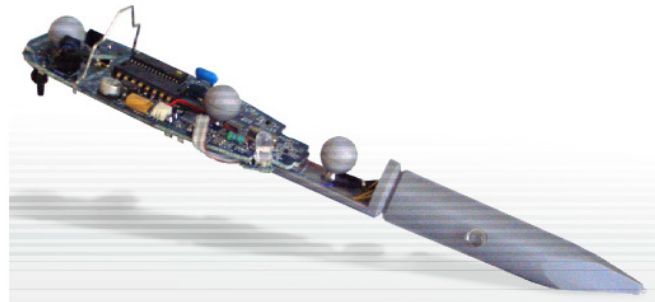

Development of TUI with New Functional Capabilities.

Keywords: Virtual Reality; Tangible User Interfaces; Interaction

Abstract

During creativity phases the intuitive handling of the system is very important. The user must not be distracted by operating the IT-system. Thus, existing Tangible User Interfaces (TUI) have to be enhanced in their functionality in order to allow performing even complex operations in the virtual environment.



Background

Within two research projects a new technology was developed, which allows multiple collocated users to simultaneously write and sketch on a common workspace. A first prototype was built to perform a proof of concept.

Content of the Work

Getting into the topic of Tangible User Interfaces (TUI) and its state-of-the-art. In a next step the new CRiON interaction environment has to be built up. For this environment also new TUIs have to be developed, which allow more functionalities than the current interaction pencils. In particular, the TUI should allow the interaction on multiple distributed workspaces, as well as the interaction between the individual devices. In addition, possible solutions that vary analog signals by the TUIs should be developed. After an intermediate oral presentation one concept is chosen and realized in a functional prototype. This prototype is used to verify the functionality of the TUI. The project work closes with proposals for possible applications for the new environment in teaching, research or industry. This point is of particular interest for a future closer collaboration between ETH and BTH.

Work Packages

- Getting into the topic "TUI".
- Setting up the CRiON test environment.
- Development of new functionalities and of new TUI (concept).
- Intermediate presentation.
- Selection of a concept and building up the new devices.
- Testing and optimizing the TUI.
- Final oral presentation.
- Written final report.

Information & Administration

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