WP 4 Project Deliverable D4.4

Integration of HMD system completed

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Abstract	The objective of WP4 Task 1 is to specify the hardware requirements for the HMD installation. This also includes the selection of a tracking system for the user's head movement.
Keywords	Specification, HMD, Tracking system

Contents

1 Overview

This report describes the work done by SiTu and Vircinity to integrate the support of an HMD and a Spacemouse.

2 Functionality of HMD system

The layout of the VIRTUALFIRES System can be used in a CAVE as well as with an HMD. The HMD [1] is used on a laptop pc on the external VGA-port. The XServer is configured to use two separate screens one for the LCD-screen and one for the external port. Covise and the GUI runs on the LCD-screen and COVER runs on the HMD in Stereo mode using the field sequential mode.

2.1 Support of Tracker and Spacemouse

In Summer 2003 Vircinity and SiTu integrated the support of the ITRAX tracker [2] and the 3Dconnexion Spacemouse [3]. Two server were developed to read the data of the devices and send them to COVER using UDP protocol.

COVER was always used with fixed projection screens, so that only the camera moves within the scene. When using an HMD, the camera is fixed but the projection screen has to move. This development was done by Vircinity in August 2003.

The use of a Spacemouse was already integrated in Covise on SGI platforms, so the data provided by the Spacemouse server could be easily integrated by Vircinity.

The new version (5.3.1) of Covise includes the two new developed servers. The functionality was tested by SiTu and presented at the review meeting in Stockholm on 24th of November 2003.

3 Literature/Links

[1] http://www.hi-res800.com

[2] http://www.intersense.com/products/pro/index.htm

[3] http://www.3dconnexion.com/