Skinvisor

- Device for contact projection contours of objects are in the camera's field of view onto human skin.

The idea of this device aims to help blind people navigate in space; it arose 16 years ago due to family circumstances. The idea is in the fact that very special display - electromechanical (MEMS) or electro-thermic matrix - is pressed tightly to a forehead (chest, arm) of a person. The raster "image" of object boundaries and structures outputs to this matrix in the real-time. The DSP-processed image is originated from miniature video camera mounted on opaque glasses. Thus, mechanical (vibration) or thermal stimulation in the form of boundaries affects the sensitive skin. With some training, a person begins to "see" (as Braille letters) the outline of the buildings, pavement, people, doorway, windows, furniture, etc., that greatly simplifies life. With sufficiently large size and resolution, this touch display may give more information, more small objects and even the inscriptions on closer "consideration".

Outside the home, the displayed information can be complemented by voice information about the location (like in Toyota BLAID device) and direction of travel from the GPS / GLONASS navigation and perhaps switch the display to "projection" maps.

At the present level of electronics, the skinvisor is quite feasible in glasses. The algorithmic part of contours recognition software has long been used in robotics. It is necessary to develop and manufacture the touch display - the main skinvisor’s unit. Perhaps someone from the specialists developing MEMS, print heads, micro-resistors, film infrared diodes, etc. will be interested in this project.

For obvious reasons, I did not patent the idea and skinvisor device, and invite all interested people on GPL basis. If someone will be able to realize skinvisor all alone, hopefully, he will share the information and technology, openly and freely.

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(to be continued with illustrations)