K-Space partners

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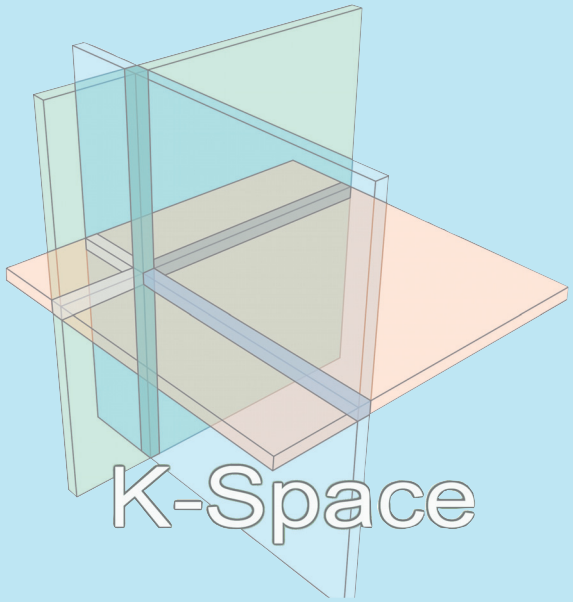

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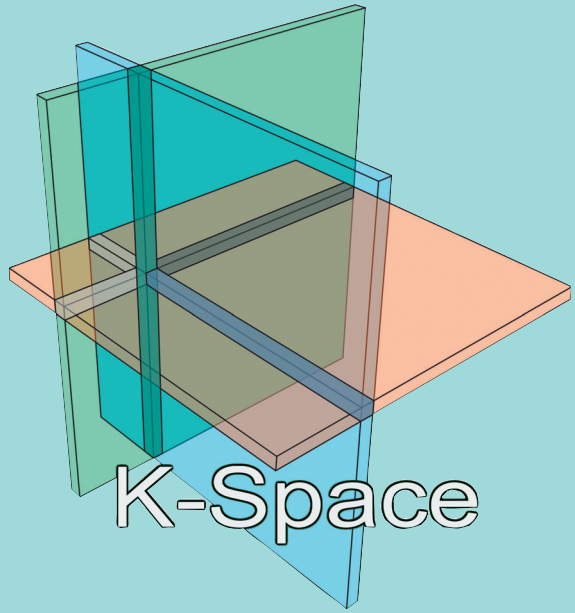


Knowledge Space of Semantic inference for automatic annotation and retrieval of multimedia content

K-Space integrates leading European research teams to create a Network of Excellence in semantic inference for semi-automatic annotation and retrieval of multimedia content. The aim is to narrow the gap between content descriptors that can be computed automatically by current machines and algorithms, and the richness and subjectivity of semantics in high-level human interpretations of audiovisual media: The Semantic Gap.

Information Society Technologies

K-Space

K-Space is a European Network of Excellence (NoE) funded by the EC 6th Framework IST Programme.

K-Space is a network of leading research teams from academia and industry conducting integrative research and dissemination activities in semantic inference for automatic and semi-automatic annotation and retrieval of multimedia content. K-Space exploits the complementary expertise of project partners, enables resource optimization and fosters innovative research in the field.

K-Space main objectives

To bring together leading European research teams to create critical mass for innovation of currently highly fragmented research groups addressing semantic inference for semi-automatic annotation and retrieval of multimedia content.

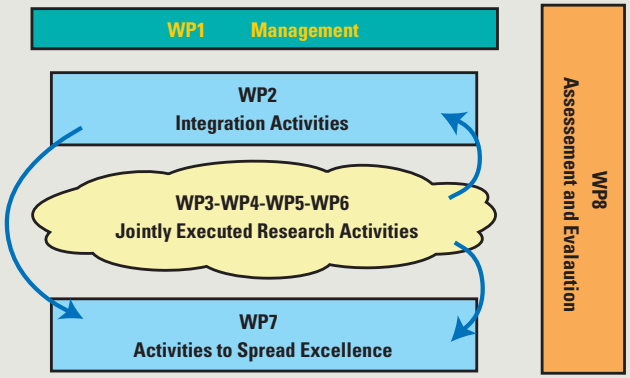
To build an open and expandable framework for collaborative research on knowledge acquisition based on system made up of flexible, modular and interconnected technology.

To disseminate the technical developments of the network across the broad research community

To boost technology transfer to industry, influence and contribute to related knowledge-based multimedia standardization activities.

Work Packages Overview

The project consists of eight workpackages (WPs). WP1 is dedicated to the coordination activities. The division among the other seven WPs has been chosen to group activities and skill types required to implement the strategic objectives of the NoE. While WP2, WP6 and WP7 are dedicated to the Integration and Dissemination activities, two main strategic objectives of K-Space, three WPs (WP3, WP4 and WP5) group the core R&D activities of the Network. Finally, WP8 focuses on the assessment and evaluation of the project progress and outputs.



WP3, WP4, WP5 and WP6 are the core of a Jointly Executed Research and Development activities of K-Space and they create a backbone of the Network. The Joint Research Activities are embraced by the two WPs dedicated to integration and excellence spreading.

K-Space builds on existing relationships where they exist and will forge new interdisciplinary relationships where previously there have been none. Clearly, initially this will happen between the existing partners within the network. However during its lifetime the network will also reach out to the wider academic and industrial community and initiate new collaborations with partners not currently members of the K-Space NoE.

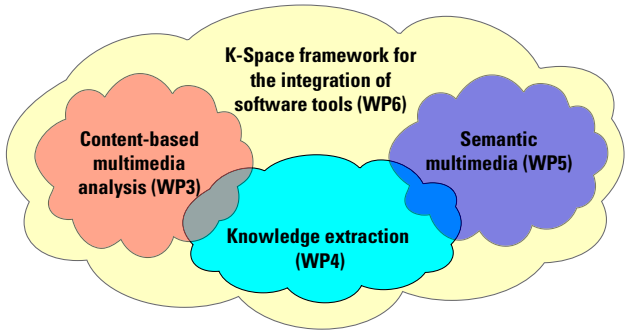
Joint Research Activities

The joint research activities of the network are aimed at convergence and resources optimization by exploiting important multidisciplinary aspects of multimedia knowledge extraction. This will be achieved by linking research efforts over the following three research clusters underpinning the K-Space framework.

Content-based multimedia analysis (WP3): Tools and methodologies for low-level signal processing, object segmentation, audio processing, text analysis, and audiovisual content structuring and description.

Knowledge extraction (WP4): Building of a multimedia ontology infrastructure, knowledge acquisition from multimedia content, knowledge-assisted multimedia analysis, context based multimedia mining and intelligent exploitation of user relevance feedback.

Semantic multimedia (WP5): Knowledge representation for multimedia, distributed semantic management of multimedia data, semantics-based interaction with multimedia and multimodal media analysis



The networking and distributed interaction between partner modules is supported by suitable interfaces, database management and networking tools. The integration of these tools, to build the K-Space communication infrastructure is a vital part of this project (as detailed under ***K-Space Framework for Integration of software tools*** (WP6)). The following Figure shows a high-level abstraction of the K-Space framework.