



P2P-FUSION

project overview

Kari-Hans Kommonen / Arki / Media Lab UIAH

khk@uia.fi

P2P-Fusion overview

- addresses the current difficulties in the **legal creative reuse of audio and video media** in the Internet environment
- aims to create an **open, accessible, legal and economically efficient** environment
- for **creative audiovisual cultural activities** that can be **based on the work of others** and **materials from cultural institutions**
- through **built-in, easy-to-use support** for suitable **licensing schemes**

P2P-Fusion operates...

...in two areas:

- 1) it develops an open, inclusive and extensible **technology platform**
- 2) works with real user communities and **evolves new social practices** that take advantage of the new capabilities developed in the project

Partners

- University of Art and Design Helsinki (TAIK)
- Helsinki Institute for Information Technology HIIT (TKK)
- Delft University of Technology (TUD)
- The Budapest University of Technology and Economics (BME)
- KnowledgeLand (KL)
- Netherlands Institute for Sound and Vision (BandG)
- National Audiovisual Archive - NAVA (NEUMANN)

Partnership

- development of **technology** (TUD, TKK, TAIK),
- work with content **communities** (KL, TAIK, BME),
- expertise in **social processing** (BME),
- audiovisual **archives** (BandG, NEUMANN),
- expertise in **intellectual property issues** in **open content** production and reuse (KL, BME, TKK, TAIK).

Scenario: Cooking Community



*My **mother** has promised me that she will teach me how to make the Carelian Stew the right way. She will make a **cooking video** for me, explaining how she and her mother have always made this dish.*

Scenario: Cooking Community (2)

*She begins by **recording on video on her mobile phone** (with fairly high quality video) her **narrative overview** of how the food is prepared, and what ingredients are needed. While narrating, she realizes that she should actually **show how to select the meat** in the store, and decides to **shoot that part on video and mix it in later.***

Scenario: Cooking Community (3)

However, in the end, the *raw material* she shot still *requires some editing* to become a *program that is enjoyable and informative*. But most of this editing is simple - just removing unwanted fragments.

She also makes *little marks* at points where the video shows the basic ingredients and *adds the ingredient information as metadata*, so that these can be later displayed in a shopping list helper.

Scenario: Cooking Community (4)

She also makes a **trailer** that advertises the video – a **short narrative** overlaid on top of a few of the **best visuals** from the video.

After the rough editing, she is happy to **publish the video for her family**. In her **cameraphone** recording software, she **saves the video with certain preset access rights** (and at the same time, **default licensing options**) that restrict **access and reuse** to only her immediate family.

Scenario: Cooking Community (5)

*As she saves the video, the **Fusion system** moves it **forward**, following the access restrictions she has given. It gets **archived in her own system** and **distributed to the family members** through the **peer-to-peer network**. To the various family members, it **becomes visible in their Personal Fusion Mediascape** according to each one's personal configuration.*



Scenario: Cooking Community (6)

*As a keen cook, I have set **my configuration** so that whenever my mother is **kind enough to make a video**, it is a **high priority event** for me. I know she wants to hear comments immediately, so I receive the video as a **new hot item** on my **Family Channel** I have set up on Fusion. This is a selection of audiovisual input that contains materials specially **recommended to me by my friends and family**.*

Scenario: Cooking Community (7)

*I think this is one of her best videos – also because the dish is so delicious. I ask her for **permission** to make it **public for our Cooking Community**. We have quite an avid community of family cooks among our friends. We have **chosen** to keep this community and its videos **public and openly available** to anyone. Through friend-to-friend connections, the Cooking Community has grown to cover lots of different cooking genres and even continents.*

Background

- digital convergence offers **great potential** for more **open and democratic** cultural practices
 - access and new tools facilitate **creation of novel media formats**
 - tools of consuming / channels of reception can also be **tools of production / channels of sending**
- problems in
 - support for **audiovisual** media
 - systems and social practices for **IPR and rights management**

Project objectives

- platform
- social practices
- ipr redesign

Platform

- develop a **P2P** based software platform that adds new features that make it suitable for **interesting** new **serious and legal** applications, such as:
 - support for addressing and distributing **fragments of audiovisual content**
 - support for **versatile semantics**
 - a **semantic layer** that distributes the metadata separately from the media it describes
 - support for **machine readable licenses**
 - support for diverse **social processing mechanisms**
 - a **set of tools** for building **social media applications**

Social practices

- evolve social practices by
 - developing a set of **pilot applications**
 - identifying and selecting a number of end-user **content communities** to participate in the project as **codesign partners**
 - **supporting the development** of end-user applications
 - organizing events, workshops and conferences that aim to **involve and educate potential users** of the possibilities in using the system
 - **recruiting co-developers** from both the **open source community** and **other development projects**
 - **integrating audiovisual archives** into the system as both content **sources and repositories**

IP redesign

- contribute to development of **new social, legal and technical solutions** for IP issues related to the project's topic in society by
 - **built-in support for embedded, integrated and easy to use** licensing schemes
 - supporting **open content licensing** such as Creative Commons
 - **investigating the legal aspects** of technological and social **design solutions**
 - **organizing a social process** for mapping IP related **problems** and **envisioning novel solutions**

Operational objectives

- Over the 36 month duration, the project will produce **three versions** of the integrated software platform, at 12 months intervals, with **increasing functionality**, level of **generalization**, support for **more diversity and robustness**.

Major software results

- Fusion platform
- P2P Mediaspace
- Social Enrichment Mechanisms
- Semantic Overlay
- Media Archive Integration
- Social Media Application Kit (SMAK)
- Pilot Applications

Major social results (1)

- Several real **user communities** are recruited to work with the system
- Two major **audiovisual archives** are integrated into the system
- Several real **end-user applications** are built with the **tools**
- In the applications, **users add value** to the media through **social processing**

Major social results (2)

- Intellectual property issues that relate to the project's topic are mapped and analyzed
- Novel IP solutions are proposed
- International workshops and conferences are organized in the project's fields of activity (Peer-to-Peer, IP issues, Social enrichment)
- Reports and publications disseminate the results
- Other projects and development teams use the system and develop components that are compatible with the system

Impact indicators

- it makes it easier for anyone to create and publish audiovisual media to a desired audience, with a desired licensing scheme, without servers and system management expertise
- it makes it easy to create legally new programs from materials created by others, using simple editing systems, and with an easy path to publish the result again to desired audiences with appropriate licenses
- it makes this kind of audiovisual content accessible to audiences as easily as the web or the TV

Results indicators

- the platform addresses and delivers partial media content based on time code and other metadata
- the semantic overlay has been implemented
- the platform supports machine readable licenses
- the platform has built-in support for several social processing mechanisms
- the platform contains a toolkit for developing social media applications

Envisioning - by 2009:

- Fusion becomes the **p2p distribution** system of choice for **broadcast content** through collaboration with broadcasters
- **teachers** use Fusion based social media applications for **sharing audiovisual media in education** - both institutionally produced and self-created - with didactic ideas and **feed back their own content to broadcasters**
- Fusion offers viewers **hundreds of global grassroots media channels**
- Fusion compatible **open source Linux set-top boxes are available** from several commercial sources
- Most Fusion **development happens through open source collaboration** - with developer communities in countries such as Brazil and India



Thank you!

Contacts:

Kari-Hans Kommonen, khk@uiah.fi

Sanna Marttila, sanna.marttila@uiah.fi

Website (from Sept 2006) at:

p2p-fusion.org

