Creating intelligent multimedia content

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The Figures Perspective

- FP6 Integrated Project
- 9 countries
- 45 staff (approx.)
- 6 industrial partners
  - 4 large
  - 2 SMEs
- 7 academic partners
  - 4 Universities
  - 3 National Research Centres

- Co-ordinator: Motorola Ltd
- Started: 1 Jan 2004
- Duration: 4 years
- Total Budget: 17M Euros
aceMedia aims to discover and exploit knowledge inherent in multimedia content, making it more relevant for the user and automating annotation.

aceMedia will implement a full content value chain which will enable content and knowledge creation, update, transmission, and manipulation & exploitation (through advance search and retrieval and intelligent content behaviour)
aceMedia’s central concept: The ACE
aceMedia’s vision is materialized through the concept of the Autonomous Content Entity.

- Programmable layer, enabling the ACE to be self-sufficient, self-organizing, self-analysing
- Knowledge-based Automatic Semantic analysis and annotation using ontologies for multimedia and Semantic Web technologies. Also scalable!
- Scalable content for reuse in different devices, different situations and user needs.
ACE update - typical annotation process

NLP processes manual annotations

If rich enough, then automatic selection of domain ontology

Visual Content Detector

Content is classified: indoor / outdoor, natural / man-made

Standing persons and faces detected. Learned faces recognized.

Person and Face detection and recognition

Multimedia Reasoning

Ambiguities removed. Regions merged. Final consistent semantic annotation

Regions are labelled with concepts from the domain ontology

Knowledge-Assisted Analysis using MM ontologies

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aceMedia’s structure
aceMedia structure

Knowledge Infrastructure

- Content Management
- Content Analysis
- Content Engineering

Content Delivery Tools

- Cross-Media Engine
- Wavelet based scalable video codec
aceMedia structure

Knowledge Infrastructure

- Content Management
- Content Analysis
- Content Engineering

Self-Organization

Personalized Browsing

Intelligent Search and Retrieval

Content Privacy Mgmt
aceMedia applications

aceMedia PC applications

Web-based

Standalone
aceMedia applications (2)

aceMedia running on an IP set-top-box