CELTIC
Telecommunication Solutions

New AudioVisual Indexed Media Platform and search engine for UGC enhancement

MediaMap

MediaMap aims at promoting new collaborative audiovisual production services using the network as a federative channel. The project includes new concepts using semantics and ontology elements adapted to the audiovisual world in order to create a high level contextual search engine and a new audiovisual web portal. This places the amateur user and creator of AV content as a new actor of the web TV life providing him/her with new tools to enhance the level of his/her production.

Main focus

MediaMap aims at developing innovation in the area of audiovisual content productions circulating on the Internet for TV channels as well as for Web 2.0 sites. MediaMap addresses the niche of User Generated Content, which is getting more and more popular.

MediaMap will act on 3 tied services in AV production:

♦ Create a new and efficient collaborative production service for all users mixing professionals and non-professionals and using telecom networks as the heart of communications,

♦ In order to create this enhanced collaborative process, there is a need to produce new tools allowing to dramatically increase the editorial and technical quality level of amateurs' UGC (User Generated Content),

♦ Provide a new experience of viewing content using the context-awareness skill of the semantic metadata.

In order to create these services, two main problems have to be solved: creating an efficient collaborative workflow and raising the quality level of amateurs' production as close as possible to the professional level.

The first part of the solution proposed in MediaMap consists in creating a new wrapper for AV production, the Unique Semantic Entity (USE), whose elements will be accessible by all collaborators. The wrapper will include not only video, audio and metadata elements, but also a description of the structure of the movie, the editorial intentions, targeted metadata, the realization method, etc. It could be seen as a "video template" fully defined at the beginning and then simply filled by all collaborators. Filling this video template is simplifying dramatically the usual workflow and gives more efficiency to operators that know before filming what and how they have to shoot.

The second part of the solution is to give access to this new container to all collaborators through a "documentary bus" relying on a network's infrastructure upon which its elements will easily circulate.

This OSB (Open Semantic Bus) concept is borrowed from the OAIS (Open Archival Information System) ISO standard, which deals with the functional specifications of a production / broadcast model that allows retrieval, transaction, exchange, etc. of a self-described content.

Approach

At the heart of MediaMap is the pre-indexation of contents: describing it before producing it, allowing its conservation and re-use before filming. This indexation is semantic and goes from a new networking

MediaMap

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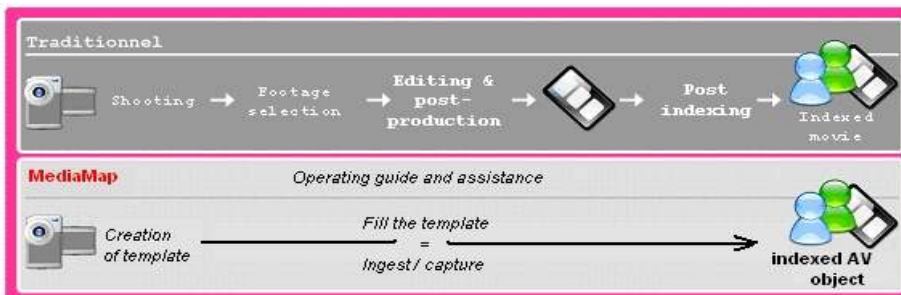
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audiovisual production platform (camera, ingest tool) to enriched publication portals enhanced throughout by a semantic search engine.

In a first step, the project will define the Unique Semantic Entity's format as a framework that ensures the transportation of the wrapped content all along the semantic bus.

In addition, it will also define and develop three components enabling the production of User Generated Content of high editorial quality: the network camcorder, the camera mate and the ingest platform. Each are designed to load and translate the USE, towards guidance and process control for the content production

In a further step, the project is aiming at demonstrating an Open Semantic Bus based on the AXIS architecture. It will also deliver a repository with a semantic search engine connected to this semantic bus to store the entities created by the MediaMap project.

Before starting experiments, the requirements of the USE will be defined for each task of the audiovisual production chain. These requirements will be based upon the results of a benchmark of collaborative productions and user generated content (UGC) with folksonomies and upon a survey of a mock-up alpha web site with UGC "expo 58" and a beta site

"Congo 60".

At last, a demonstrator will be launched in order to assess the concept of the USE. At the end of the project a report based on the experience gained from the demonstrator will provide the final requirement of the USE.

Main results

The expected major results are:

♦ A new data model structure with semantic metadata and ontological approach: the Unique Semantic Entities in the new Open Semantic bus. Implementation

Open Semantic BUS
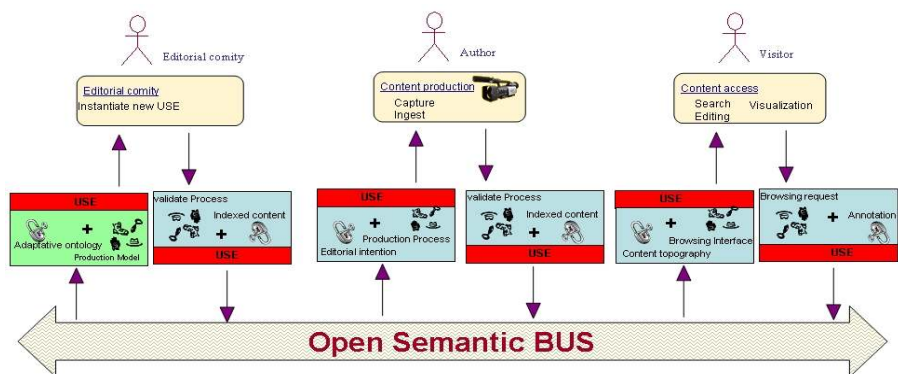
with AXIS, definition of its semantic structure, in order to improve collaborative mode.

♦ A new interactive networking camcorder, with an ingest platform and a camera mate (for the implementation of the use with a PDA when shooting with a regular camera), in order to create new writing methods. Note that this development makes the camcorder to be considered as a

network terminal and collaborative tool and not simply a standalone AV recorder.

♦ An adequate Digital Asset Management/Multimedia Asset Management (DAM/MAM) and server for the whole process of the audiovisual production and the publication. In order to manage new content logistics.

♦ A validated use case: an innovative web portal with established ergonomics thanks to the semantic search engine in order to create new content consumptions.

Impact

Important impacts of MediaMap include the increased quality of non-professional productions, the increase of the efficiency of research and sustainability of archives, the improvement of the collaborative workflow, and the reuse and visibility of contents. The personalisation of information will be at the heart of MediaMap with its concept of territory; the user will see the content depending on his being, his role, his skills, and the terminal he's employing at each moment and place of the open semantic bus.

Another important impact is to introduce MediaMap's European method for imposing a new workflow for audiovisual productions to the relevant standardization committees.

Besides getting technical knowledge and experience on collaborative production and publishing and viewing content, the expectation of the project is also to have positive effects on content creation and social networks.

Last important aspect of the project: new hardware equipment like camcorders will allow new industrial development in Europe.