Template

A GESTURE BASED TOOL FOR STERILE BROWSING OF RADIOLOGY IMAGES.

The current methods for interaction are different where they use glove or sensors. So a direct comparison of our work is not possible, although the method used in this work can be compared with existing implemented methods.

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2-8 people recommended

Share template feedback

Before you collaborate

A little bit of preparation goes a long way with this session. Here's what you need to do to get going.

10 minutes

A Team gathering

All my team members has to participate.

B Set the goal

The nature of gestures used in different interaction interfaces is explored, along with the reasoning, if present, behind the gesture elicitation choices made in them.

C FACILITATION TOOLS

1.Gesture recognition.
2.Taking videos.
3.Sensors.

Open article

1 Define your problem statement

The use of doctor-computer interaction devices in the operation room (OR) requires new modalities that support medical imaging manipulation while allowing doctors' hands to remain sterile, supporting their focus of attention, and providing fast response times.

PROBLEM

Hand Gesture Recognition based human interface is being developed vigorously in recent years. Due to the effect of lighting and complex background, most visual hand gesture recognition system work only under restricted environment.

Key rules of brainstorming

To run an smooth and productive session

- Stay in topic.
- Encourage wild ideas.
- Defer judgment.
- Listen to others.
- Go for volume.
- If possible, be visual.

2 Brainstorm

Write down any ideas that come to mind that address your problem statement.

10 minutes

TIP

You can select a sticky note and hit the pencil (switch to sketch) icon to start drawing!

PROBLEM 1

The bases of human-human communication are speech, hand and body gestures, facial expression, and eye gaze. Some of these concepts have been exploited in systems for improving medical procedures.

PROBLEM 2

For gesture recognition, a human hand can be mathematically modeled as a distributed target consisting of continuously varying inflectivity across space. Understanding how the radar captures such target scenes provides an intuition into the difficulty of the hand gesture recognition problem.

PROBLEM 3

The first application of hand-gesture control we review—medical systems and assistive technologies—provides the user sterility needed to help avoid the spread of infection. The second—entertainment—involves naturalness of the interface as part of the user experience.

PROBLEM 4

Having surgeons perform a small amount of training postures would be preferable in order for the training step not to be long and cumbersome for them.

PROBLEM 5

The Gesture Continuity metric measures the continuity of data in two neighboring segments. When two segments differ greatly in its signal shape at the connecting point, it is less likely that those two segments belong to the same single gesture.

PROBLEM 6

The goal of this review was to investigate the patterns of touchless hand gestures used in gesture-based interfaces, which have reached the prototype stage. In this process, the reasoning behind the elicitation of these gestures was explored.

PROBLEM 7

Regarding implementing gesture recognition in systems, we see in the literature a gradual movement from implementing conventional interaction methods using gestures, to designing systems with gestures in mind from the ground up.

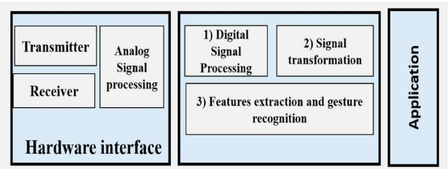
PROBLEM 8

The use of "Gestix," a calibration process is conducted to capture a sample of the gamut of colors of the hand or surgical glove. The setup time for the whole "Gestix" system was approximately 20 minutes.

3 Group ideas

In medical applications or industrial environments, they enable touchless operation guaranteeing sterility or safer interaction.

20 minutes



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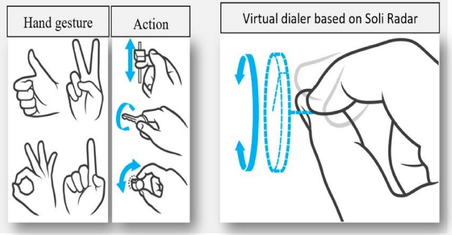

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