Holographic and action capture techniques

From 2004-09-01 to 2007-08-31 | HOLONICS Website

Project details

<table>
<thead>
<tr>
<th>Total cost:</th>
<th>Topic(s):</th>
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<tr>
<td>EUR 4 027 000</td>
<td>IST-2002-2.3.2.7 - Cross-media content for leisure and entertainment</td>
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<th>EU contribution:</th>
<th>Funding scheme:</th>
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<tr>
<td>EUR 2 074 939</td>
<td>STREP - Specific Targeted Research Project</td>
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Coordinated in: Spain

Objective

Leisure and entertainment require every day more innovation;" innovation that must be understood in terms of new contents but also in terms of new user interaction paradigms. 3D is at the forefront of community research efforts today. HOLONICS has as its main objective to research new technologies for the automatic acquisition, management, presentation and delivery of 3D information.

HOLONICS will place holographic technology and computer vision based human action capture at the base of its research efforts with the objective to achieve most realistic representations of 3D contents for multiple simultaneous users, real-time automatic acquisition of human action data (geometry, volume, texture) and unconstrained user interaction with the system and / or other users. HOLONICS will have as one of its main requirements to avoid the use of any kind of device that can be annoying, limiting or little comfortable for the user (i.e. head mounted devices, markers, cabling, etc); a circumstance that have jeopardised the development of the sector in the past.

HOLONICS’s demonstration applications will explore the possibilities of holographic display technology for true 3D representation of contents, will feature new user interaction capabilities using the human body and will develop new methods for the automatic acquisition of 3D human body information. HOLONICS Tele-presence application will use a set-up of cameras to acquire in real time the volumetric structure and the texture of the full body of a person.

Then, the system will track and animate the resulting 3D model with the objective to transmit the information to a remote 3D holographic display monitor for naked eye interpersonal communications. The Virtual Theatre application will use large panels of holographic displays combined with sophisticated human action capture to demonstrate HOLONICS’s can be successfully applied to wide scenarios and highly interactive experiences that can be shared by a great number of persons.
Coordinator

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Subjects

Telecommunications

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