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PROJECT PERIODIC REPORT

Grant Agreement number: 611057

Project acronym: EUMSSI

Project title: Event Understanding through Multimodal Social Stream Interpretation

Funding Scheme: FP7-ICT-2013-10 (Collaborative project)

Date of latest version of Annex I against which the assessment will be made: 17/07/2013

Periodic report: **1st X** **2nd ☐** **3rd ☐** **4th ☐**

Period covered: **from** **01/12/2013** **to 01/12/2014**

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[1] Usually the contact person of the coordinator as specified in Art. 8.1. of the Grant Agreement.

[2] The home page of the website should contain the generic European flag and the FP7 logo which are available in electronic format at the Europa website (logo of the European flag: http://europa.eu/abc/symbols/emblem/index_en.htm logo of the 7th FP: http://ec.europa.eu/research/fp7/index_en.cfm?pg=logos). The area of activity of the project should also be mentioned.

Publishable summary

Summary description of the project context and objectives

EUMSSI aims at developing technologies for identifying and aggregating data presented as unstructured information in sources of very different nature (text, video, audio and social media), including media from online news providers and broadcasters as well as from social sites (e.g. Twitter, YouTube).
This is accomplished thanks to the integration in a cross-modal semantic representation framework of state-of-the-art technologies from the following fields: (i) text analysis, (ii) audio-visual (A/V) analysis, (iii) semantic enrichment, (iv) reasoning, (v) social intelligence and (vi) collaborative content-based recommendation.
The multimodal interpretation EUMSSI platform, in an optimized process chain, analyses a vast amount of multimedia content and enriches it with additional metadata layers. These metadata layers provide a multi-facetted access of comprehensive information and can be used for further analyses or enrichment. A core idea is that the aggregation of information is carried out in an interactive manner, so that the metadata resulting from one media helps reinforce the analysis results from other media.
The resulting platform, through the use of innovative visualization techniques will allow an interactive exploration of the enriched data helping discover new, implicit information.

The most relevant specific objectives of the project are as follows:

- To develop and/or adapt state-of-the-art technologies for supporting all the different operational elements of the proposed solution, including audio, image, text and social media analysis technologies in the four languages involved (Spanish, English, German and French);
- To define an interoperable semantic framework able of integrating multimodal information with different degrees of abstraction (from low-level physical features to high-level semantics);
- To integrate all the different operational elements into a distributed platform that must comply with the requirements of efficiency, robustness and scalability;
- To define and implement all required data and communication protocols for allowing independent systems to interoperate with the integrated platform;
- To implement and demonstrate a fully operational prototype with two pre-defined well-motivated use-cases that include an innovative approach to multimodal collaborative content-based recommendation;
- To define the strategies and policies for managing and exploiting the intellectual property derived from the activities of the project;
- To define and implement a business exploitation model and its corresponding business plan.

Description of work performed and main results

EUMSSI started in December 2013. During this first year, the emphasis has been placed in the specification and development of the integration platform, and the design of the cross-modal semantic representation framework, so that an initial prototype could already be displayed at the end of this period. In parallel, the teams with expertise in text, audio and

video analysis have been setting up their respective modules and start working with the data, also taking into account the input of the functional requirements gathered by the user partner.

The main results achieved in the first period, ending December 2014, are as follows:

- The specification and design of the overall architecture of the whole EUMSSI system;
- The identification of the user requirements of the demonstrators;
- The collection of a sizeable amount of multimedia and social data belonging to the chosen domain;
- The setting up of the actual multimodal platform with functioning communication protocols to interoperate with the analysis modules;
- Preliminary versions of text and A/V analysis modules, already integrated into the platform;
- A first version of a demonstration and validation plan;
- First dissemination actions, market analysis and monitoring as well as exploitation planning.

Expected final results and potential impact

The resulting multimodal, interoperable platform will be potentially useful for any application in need of automatic cross-media data analysis and interpretation, such as intelligent content management, recommendation, real time event tracking, content filtering etc.

At a primary level, the EUMSSI platform will complement VSN broadcast solutions with its multimodal metadata automatic enrichment capabilities.

Through the Computational Assisted Storytelling demonstrator, we expect that EUMSSI boosts productivity of the overall news production workflow (such as the one used by DW journalists), by providing an efficient manner to automate and integrate monitoring, gathering and filtering tasks in the news article creation lifecycle. Hence, while the journalist is editing a story, he will automatically be presented with a series of related content, suggestions, hot topics, from many sources ranked in turn by relevance, up-to-dateness, reliability, category, etc. by means of an array of visualisation devices that will help him explore the data in an interactive and principled way, and discover hidden relevant information in large document collections.

With its Second-screen demonstrator, EUMSSI has the potential to enhance the media watching experience of the European citizens by providing them with personalised visualisations and games aimed to further engage them and to allow them to investigate background information and related aspects, as well as share their findings in social media. The platform will hence provide a combination of information and entertainment: what we call infotainment

All technical results of the project will be accessible to the community, both research and industrial, by licensing them using the Meta-Share platform, under an open source licensing scheme, allowing a commercial exploitation of the developed resources and tools and also an unrestricted use for research purposes.

For the research centres involved, the project will result in dramatically improved Information Extraction and analysis tools of their respective technology fields and thus greatly improve their competitiveness. These improvements will also have a favourable impact on other projects in which the respective centres are involved.

Addresses of interest

Site	Address	Contents
EUMSSI official website	http://www.eumssi.eu/	Contains useful information about EUMSSI: Fact sheet, goals, consortium, contact information, access to public deliverables, etc.
EUMSSI Flyer	http://www.eumssi.eu/downloads/	For dissemination purposes
EUMSSI Twitter account	https://twitter.com/eumssi	Presence and activity of the project in this Social Network
EUMSSI Google+ page	https://plus.google.com/100237411555431761195	Presence and activity of the project in this Social Network
EUMSSI Github site	https://github.com/EUMSSI	Open Source software outcomes of the project, accompanied with documentation