SUPERMULTIMEDIA short information sheet

Proposal full title

"High-quality audiovisual content for the next generation of interactive and immersive home entertainment"

Proposal acronym

SUPERMULTIMEDIA

Proposal type

Integrated Project

Strategic objectives addressed

Cross-media content for leisure and entertainment (IST-2002-2.3.2.7)

Proposal abstract

SuperMultiMedia (SMMedia) will pave the way for the next generation of interactive cross-media services for home entertainment by applying innovative audio-visual content technologies.

The next generation of cross-media content will enable a previously never experienced consumption of interactive, creative and artistic content in combining human-like ways of interaction with immersive audio and video representation.

A key component to the project is the appropriate acquisition and processing of audio and video content. Techniques such as advanced multiple-microphones and cameras with real-time processing, tracking systems for source location as well as multi-channel echo cancellation for two-way communication and acoustical or gesticulatory man-machine interaction need to be coupled and managed by intelligent algorithms in order to allow for the anticipated realistic perception experience of the end-user and in order to support the user-friendly finding, accessing and handling of the SMMedia content. State-of-the-art multi-channel audio systems and binaural technologies will be integrated with immersive visual displays. User interfaces will allow interaction under digital rights management control. Three prototypes will be assembled for testing and validation. Coding and handling of the complex audio-visual content will be based on the MPEG family of standard. The DVB-ETSI standards will be applied for transport and APIs where applicable.

The proponents of the projects are renowned companies and organisations in the media and consumer-equipment industry, in media research, in the broadcast, the telecom and the academic domain. Collectively, they are highly competent to achieve the high-reaching objectives of the SMMedia proposal. The project is planned for a total of 54 months with a first phase of 18 months, which allows for the granularity necessary to support the ambitious objectives.

The results of the project will be beneficial to the European media and manufacturing industry as well as to the end-users. SMMedia will foster the European advance in media technology in the future and will thus support the priorities of the European Commission's eEurope 2005 Action Plan.

Strategic objectives addressed

- Provide new, three-dimensional and high-quality forms of content for interactive, creative or artistic audiovisual representations including mixed realities for media consumption at home ranging from concert reproductions to interactive video games and interactive video-phoning;
- Support these new forms of content in creation, management, production and representation by applying innovative audiovisual content technologies;
- Create the work-flow for innovative multidimensional audiovisual immersive environments and develop according authoring tools including appropriate metadata generation and their association;
- Address intelligent application and user interfaces including interaction devices under digital rights management control;

- Represent and display ("render") multidimensional audiovisual immersive environments in real time (both for professional authoring and consumer perception);
- Retrieve audiovisual content supported by intelligent algorithms.

Project structure

The project is divided into 6 subprojects:

- Authoring
- Audio and Video Content Acquisition and Processing
- Audio and Video Content Display
- Content and Access Management
- Applications
- Dissemination and Exploitation

These subprojects encompass the following work packages:

Work Package	Work Package title	Activity typology
WP 1	Coordination and Management	MAN
WP 2	Natural Media Authoring	RTD
WP 3	Synthetic Media Authoring	RTD
WP 4	Multimedia Scene Authoring	RTD
WP 5	Object-oriented Authoring for User Interaction	RTD
WP 6	Audio Content Acquisition and Processing	RTD
WP 7	Video capture and processing	RTD
WP 8	Integration of Audiovisual Capturing and Processing	RTD
WP 9	Audio Display	RTD
WP10	Video and Graphics display	RTD
WP11	Integration of audio and video display	RTD
WP12	Content and Metadata Management	RTD
WP13	Home user control interface	RTD
WP14	Interactive Home Entertainment System	RTD
WP15	Immersive Home Entertainment System	RTD
WP16	Content Delivery System	RTD
WP17	Education and Training	TRAIN
WP18	Dissemination	DISS
WP19	Public relations & Marketing	DISS

Participants:

Partic. No.	Participant name	Participant short name	Country
1	Fraunhofer Gesellschaft zu Förderung der Angewandten Forschung e.V.	1a FhG AEMT 1b FhG IIS 1c FhG IMK 1d FhG HHI	Germany
2	Institut für Rundfunktechnik	IRT	Germany
3	Institut de Recherche et de Coordination Acoustique/Musique	IRCAM	France
4	Universität Erlangen-Nürnberg	UEN	Germany
5	Aristotle University of Thessaloniki	AUTH	Greece
6	Technische Universiteit Delft	TUD	Netherlands
7	University of Surrey	7a ISR 7b CCSR	England
8	Universität von Graz	UGR	Austria
9	University of Valencia	UVA	Spain
10	Technische Universität Ilmenau	TUI	Germany
11	McGill University	MG	Canada
12	Philips	PHL	Netherlands
13	Alterface	ALFC	Belgium
14	1limited	1Ltd	England
15	Bang & Olufsen	B&O	Denmark
16	4FriendsOnly	4FO	Germany

Co-ordinator:

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Information in brief:

Overall total costs of NM2	25.41 Million Euro
Requested grant from the Commission	17.98 Million Euro
Duration of the project	54 months