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**THEIA** (ang. *The Handy Eye-Interaction Adapter*) is a touchless human-computer interaction system. The main target is to give the end-user an ability to interact with a computer only by his/her sight. By looking at areas of the screen the user triggers actions in the operating system he/she is using. The communication with a standard PC is based on an eye position recognition and further a user's gaze point by analyzing the image obtained from a regular web camera.

The major reason for developing such a solution is to help a lot of people with many different disabilities (for instance "locked-in syndrome", paresis or paralysis) use a computer in order to acquire electronic sources of knowledge, or simply contacting the world. Moreover, the THEIA system can monitor such user's activity and alarm a carer in an emergency.

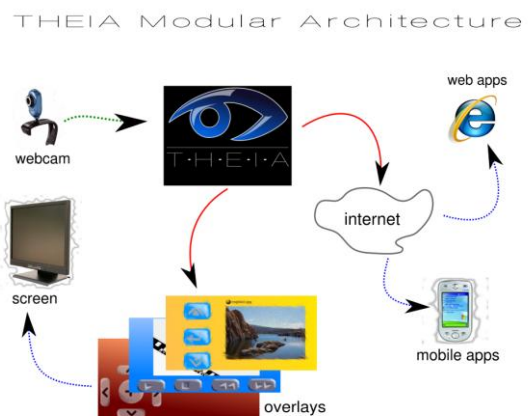


Fig. 1 THEIA Architecture

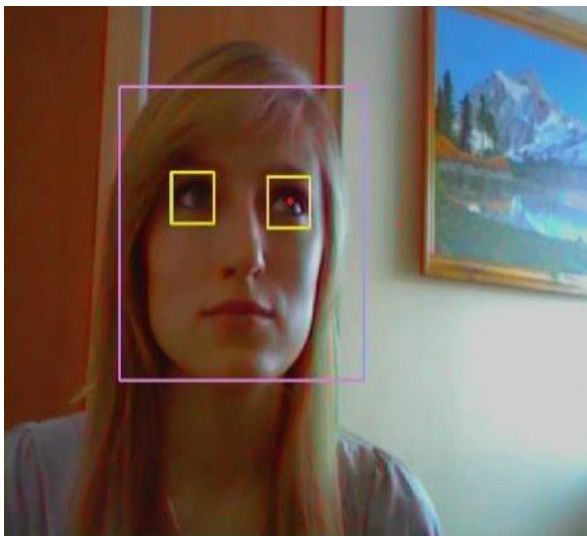


Fig. 2 The idea of identification the active screen area using image analysis

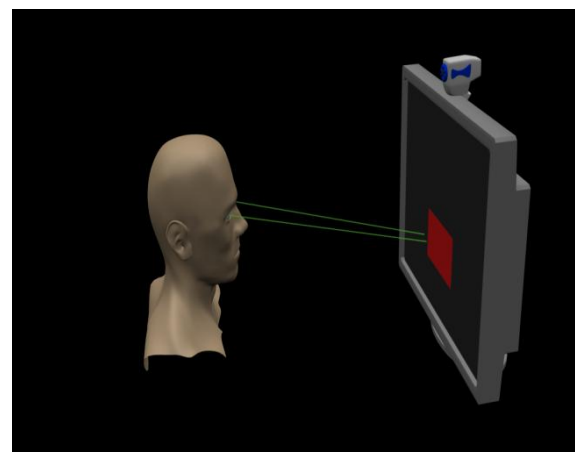


Fig. 3 The idea of using overlays on standard operating system

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