

Expression of Interest to the Networked and Electronic Media Platform for a R&D project

Project Title (provisional): UHPAC (User media Halos for Pervasive And participative Content)

Target Call: ICT Call 3, Challenge 4, Objective ICT-2007.4.4: “**Intelligent Content and Semantics**”. Deadline: 8 April 2008

Keywords: Ubiquitous media consumption – Semantic search and retrieval in distributed repositories – Distributed control – Content sharing – Semantic Web technologies – User profiling – Personalized recommendations – Location- and context-based adaptation of media consumption – Social interactions and dynamic community building via aggregation of personal networks – Open source platforms for mobile communication – Content adaptability to mobile appliances

Project description:

Challenges: The Media consumption sector is currently facing several challenges. First, that of **personalized** and **ubiquitous access** to media. Users will soon require having pervasive access to their (distributed) data, anytime, anywhere and on any of their personal devices. They will also ask for relevant and personalized **content recommendation**. Further, Media access will have to be leveraged by efficient, scalable and robust search and retrieval technologies integrating **semantic** analyses of the raw content itself, as well as of monitored uses of this content. Other challenges concern users’ thirst for playing a **more active role**, by sharing, creating, adding value to their data, and socializing through it.

Objectives: Articulated around the idea of personal “media halos” (i.e. individual profiles surrounding mobile users and representing their tastes and consumption behaviors with regards to media content), the project will propose novel solutions for improving mobile networked content consumption, distribution, sharing, and enrichment by end-users; with a special focus on music content and non-expert users. Software demonstrators will integrate outcomes of innovative and multidisciplinary research (on wireless networks, semantic characterization of multimedia content, semantic web technologies, knowledge extraction/processing, user modeling and the emergence of dynamic user communities) in which representative amounts of users and data will play a fundamental role.

We propose to focus on **Music Content as a case study** because of the enormous economical importance of the music industry in EU, because music business is currently overcoming a revolution due to the uptake of online music, but also because of the semantic richness of this media and its role as social coherence promoter in EU society.

Use case: Users will enjoy their distributed music collection anywhere, anytime, and on any of their portable devices. Carrying a portable media player in a public space will also turn into a way for users to discover more music they like, a way to get to know more about the music they like, a way to create and share content with others and a social experience with the people around.

The project will address:

- Self-configurability of personal networks and distributed media repositories, accessible anytime, anywhere and on any device;
- Mobility, ad-hoc networks and support for session transfer, on different devices
- Aggregation of two or more personal networks;
- Implications on security and privacy, devising solutions to accordingly deal with those aspects;
- More personalized content delivery, consumption and recommendation by taking advantage of user profiling, listening context (time, place, mood, etc.), and neighboring users (“fellow music listeners around can help me better enjoy music”).
- Intersection of Semantic Web technologies and automatic semantic content analysis for user profiling
- Emergence of dynamic ad-hoc user communities, by attaching “music auras” around users and fostering relevant connections in dynamic networks of users;
- Creation, usage and interoperability of ontologies to enable (re)using existing or newly-created metadata and user tags under different formats, for metadata sharing and content search;
- Relevance of Geographical Information Systems in content distribution;
- Democratization of authoring tools; towards “personal metadata as new content”, added-value to content, to be shared among users;
- Promotion of open source platforms (for instance, Android)

Current consortium profile

The expertise of current partners include Wireless and ad-hoc networks, Networked content distribution and adaptation, End-to-End QoS over heterogeneous networks, Geographical Information Systems, Digital Rights Management in P2P contexts, AI and ontologies, Sound and Music Computing, Audio Fingerprinting, Music recommendation, Music summarization, Semantic Web, Social Network Analysis and Visualization.

The consortium is currently being defined, among the partners are 3 NEM members.

Contact persons:

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Partner profile sought:

We are still interested in partnerships. Ideally, the work to be carried out by the partner(s) sought should be one/several among the following: provide handset devices for tests, implement functionalities on handset devices, provide content and/or users, conduct user validation tests, participate in the development of exploitation/business plans, or/and participate to the research on Personal Networks.

Type of partner(s) sought:

Industrial, Electronics/Handset manufacturer, Mobile operator, Broadband Wireless provider, Music/Multimedia content provider, Software company, Commercialization company.