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May 2020

TOUCH-DISPLAY CLEANING THROUGH TOUCH AND CAMERA FUNCTION

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Recommended Citation

Blunder, Verena, "TOUCH-DISPLAY CLEANING THROUGH TOUCH AND CAMERA FUNCTION", Technical Disclosure Commons, (May 26, 2020)
https://www.tdcommons.org/dpubs_series/3263



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TOUCH-DISPLAY CLEANING THROUGH TOUCH AND CAMERA FUNCTION

Technical task:

This function provides the occupant of a vehicle with information on the use and disinfection of a touch display in the vehicle in order to protect them from infection.

Initial situation:

Touch displays are a cause of concern for the transmission of viruses and bacteria when a display is used by several people. The risk of spreading is particularly high when all functions are operated via the display. Especially since the corona crisis, the awareness of the hygiene of touch displays has increased significantly.

Up to now, there is no indication of how many people have used a touch display since it was last cleaned. Some models have a display cleaning mode in which the display turns black, making fingerprints more visible. A good visibility of the fingerprints is strongly dependent on the ambient light. In other vehicles or, for example, ATMs and touch displays in public transport, there is no indication of how dirty the respective display is.

Solution:

The solution to this problem is based on the fact that touch displays still work when you touch them with a cleaning cloth. This means that the display can detect where it is cleaned and where it is not. With a touch algorithm it is possible to detect when the touch display is cleaned. The touch surface can detect that the display is being cleaned by the width and movement pattern of the touch. In addition, a camera detects the display from the outside and can use the image recognition to analyze whether the display is being cleaned. The display's touch sensors then detect where exactly cleaning is taking place and where it is not. The uncleaned areas are highlighted with an accent color and a message is displayed that the display should still be cleaned there. If this is not done, items can be moved from the processor to clean areas of the display in the menu. In shared vehicles a display shows how many people have used the display without cleaning it. Especially in shared vehicles it would be useful to provide suitable cleaning cloths.

Advantages:

- Real support for cleaning
- Reduction of infections
- Technically easy to implement

Possible application:

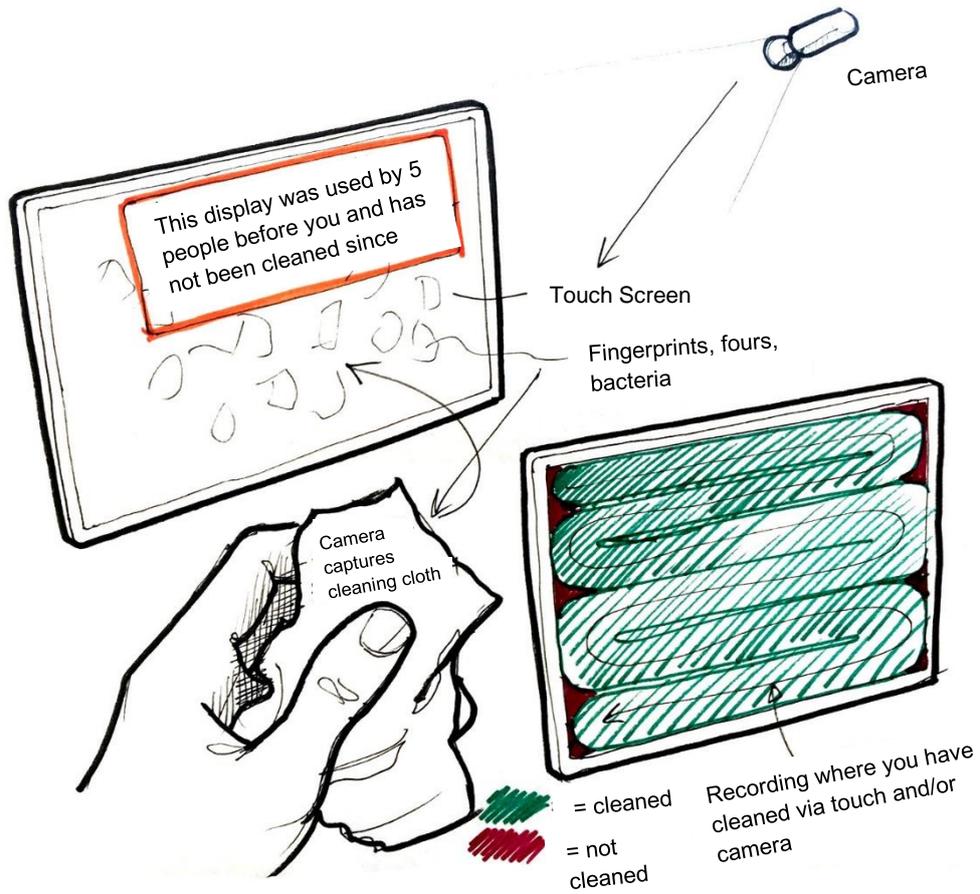


Figure 1

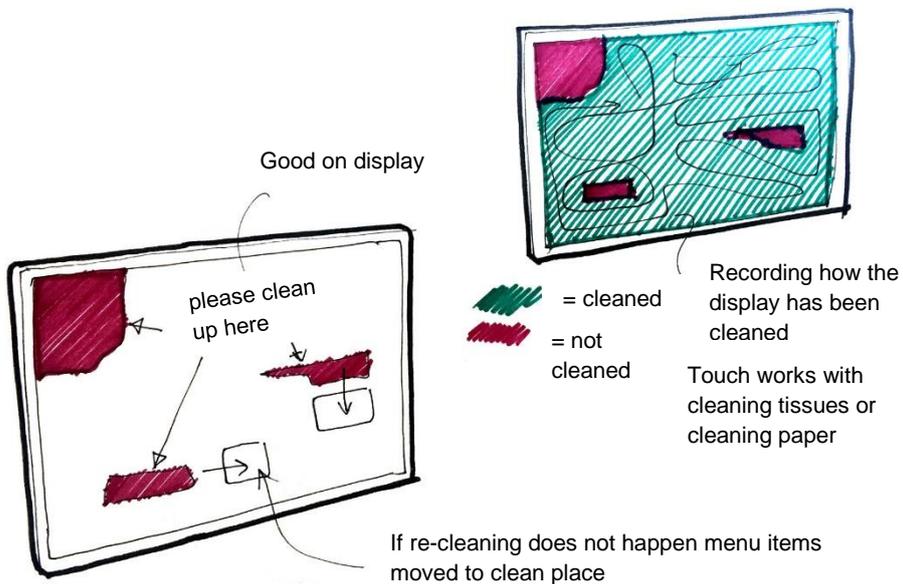


Figure 2