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A DESIGN OF 2ND DISPLAY FOR ENHANCED PRIVACY AND 3D INTERACTION

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A Design of 2nd Display for Enhanced Privacy and 3D Interaction

Abstract

We hereby propose a Design of 2nd Display for Enhanced Privacy and 3D Interaction, for notebook/tablet and standalone displays, with:

- A 2nd display above the main screen to show content separately
- The 2nd screen is a privacy screen, with narrower than normal viewing angles and can be activated to show content in privacy mode
- The camera arrays at the top left corner and top right corner of the display for
 - optimized 3D image construction and interaction
 - maximum range of detection of uninvited peeping beside or behind the direct user
- The camera arrays can include normal cameras, infra-red cameras, and Time-of-Flight sensors/cameras

Problems Solved

- Current privacy screen activation is on the whole display, which is expensive, and not comfortable for some end user due to eye fatigue
- The top of displays is commonly not fully utilized for max display utilization.
- Camera in the center of top display edge can't well detect personnel behind user
- 3D interaction is hard for common laptop/display camera locations

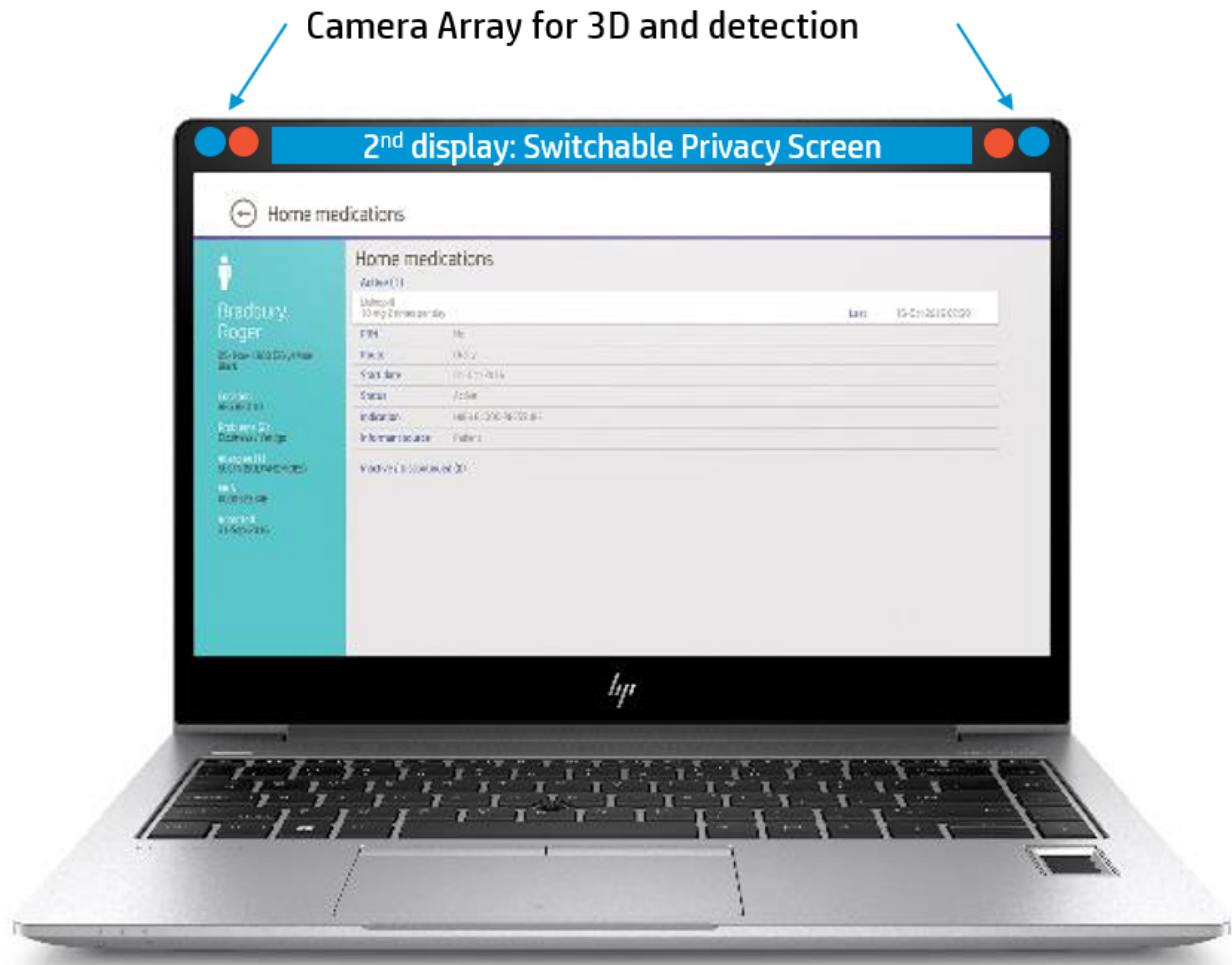
Product Details

2nd display above the main screen

2nd screen for showing:

- instant messaging
- taskbar
- presentation notes
- additional content

Camera array on both corners can better detect peeping behind



A 2nd privacy screen in smaller size give an option for personalized notifications

2nd screen is convenient for showing taskbar, additional content, presentation notes, and instant messaging, etc.

To enhance privacy, camera array on both corners can better detect peeping behind, then system can notify end user

Advantage

This design provides a low cost version of privacy screen (display).

A 2nd privacy screen in smaller size give an option for personalized notifications

2nd screen is convenient for showing taskbar, additional content, presentation notes, and instant messaging, etc.

To enhance privacy, camera array on both corners can better detect peeping behind, then system can notify end user.

Disclosed by Hui He , Hang Yan Yuen and Leng Lim, HP Inc.