the AXEPTool for P2P sharing**
- | **Eventual Shown of the P2P Query Support**
- | **Eventual Shown of the P2P AXEptool in Florence**
- | **Eventual Shown of the P2P AXTRACKER:**
 - ♣ <http://axtrk.axmedis.org:8080/AXTrackv2/>




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AXMEDIS

| SCRIPT 6

| P2PNetwork



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Script 6: P2P, monitoring of the whole AXEPTool P2P Network 




AXMEDIS

I Purpose


- ♣ Usage of an automated customizable process to control and monitor the WHOLE P2P Network of AXMEDIS via Supernodes
- ♣ advantages:
 - Usage of a P2P network as publication channel
 - reduction of publication costs, reduction of seeding time
 - Monitoring and controlling the P2P network via Super Nodes (AXEPTools)
 - BitTorrent Technology

I What is shown (can be shown)

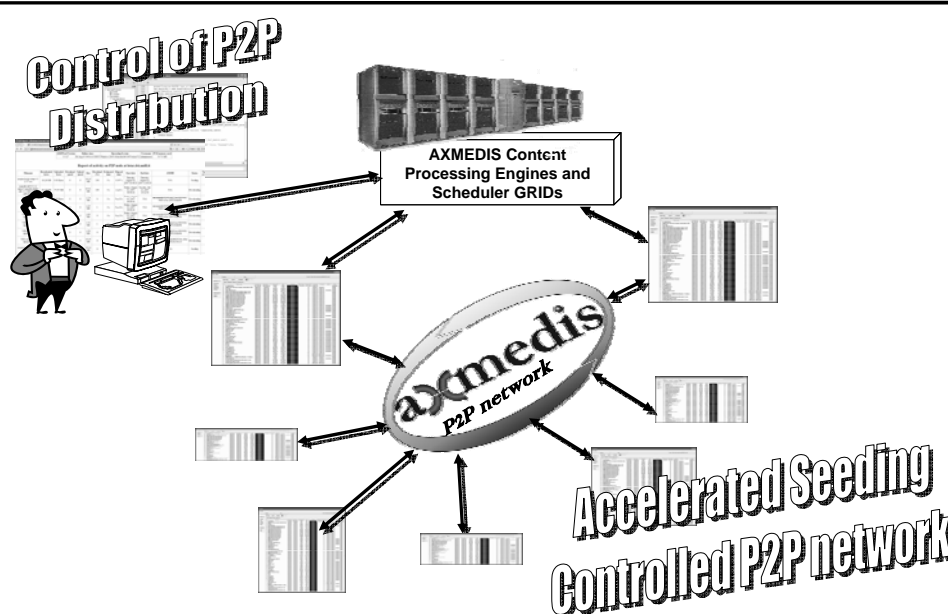
- ♣ Show of the AXEPTool, P2P tool
 - Eventual Shown of the AXMEDIA tool
- ♣ Control of the P2P network
- ♣ Usage of the AXCP Editor for the rules
- ♣ AXCP Rule activation
 - Eventual show of the AXMEDIS Scheduler
- ♣ Monitoring the whole nodes AXEPTools Nodes

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Script 6: P2P, monitoring of the whole AXEPTool P2P Network 

AXMEDIS






Control of P2P Distribution


AXMEDIS Content Processing Engines and Scheduler GRIDS

axmedis P2P network

Accelerated Seeding Controlled P2P network




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Last status of the P2P Network

- | **lotar.dsi.unifi.it (150.217.15.248), Italy**
- | **University of Leeds 1 (129.11.117.223, 129.11.117.179), UK**
- | **Telecom Italia (82.90.96.218), Italy**
- | **BBC (132.185.133.21), UK**
- | **ILABS (85.18.48.130), Italy**
- | **XIM (87.194.208.57), UK**
- | **AFI (62.94.61.241), Italy**
- | **VRS (217.117.19.226), Lithuania**
- | **Tiscali (213.205.45.50), Italy**
- | **ANSC (82.191.52.6), Italy**
- | **Sejer (212.94.191.72), Paris, France**
- | **Fraunhofer (192.44.35.27), Darmstad, Germany**
- | **sDae (195.55.243.2), Spain**
- | **etc.**

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



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Last status of the P2P Network


Connected Peers in the AXP2P Network

lotar.dsi.unifi.it (150.217.15.248) connected (v3.2.21) online since Tue Aug 28 09:25:04 CEST with 1262 objects
University of Leeds 1 (129.11.117.223) connected (v3.2.20) online since N/A with undefined objects
University of Leeds 2 (129.11.117.179) connected (v3.2.20) online since Fri Aug 24 17:18:31 BST with 1350 objects
Telecom (82.90.96.218) connected (v3.2.21) online since Mon Aug 27 13:50:06 CEST with 1366 objects
BBC (132.185.133.21) connected (v3.2.17) online since Tue Aug 28 09:40:12 BST with 1344 objects
ILABS (85.18.48.130) not connected (timeout 10 seconds)
XIM (87.194.208.57) connected (v3.2.17) online since Tue Aug 28 08:54:21 BST with 1786 objects
AFI (62.94.61.241) not connected (timeout 10 seconds)
VRS (217.117.19.226) connected (v3.2.17) online since N/A with 1462 objects
ANSC (82.191.52.6) not connected (timeout 10 seconds)
Sejer (212.94.191.72) not connected (timeout 10 seconds)
sDae (195.55.243.2) not connected (timeout 10 seconds)
Fraunhofer (192.44.35.27) connected (v3.2.17) online since N/A with undefined objects
Tiscali (213.205.45.50) not connected (timeout 10 seconds)
Return: undefined


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P2P Network, Some Numbers


- | **Number of Supernodes controlled by the AXCP GRID:**
 - ♣ about 13
- | **Number of different objects in the test network since the beginning:**
 - ♣ 2700
- | **Number of alive objects in the test network, AXTracker catalogue:**
 - ♣ 1362
- | **Size of the present testing catalogue of 1362 objects:**
 - ♣ 16 Gbyte
- | **Number of different peers connected to the AXTracker:**
 - ♣ 262
- | **Number of active peers for the AXTracker in the last 24 hours:**
 - ♣
- | **Number of active peers related to the AXP2P.node objects:**
 - ♣ about 120



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Script 6: P2P, monitoring of the whole AXEPTool P2P Network

- | **Explain the purpose of the script:**
 - ♣ monitoring the status of the WHOLE P2P NETWORK for Publication and Download, how many nodes are active, how many objects they have, etc., which is the status of each of them if needed as in the SCRIPT 5.
- | **Usage of the AXCP Rule Editor**
- | **Select the Rule, activate the rule**
 - ♣ Monitoring the activities on the node on which it is executed
- | **Show the results on the screen, read them**
 - ♣ Show how may objects they have, who they are.
- | **Eventual Shown of the AXEPTool for P2P sharing**
- | **Eventual Shown of the P2P Query Support**
- | **Eventual Shown of the P2P AXEptool in Florence**
- | **Eventual Shown of the P2P AXTRACKER:**
 - ♣ <http://axtrk.axmedis.org:8080/AXTrackv2/>



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SCRIPT 7

DownloadFromP2P



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Script 7: automated P2P downloading from the P2P Network

I Purpose

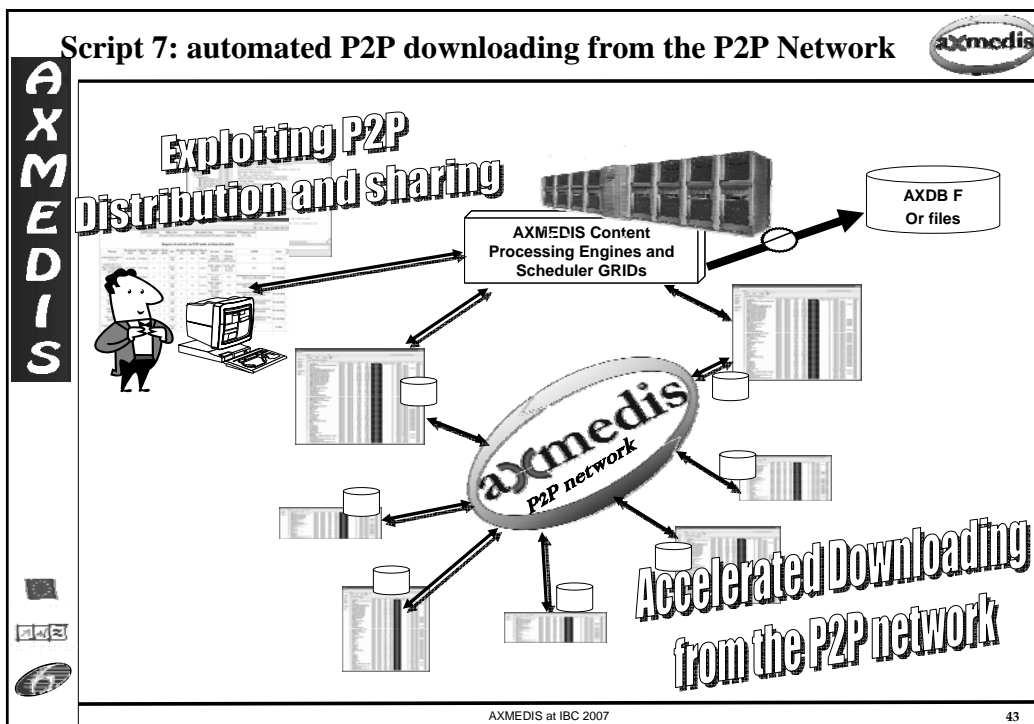
- ♣ Usage of a customizable process to automatically download content from the P2P Network, make a query on the P2P network and start the download, take and objects and put them into the database, etc.
- ♣ Advantages:
 - Usage of a P2P network as distributed database and for content downloading B2B P2P channel
 - reduction of content acquisition costs
 - BitTorrent Technology

I What is shown (can be shown)




- ♣ Make a query/selection, with the AXCP Quick Start
- ♣ Show of the AXEPTool, P2P tool
 - Eventual Shown of the AXMEDIA tool
- ♣ Usage of the AXCP Editor for the rules
- ♣ AXCP Rule activation
 - Eventual show of the AXMEDIS Scheduler



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- Script 7: automated P2P downloading from the P2P Network**
-
- AXMEDIS**
- | **Explain the purpose of the script:**
 - ♣ Make a query on the P2P network on the basis of complet metadata, may be including also PAR, automating the downloading from the WHOLE P2P NEWWORK
 - | **Working with the AXCP Quick Start or with the AXCP Editor**
 - | **Make a QUERY identify more Objects into the P2P**
 - ♣ The query has to get content posted on P2P and present in several supernodes of the P2P network: thus content including into the title "IBC" and/or "IBC_PDA"
 - ♣ they have to well seeded into the P2P network
 - | **Loading of the RULE**
 - | **Activation of the Rule**
 - | **Execution of the RULE**
 - | **The chosen obejcts are listed into the downloading list on the reference AXEPTool,**
 - ♣ the download starts from the P2P network
 - | **Show the results on the screen**
 - | **Eventual Shown of the AXEPTool for P2P sharing**
 - | **Eventual Shown of the P2P Query Support**
 - | **Eventual Shown of the P2P AXEPTool in Florence**
 - | **Eventual Shown of the P2P AXTRACKER**
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SCRIPT 8

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Script 8: Crawling, production, adaptation, delivering

I Purpose

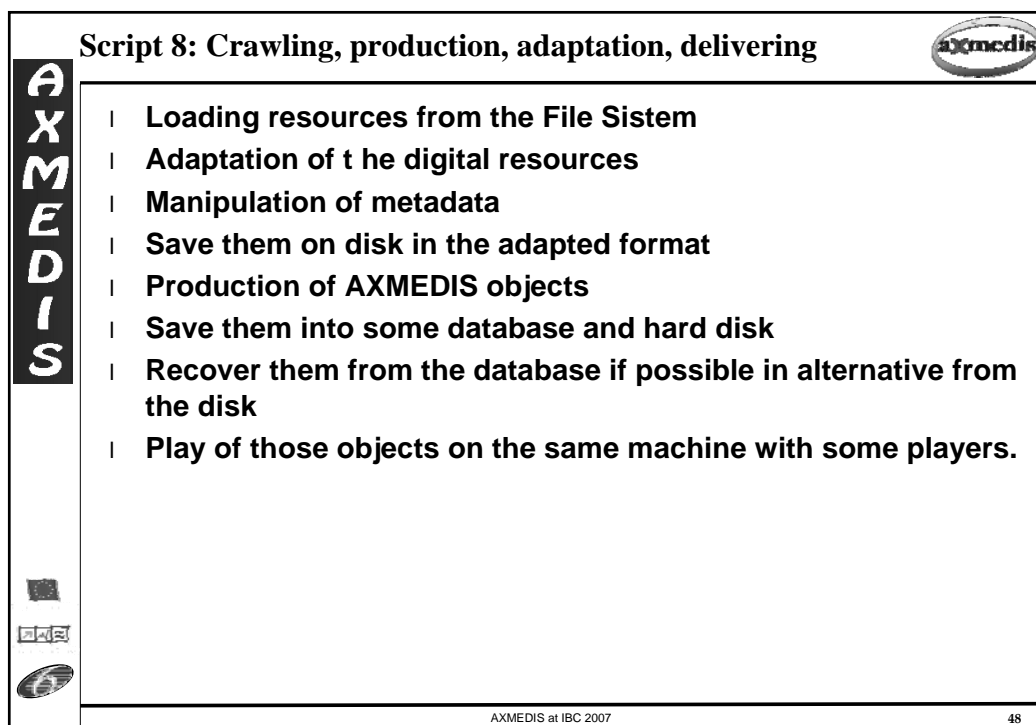
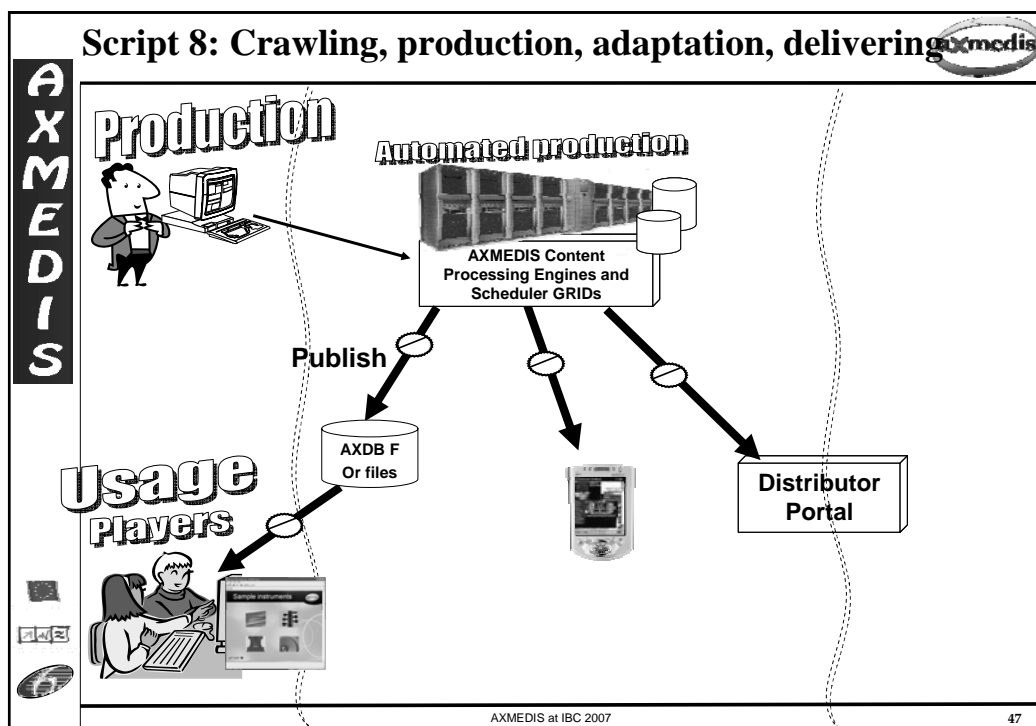
- ♣ Usage of an automated customizable process to get resources and metadata from legacy CMS, create content objects for different terminals/devices (multichannel), distribute them, and use them.
- ♣ advantages:
 - Fully automation of the content production and publication, for multichannel distribution
 - Fully customization in terms of metadata and composition, production and protection
 - Make one use MANY MANY times for many many objects



I What is shown (can be shown)

- ♣ AXMEDIS model (MPEG-21)
- ♣ Automated Content crawling, production, adaptation and publication
- ♣ Usage of the AXCP Editor
- ♣ Usage of several adaptation algorithms and tools
- ♣ AXCP Rule activation
 - Eventual usage of the AXMEDIS Scheduler, AXMEDIS Rule Editor
- ♣ Usage of one or more AXMEDIS Players


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Features of AXCP




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AXMEDIS processing capabilities

- | **Processing on**
 - ♣ Metadata
 - ♣ Text and documents
 - ♣ Audio files
 - ♣ Video files
 - ♣ Image files
 - ♣ Multimedia
 - ♣ XML
- | **Communication**
 - ♣ Access to databases, CMS, crawlers, etc.
 - ♣ FTP, HTTP, etc...
 - ♣ Send Mails
- | **Distribution and publication**
 - ♣ Access to FTP, Web services, P2P, etc.




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Processing METADATA on AXCP and AX-EDITOR


- I **Accessing to legacy CMS in several manners and protocols**
 - ♣ via a crawler (SearchBox), or
 - ♣ directly with ODBC, query, HTML, ft, WEBdav, WEB Services, etc.
 - ♣ Database to make and actualise queries
- I **Accessing and defining AXInfo Metadata**
 - ♣ Dublin Core, several IDs
 - ♣ Any MPEG-7
 - ♣ Business Metadata
 - ♣ Potentially Available Rights, PAR, Licensing information
 - ♣ Any kind of Descriptors
 - ♣ Workflow information
 - ♣ Protection information
- I **Metadata Mapper based on XSLT**



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Processing TEXT on AXCP and AX-EDITOR

- I **Text/Document adaptation and transcoding**
- I **Text KeyWords**
 - ♣ Extraction from comparison
 - ♣ Extraction from semantic analysis
- I **Text Transcoding by format**
 - ♣ PDF-TXT, HTML, PS, RTF, Msword, Plain
- I **Text Fingerprint**
 - ♣ Extraction
 - ♣ Compare
 - ♣ Plagiarism detection




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Processing AUDIO and RING on AXCP and AX-EDITOR




- | **Audio adaptation and transcoding**
- | **FFMpeg Library**
 - ♣ Audio Transcoding
 - ♣ WAV, WMA, MPEG, VORBIS, AC3, DV, MACE, ADPCM, AAC, real audio, etc.
- | **LSAudio Library**
 - ♣ Audio Transcoding
 - ♣ WAV, AIFF, PARIS, NIST, SVX, IRCAM, W64, SD2, ETC.
- | **RingTones production:**
 - ♣ Convert to MP3, WAV
 - ♣ Resample, clip, etc.
- | **Audio descriptors:**
 - ♣ Low level descriptors extractor
- | **Audio fingerprint:**
 - ♣ extractors and compare, plagiarism

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Processing VIDEO and IMAGES on AXCP and AX-EDITOR



- | **FFmpeg Library**
 - ♣ Video Transcoding
 - ♣ Mpeg, mpeg2, mp4, raw, h263, wmv, asf, svq, dv, h264, vp3, ffv, flash, etc.
- | **Video fingerprint**
 - ♣ Extraction
 - ♣ Compare
- | **ImageMagik Library full**
- | **Image Conversion: > 100 formats**
 - ♣ Jpg, gif, png,
- | **Image Processing:**
 - ♣ Contrast, edge, blur, media, mirror, equalize, magnify, resize, rool, scale, shade, negate, noise, replace, shear, spread, etc.


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Processing MULTIMEDIA on AXCP and AX-EDITOR


- | **Managing complex formats:**
 - ♣ MPEG-21
 - ♣ SMIL, HTML
 - ♣ OMA
- | **Formatting of SMIL, templates, style sheets**
 - ♣ Templates Descriptors
 - ♣ Style Descriptors
 - ♣ Resource Descriptors
- | **Genetic optimisation of paramters**
- | **Processing XML files, E4X into the Java Script**
- | **MPEG-21 DIA: Terminal/device, user, network**
- | **Transcoding and production:**
 - ♣ MP4->3gp, Mp4 -> ISMA, Add Multimedia, create MP4
 - ♣ Delay track, remove track, etc.
 - ♣ MP4 -> AVI



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Processing DISTRIB/PUBLIC on AXCP and AX-EDITOR

- | **Several Communication capabilities:**
 - ♣ WEB Services, HTTP, FTP, File System, etc.
 - ♣ Accesses to the Operating System
 - ♣ Accesses to databases
- | **Controlling/Monitoring P2P single node**
- | **Controlling/Monitoring P2P network**
- | **Publishing/seeding content on P2P**
- | **Downloading content from P2P**
- | **Publication of Content via WEB Services**
- | **Publication of Programme via Programme and Publication tool**



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ShowCase

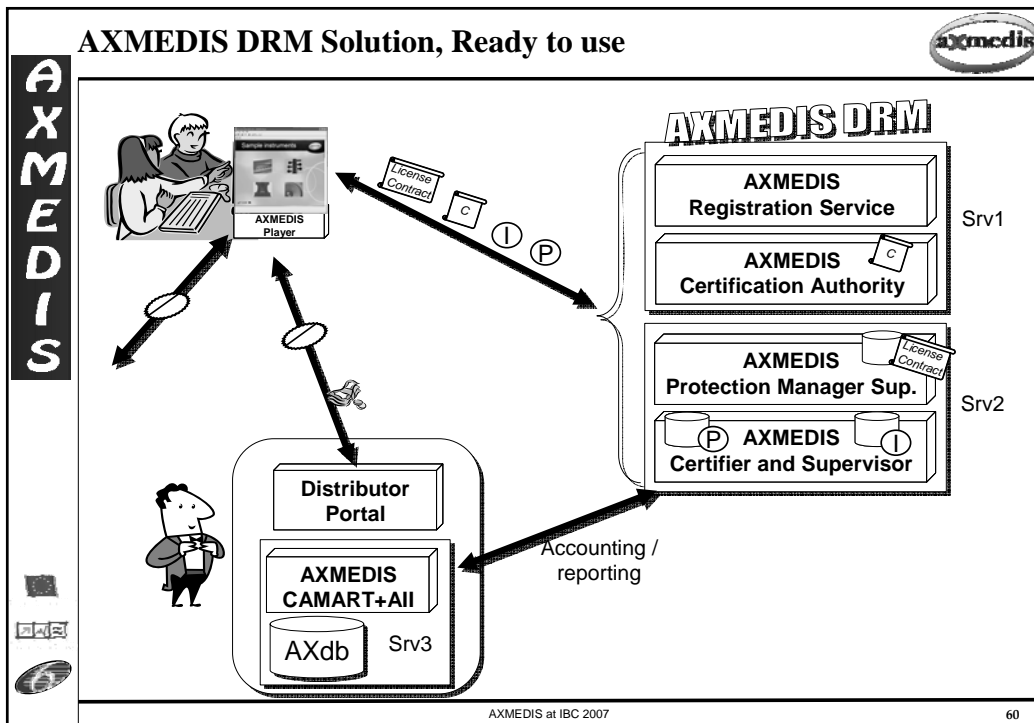
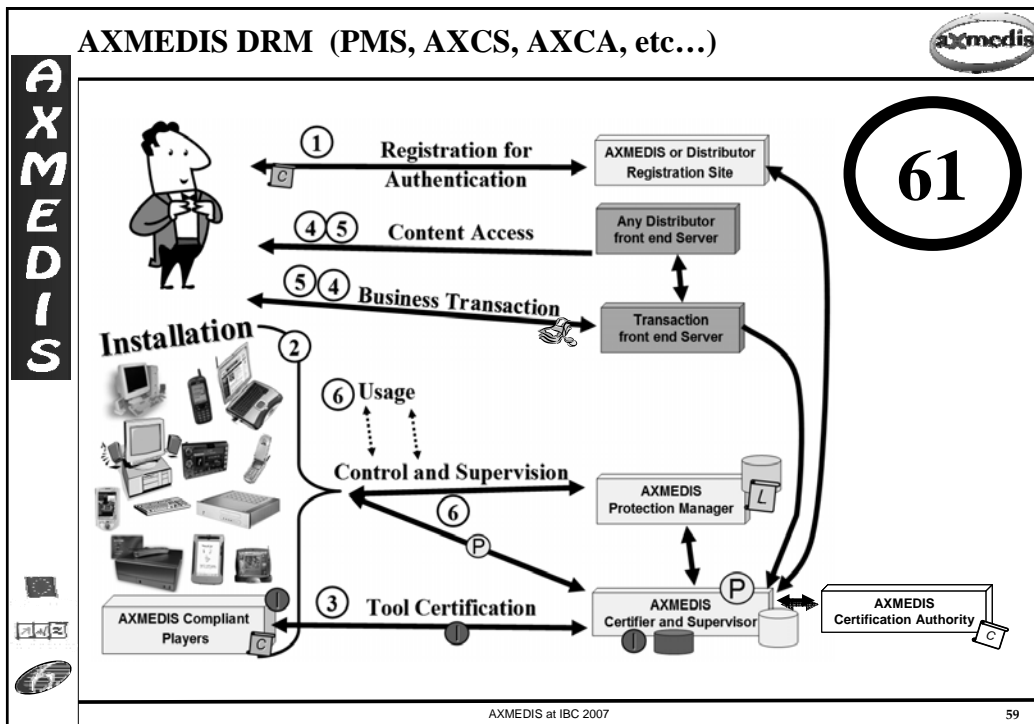
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Proposed Basic Configurations, SHOW CASE

- | **AXMEDIS Authoring tools**
 - ♣ Simple tools in CDs (only SW)
- | **AXMEDIS DRM**
 - ♣ Simple tools in CDs (only SW)
 - ♣ AXMEDIS DRM, ready to start (HW and SW installed)
- | **AXMEDIS players**
 - ♣ Standard and
 - ♣ Customized players
- | **AXCP, Content Processing GRID platform**
 - ♣ Simple tools in CDs (only SW)
 - ♣ AXCP, ready to start (HW and SW installed)
- | **Controlled P2P Network**
 - ♣ Simple tools in CDs (only SW)
 - ♣ Controlled P2P Network, ready to start (HW and SW installed)
- | **Final Users' Content Posting and distribution**
 - ♣ Simple tools in CDs (only SW)
 - ♣ Content Posting, ready to start (HW and SW installed)


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Interoperable Players

- I **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
- I **PDA player:**
 - ✦ MPEG-4, SMIL, HTML
- I **STB player:**
 - ✦ for IPTV
 - ✦ for DVB-S
 - ✦ MPEG-2, MPEG-4
- I **Mobile player:**
 - ✦ A pure Java player will be ready for October 2007
 - ✦ SMIL support with Audio Visual, MMAPi of Java



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