



Automating Production of Cross Media Content for Multi-channel Distribution

www.AXMEDIS.org

DE9.4.5

Final report on Demonstration on content production and distribution for PC

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Abstract:

This is a report on the detailed specifications for demonstrating the content distribution via internet

Keyword List:

Distribution channel, content, mock-up, prototype

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1 Executive Summary and Report Scope

This document represents an accompanying documentation to the integrated prototype for content production and distribution via Internet as defined in the WP9.4. It contains a description of the prototype for content distribution via internet as specified on DE9.4.1 according with specifications resulting from WP4 and WP5.

2 Introduction

Among the available distribution channels, this document focuses on the Internet channel providing content (mainly video content) to PC.

Target market of internet distribution prototype is young people that consume video content on the web such as video clips, music, etc.

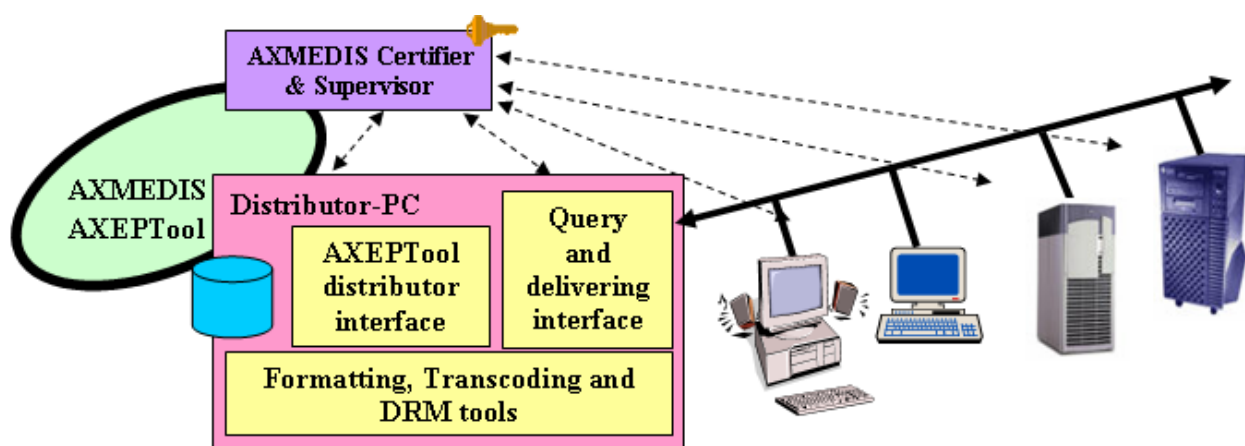
During the experimental phase the sequent business model will be presented:

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

The architecture, fully with all the AXMEDIS components, provide a complete and easy to use environment for the publication and up-selling of content over the Internet. Access to the multimedia content available on the AXMEDIS P2P network will be offered interfacing the system with the AXEPTool.

The current implementation of the Media Center has been integrated with the AXMEDIS framework to obtain an end-to-end solution for acquiring, importing, publishing, up selling and delivering the broadband content that will be available on the AXMEDIS network.

The system is designed to support all main business models for content delivery, like free-to-air, subscription, Pay per view, etc.



AXMEDIS Distribution towards PC and Archive Servers

Demonstrator scenarios are focused not only on selling content to the end users but even on the services offered to the "Content Distributor" here intended as the actor that is responsible on new content identification. We are mainly talking about the easy way to identify new contents thanks to AXMEDIS B2B P2P network where content producer are publishing their media catalogue offer, and we are talking on AXMEDIS CAMART that can be used for statistical analysis of content usage helping the "Content Distributor" to identify content trends of his web site community.

2.1 AXMEDIS Framework

AXMEDIS framework brings together innovative methods and tools to speed up and optimize content production and distribution at reduced costs, for leisure, entertainment and digital content valorisation and exploitation.

The AXMEDIS framework has two main areas: the production (also referred to as AXMEDIS Factory) and the distribution. The AXMEDIS Factory is responsible for the whole spectrum of content production such as Content Processing, Database, Editors and Viewers, and so on. The distribution area includes the distributors who deliver digital contents via different channels including the web, the AXMEDIS P2P tool for B2B distribution, and the AXMEDIS Players for end users. Both the production and the distribution areas are connected to the AXMEDIS Protection and Supervising Tools that support digital rights management, AXMEDIS DRM.

2.2 Content Distribution via Web

System functionalities for content distribution toward Internet are mainly split in two groups. In the first one are grouped all back office functionalities provided by the system while in the second one are grouped functionalities exposed to the end user.

The back office main functionalities are the following one:

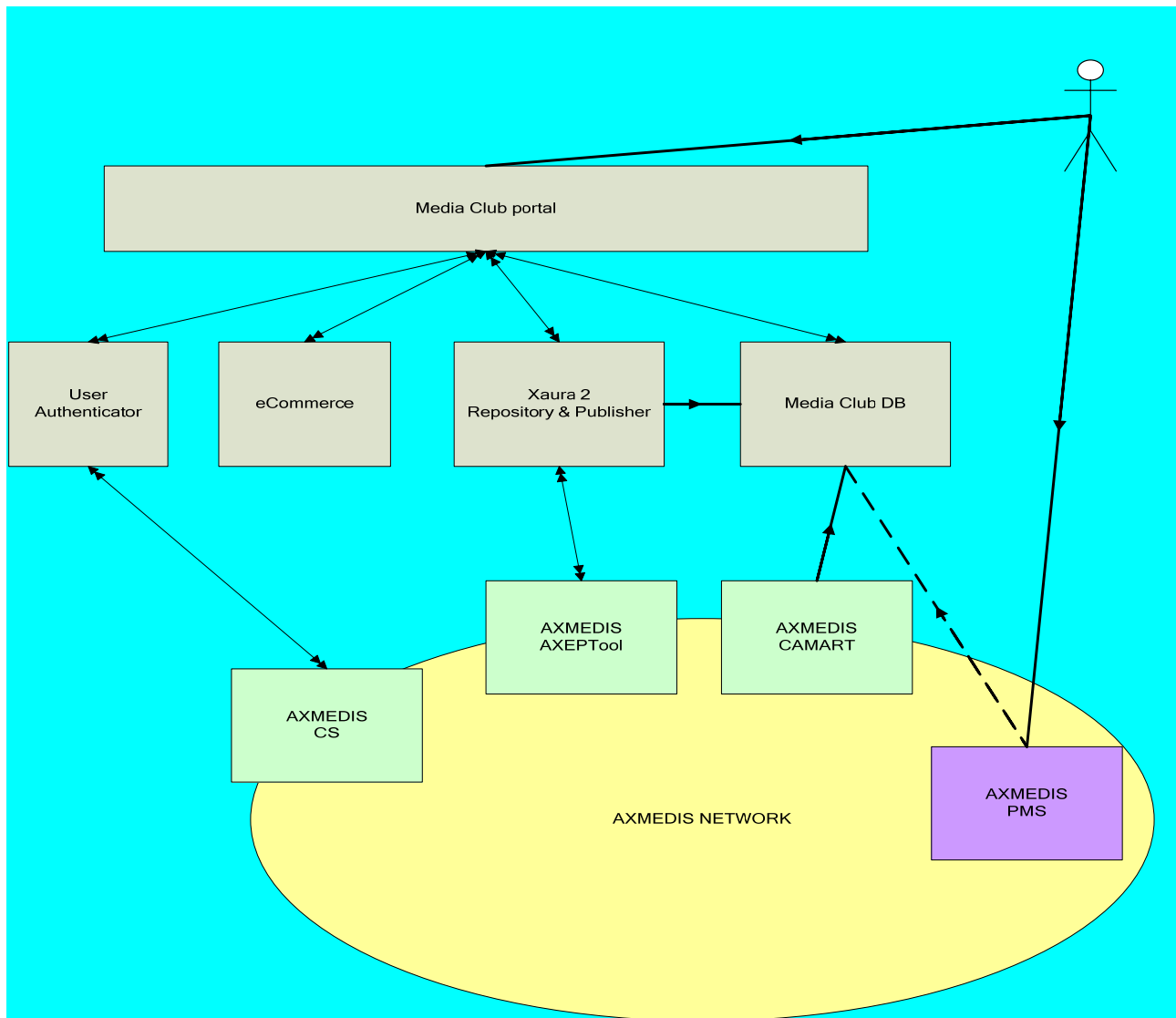
- Content acquisition within the AXMEDIS P2P network (using the AXEPTool the Mediaclub manager to search for new content in the network (AXMEDIS Network) acquire a distribution license for this content (off line step in the first stage) and add the content acquired to the mediaclub catalogue
- Content acquisition within the AXDB (interfacing the Query Support tool the Mediaclub manager to search for new content in the AXMEDIS Data Base, filtering the search by PAR (Potential Available Rights) acquire a distribution license for this content (off line step in the first stage) and add the content acquired to the Mediaclub catalogue
- CRM services: using the (AXMEDIS CAMART and AII) for reporting and customer caring purposes

The front-end main functionalities are:

- catalogue browsing;
- user registration,
- content purchase process
- content/license acquisition operation (interaction between AMEDIS Player, PMS and Distributor)

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The picture below summarize the Tiscali's Media Club main components for internet distribution.



The internet distribution system core is based on a Content Management System (CMS) called Xaura2 that allows the “Media Content Manager” to organize contents in its own catalogue (media file, description, price, etc.) and give it available for internet distribution (Media Portals).

Over the Xaura2 system, the other components that combined to create the distribution-to-internet system are:

1. **Media Club AX Plug-in** – A Xaura2 Component that shall interface the AXMEDIS platform, enabling and encapsulating AXMEDIS operations; retrieve catalogues, search for content, download media, permissions, etc.
2. **AXEPTool** – An AXMEDIS system that is required for the database (AXDB), search and storage services it offers.
3. **Xaura Media Repository** – The media content repository enhanced to support AXMEDIS content too.
4. **MediaClub Portal** – The web site portal offering media contents, managing media contents, end user subscription and profile, user portfolio, etc.
5. **MediaClub E-Commerce** – Payment gateway system, integrated with the MediaClub Portal to allow content payment to the end user.
6. **MediaClub Downloads** – Allows the end user to access to the media content offered in the MediaClub Portal.

7. **AXMEDIS CS** – Is the “AXMEDIS Certified Supervisor” here integrated to register new users in the AXMEDIS network or verify if the user is still an AXMEDIS user
8. **AXMEDIS PMS** – Is the “AXMEDIS DRM” to release to the end user licenses for AXMEDIS contents
9. **AXMEDIS CAMART and AII** - Is the AXMEDIS accounting management and reporting interface

3 Description of the demonstrator show case

The showcase by TISCALI lets you experience digital content acquisition and distribution through a Media Catalogue published on the web. Digital content is mainly in the form of protected AXMEDIS Objects containing videos, related images and metadata. The showcase consists of two different aspects:

- back office activities of professional users
- distribution to consumer activities

3.1.1 For professional users

Business and technical users, such as media managers, can search and import multimedia content available on the AXMEDIS P2P network (AXEPTool) into the XAURA2 CMS (the Media Catalogue). They can enrich imported content with additional information such as cover images, price, license duration, information regarding the quality of the file. They can select content in the Media Catalogue for publication and make it available on the e-commerce website for consumers. Screenshots will illustrate the professional user experience (link with "Professional user experience - the Media Club BackOffice" below).

3.1.2 For consumers

Consumers can access the Media Catalogue on the demonstrator e-commerce website. The catalogue is organized with multiple sections, photos and a little description of the content. End users, after registration, can buy content choosing between different kinds of licenses (with limited or unlimited times view right).

Follow the steps below for a consumer experience of the Media Catalogue and AXMEDIS Player.

Service prerequisites for consumers:

- **AXMEDIS Player** - To access content (AXMEDIS Objects) from the Media Catalogue you must install the AXMEDIS Player on your PC. Download AXMEDIS Player [here](http://www.axmedis.org/documenti/view_documenti.php?doc_id=3734) (http://www.axmedis.org/documenti/view_documenti.php?doc_id=3734) or directly from the Media Club web site.
- **AXEPTool** - If you want to download content via a P2P network you must install the AXMEDIS P2P client on your PC. Download AXEPTool [here](http://www.axmedis.org/documenti/view_documenti.php?doc_id=3975) (http://www.axmedis.org/documenti/view_documenti.php?doc_id=3975). This download is optional, you can also choose to download content directly from the Media Club portal.
- **Register on Media Club and AXMEDIS** (please, use the MS Internet Explorer web browser!) - To purchase and download content from the Media Club portal you must register on the Media Club portal. To view downloaded content you must register to AXMEDIS and certify the AXMEDIS Player. For registration click [here](http://mediacub.tiscalilab.com/registration.jsp) (http://mediacub.tiscalilab.com/registration.jsp).

3.1.3 The consumer experience of the Media Club Catalogue

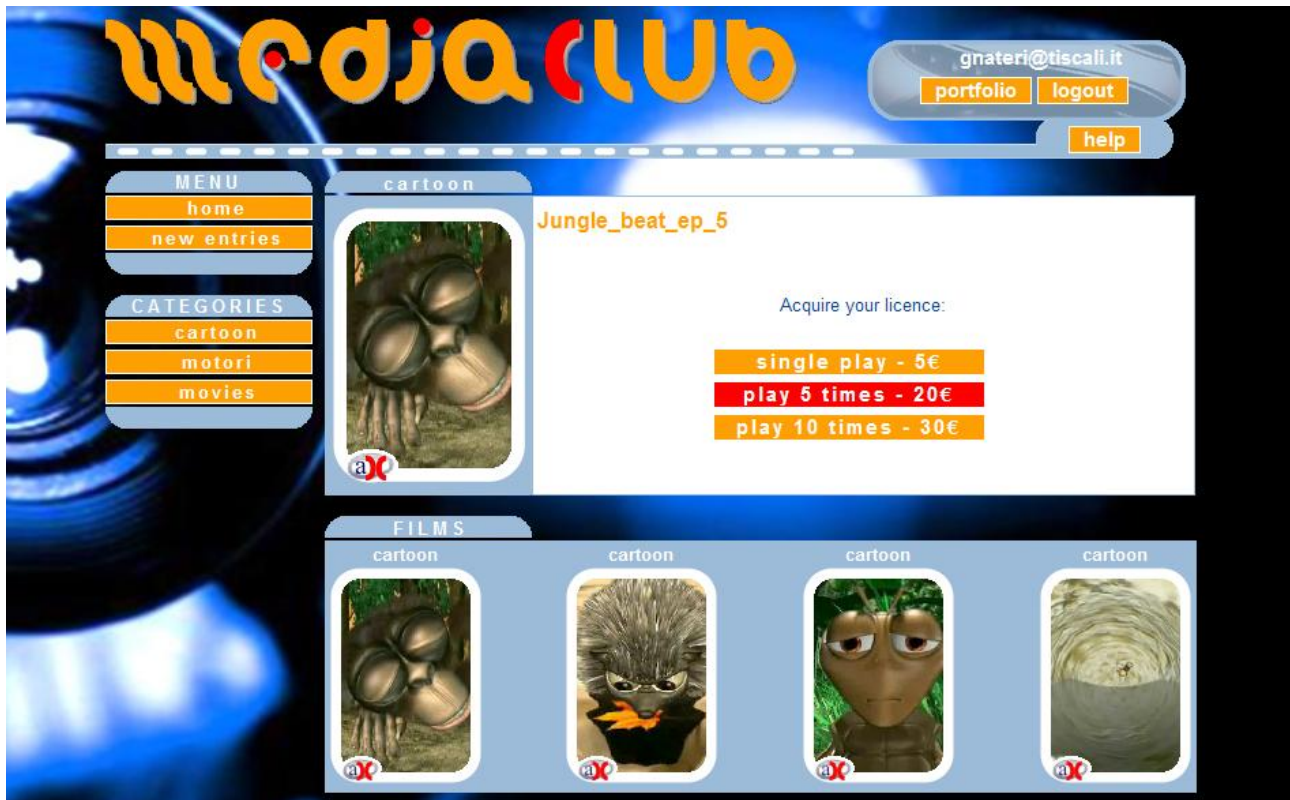
Visit the Media Club web site (<http://mediacub.tiscali.it>) with Internet Explorer. Being a demonstrator the web site does not provide customer support.



Anyone can browse the Media Club catalogue without having registered.

To fully test the catalogue including buying and viewing of videos, you must register and log in. The log in box is located in the top right corner of the Home Page.

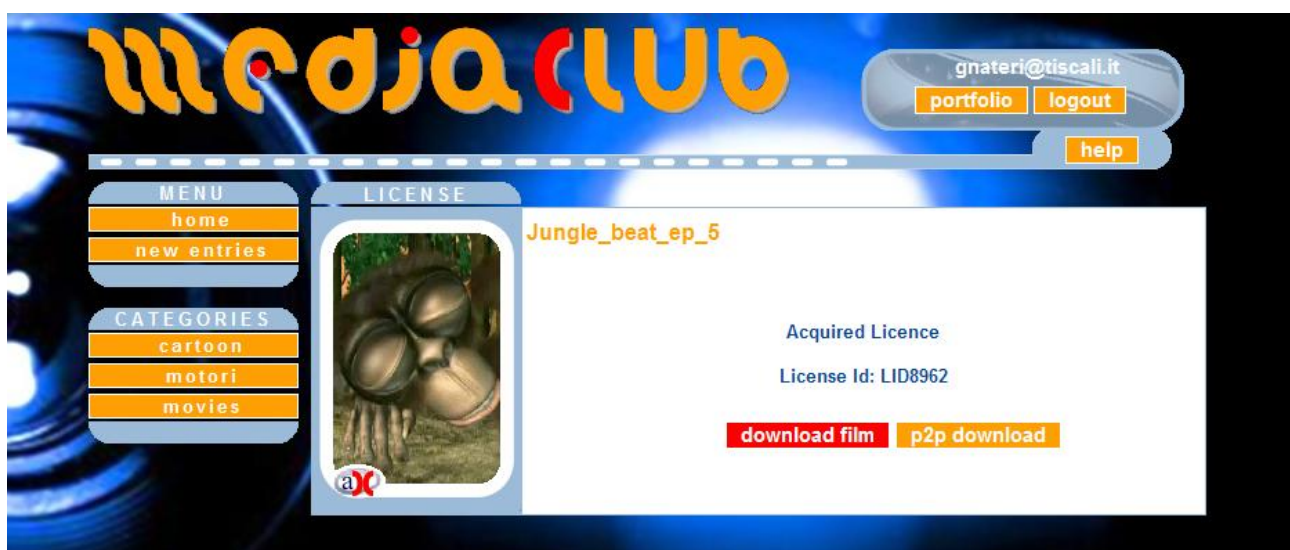
During purchase acquisition, a customer can choose from a few license policies according to what was previously negotiated between Content Producer and Content Distributor. **To experience purchase acquisition you can use the "test payment mode" free of charge.**



Supported payment methods are:

- Test Payment Mode (Free of charge!!!)
- Credit Card (Mastercard and Visa that remain disabled for all the trial phase duration)

After payment succeeded the license is issued and the content download page appears (see below).



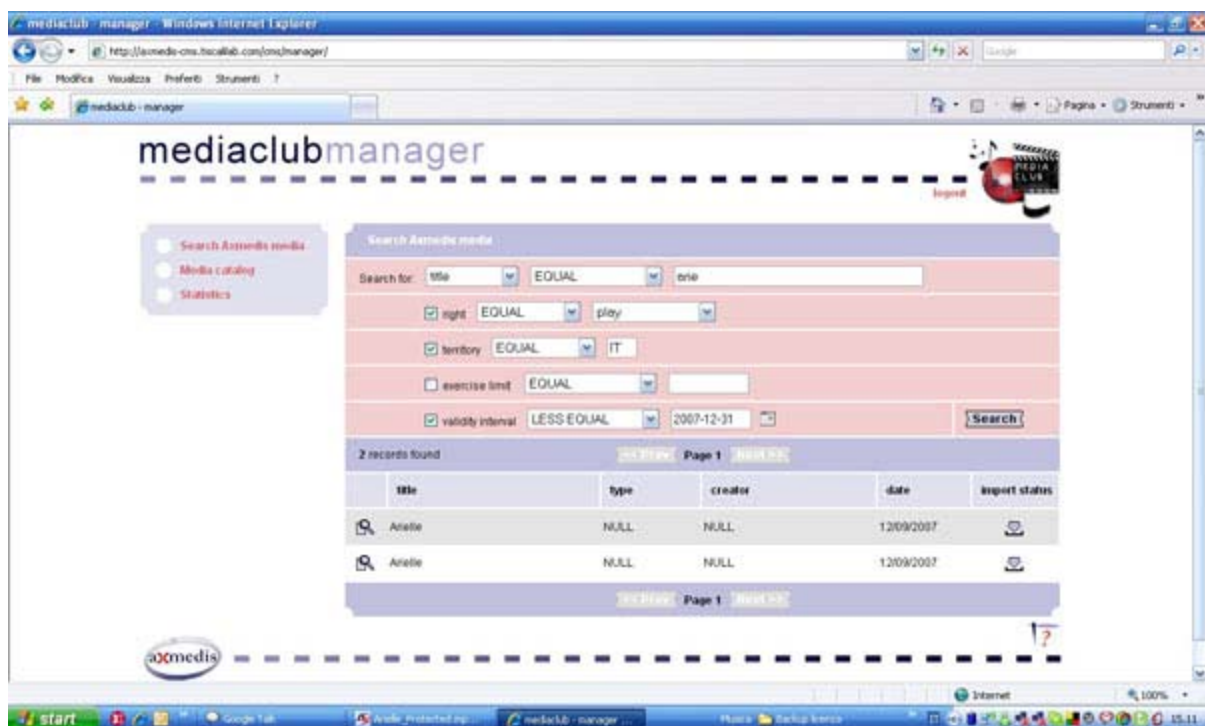
You can directly download the content or via the P2P Network if the AXMEDIS P2P client is installed on your PC.

3.1.4 The professional user experience of the Media Club BackOffice

The Media Club BackOffice is a closed test environment. Screenshots of the Media Club BackOffice system will give you an idea of the professional user experience.

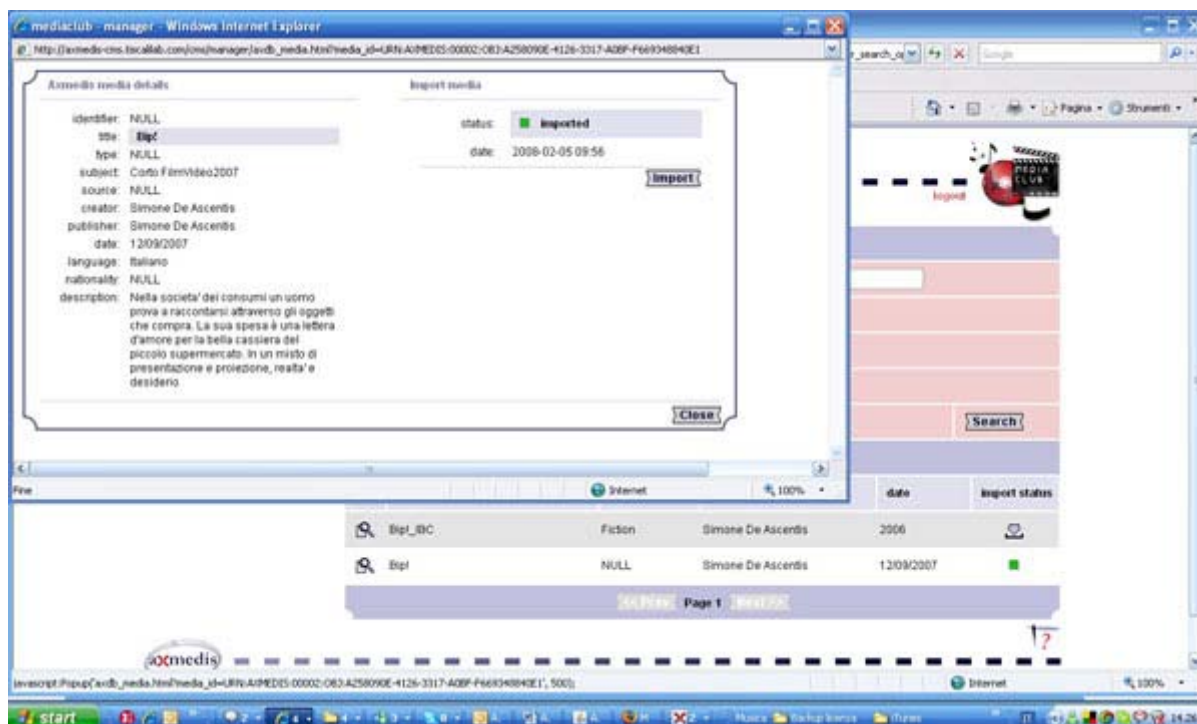
The Media Club BackOffice system interfaces with the AXMEDIS Network where the media manager can search for digital content (AXMEDIS Objects) which matches the target of the Media Club web site.

The media manager can search into the AXMEDIS Network specifying criteria such as title, descriptions, available rights, creator, and more.



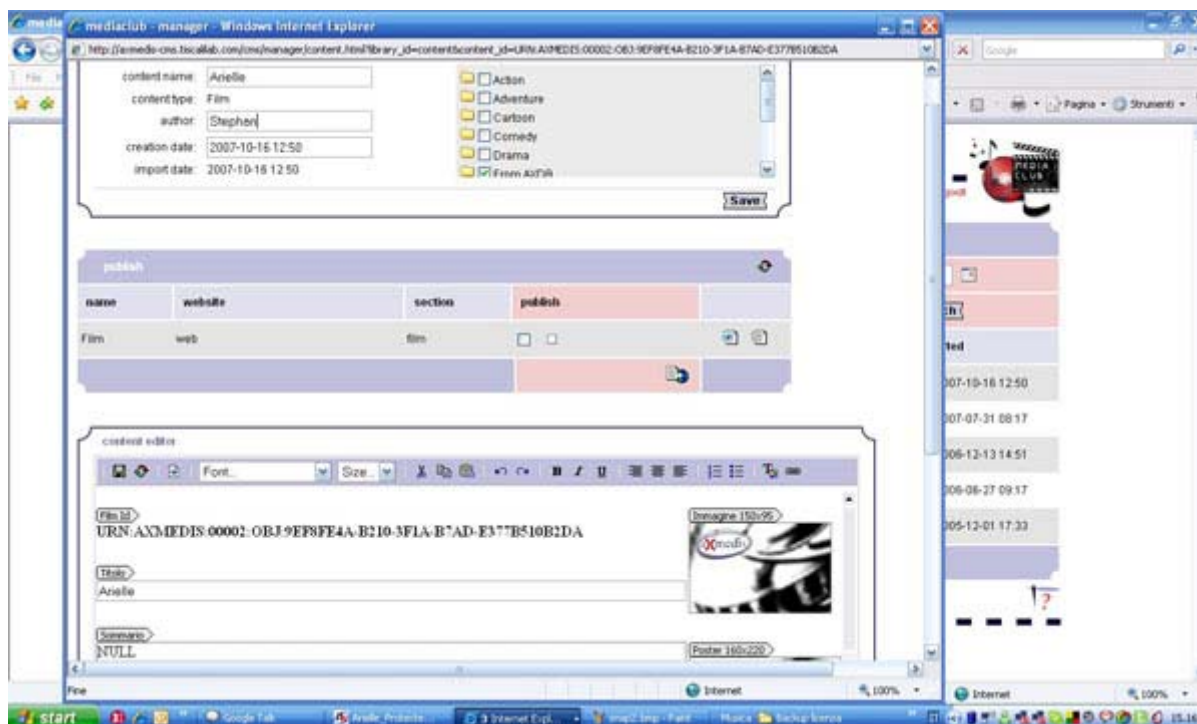
Once some relevant content was found, the media manager contacts the content owner to find a business agreement for the content distribution. This part is done outside the system. In the next step we assume that a business agreement was achieved and the content owner has created a "distribution license for the Media Club" for the selected digital content.

Now the content is ready to be imported in the Media Club Catalogue.



Once the content has been imported, the media editor is able to prepare the content to be published in the catalogue. He can add images related to the digital content, content descriptions and further details needed to present the content in the catalogue pages.

Finally, he can define the licenses and related prices available for the content. Now the content is ready for publication.



Finally, the media manager can access a statistics page to analyze the way in which consumers access and consume digital content, and to calculate consumption trends in order to identify best license policies (e.g. happy hour) for the content.

mediadub - manager Windows Internet Explorer

http://localhost:8080/manager/canet_statistics.js?htmlar_cid=bus_dowbus_cid=bus_jab=from_date=2007-06-16

File Modifica Visualizza Preferiti Strumenti ?

mediadub - manager Media Club

Search Statistics

Search: from: 2007-06-16 media id

creator: domain: work identification:

1044 records found 100% Page 1 Search

	media id	creator	operation	execution	registration
	URN:AIMEDIS:0002:OBJ:0909E87-1D09-3708-8467-1151830731B	URN:AIMEDIS:00002:BUS:DC999008-8E83-3EC0-ABC4-882122A0854C	mx.play	2007-10-18 10:50:02	2007-10-18 10:49:59
	URN:AIMEDIS:0002:OBJ:7382A059-8A61-31A1-8B51-D8D73ED1E3F3	URN:AIMEDIS:00002:USR:7C98E2E-60AD-3EB9-8478-9C2080CEE430	mx.play	2007-10-18 09:34:19	2007-10-18 09:34:23
	URN:AIMEDIS:00002:OBJ:9A295BCC-34DB-3B29-B26A-44EF8CFD9B51	URN:AIMEDIS:00002:BUS:DC999008-8E83-3EC0-ABC4-882122A0854C	mx.play	2007-10-18 08:43:19	2007-10-18 08:43:13
	URN:AIMEDIS:0002:OBJ:8905BACD-8687-3750-9C59-628F152AAF87	URN:AIMEDIS:00002:BUS:D6D45C52-602E-3AC2-995E-EF8097C794A8	mx.play	2007-10-15 17:36:14	2007-10-15 17:37:09
	URN:AIMEDIS:0002:OBJ:7ACB7F15-8B3A-3343-857F-EFA557BA71CA		mx.play	2007-10-15 17:35:29	2007-10-15 17:35:29
	URN:AIMEDIS:0002:OBJ:A2B1A7C4-789C-381C-AB77-5DACA164B6D0	CRE_10ca3186-b5e6-e08a-9781-c52676e19680	mx.play	2007-10-15 17:34:51	2007-10-15 17:33:44
	URN:AIMEDIS:00002:OBJ:9A295BCC-34DB-3B29-B26A-44EF8CFD9B51	URN:AIMEDIS:00002:BUS:DC999008-8E83-3EC0-ABC4-882122A0854C	mx.play	2007-10-15 16:22:20	2007-10-15 16:22:19
	URN:AIMEDIS:0002:OBJ:60FAF3C-4B4B-3349-BD6C-2E2E7195FF18	URN:AIMEDIS:00002:BUS:5A4C5269-F317-3EFA-ASD1-77CC50FB7E7B	mx.play	2007-10-15 16:15:24	2007-10-15 15:15:30
	URN:AIMEDIS:0002:OBJ:60FAF3C-4B4B-3349-BD6C-2E2E7195FF18	URN:AIMEDIS:00003:BUS:5A4C5269-F317-3EFA-ASD1-77CC50FB7E7B	mx.play	2007-10-15 16:15:23	2007-10-15 15:15:29
	URN:AIMEDIS:0002:OBJ:60FAF3C-4B4B-3349-BD6C-2E2E7195FF18	URN:AIMEDIS:00002:BUS:5A4C5269-F317-3EFA-ASD1-77CC50FB7E7B	mx.play	2007-10-15 16:14:44	2007-10-15 15:14:49

4 Demonstrator Trial

For the trial phase we started publishing 15 contents (small videos) subdivided in 3 categories, 5 contents each.

Most of the content are in Italian but there is even some content presented in English in the category cartoons. The reason of that have to be found in the fact that MediaClub web site will be promoted in the Tiscali web portal in Italy so, except for music contents, they aspect to watch content in Italian. This will help the first experience in the AXMEDIS world.

User has been attracted in to the MediaClub web site mainly through the following drivers:

- Tiscali Italia Technology web site (jack.tiscali.it);
- AXMEDIS projects web site (www.axmedis.org);
- Dissemination activities as defined in the project;

A news about AXMEDIS project was published in the Tiscali technology website explaining the project and providing the following links to go in deep understanding the project:

- <http://www.axmedis.org/com/> (project's website);
- <http://mediacub.tiscalilab.com/> (Tiscali's demonstrator website)

Here below is shown the snapshot as taken from Tiscali website.



The Media Club web site is available 24x7 since more than 6 months. Last content update on the portal was done on May 2008.

In order to attract potential users and invite them in testing the service, Tiscali has published a specific article regarding AXMEDIS and Media Club on the Technology Channel of its main Italian portal (the article is readable at http://jack.tiscali.it/news/08/07/24_07_08_Axmedis.html).

Details on the number of users that registered to Media Club, actions performed, licenses requested, etc. are all described in the following paragraph. Even if there have been many visits to the Media Club site, the number of users that went through all the registration steps and the related request for license is quite small. This should not represent a surprise, since users are usually very reluctant to register on sites that are in alpha/prototype version. Moreover, the number and the general quality of the multimedia content currently available on the portal should definitely be increased in order to generate a real interest in the users and attract a large audience.

5 Data analysis

Demonstrator Audience:

Here below some numbers collected on the experimental phase:

- number of unique visitors (based on user IP) on Media Club 117
- average page visited per user 1,63%
- number of Media Club registered users 43
- number of AXmedis subscriptions 21
- number of requested licenses 18: 5 for motor category videos; 9 for movies category videos; 4 for cartoon category videos; all licenses requested were for a single play;

Here below, some details on the profile of the users that visited the Media Club web site are reported:

Genre:

64% Male

34% Female

Age:

2% between 18-24 years old

42% between 25-34 years old

38% between 35-45 years old

17% between 45-54 years old

1% others

Level of education:

11% degree

69% High school diploma

19% secondary school diploma

1% others

5.1.1 Content Description

Tiscali, in conjunction with DSI has developed a content factory to automatically produce AXMEDIS objects that was published in the mediacub web site.

15 videos content in total, subdivided in the following three categories:

- Cartoon
- Cars
- Movies

Contents has been created for PC only.

5.1.1.1 Content metadata description

For each of the content the following metadata structure has been created in the AXMEDIS object.

```
<Description xmlns="http://www.w3.org/1999/02/22-rdf-syntax-ns#"> <title
xmlns="http://purl.org/dc/elements/1.1/" lang="">Jungle_beat_ep_1</title>
<description xmlns="http://purl.org/dc/elements/1.1/" lang="">..... </description>
<creator xmlns="http://purl.org/dc/elements/1.1/" lang="">..... </creator>
<publisher xmlns="http://purl.org/dc/elements/1.1/" lang="">.....</publisher>
<subject xmlns="http://purl.org/dc/elements/1.1/" lang="">.....</subject>
<date xmlns="http://purl.org/dc/elements/1.1/" lang="">.....</date>
<language xmlns="http://purl.org/dc/elements/1.1/" lang="">.....</language>
<format xmlns="http://purl.org/dc/elements/1.1/" lang=""/>
</Description>
```

5.1.1.2 Content Types

All content are video in mpeg4 480x320 pixel audio AACa 44KHz.

5.1.2 Content samples

Sample 1



Jungle beat –a small cartoon series 5 funny episodes.

Sample 2



<title>.mp21 - video presenting the new Mercedes SL.

Sample 3



<filename>.mp21 – video short movies festival on the web

All the AXMEDIS objects produced by Tiscali with the support of DSI

6 Bibliography

DE 9.4.1 Specification of content production and distribution via Internet.

DE 9.4.2 Mock up of content production and distribution on-demand for PC

DE 9.4.3 First Prototype of content production and distribution on-demand for PC

DE 9.4.4 Integrated Prototype of content production and distribution on-demand for PC