Navigation for visually impaired

Requirements

-right direction
-obstacle avoidance
-safe crossing of the road
-reaching a destination
-right bus/train
-when to get off of the bus/train

Trekker Breeze

-Humanware
-Built-in GPS
-Announces intersections and streets

BrailleNote GPS

-QWERTY/Braille
-18/32 cell braille display
-USB, SD, Ethernet
-thumb buttons
-LookAround

Loadstone GPS

-Symbian S60
-open source
-Bluetooth GPS reciever

Drishti

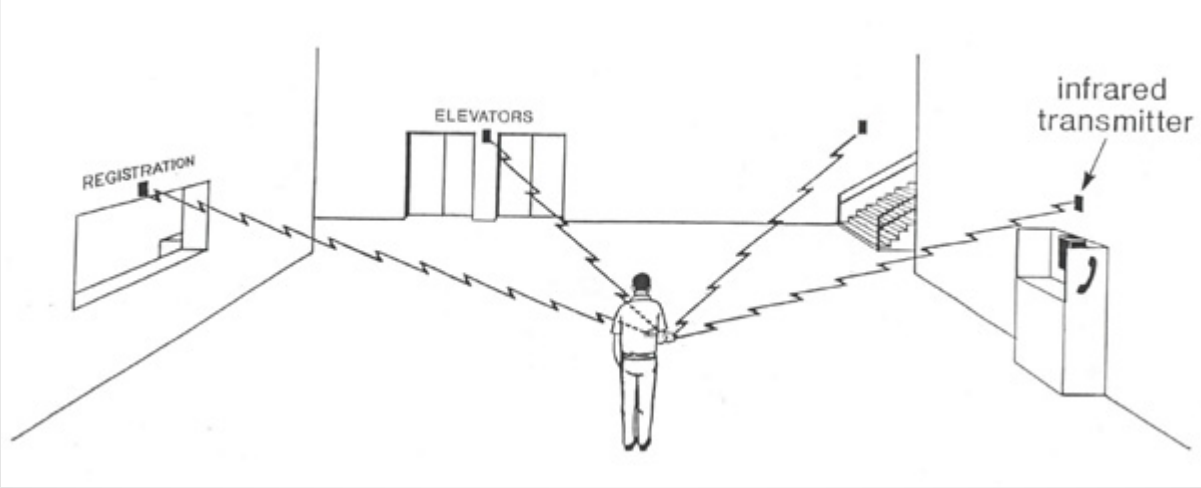
-Client-Server Architecture
-Dynamic
-text-to-speech dialogue

SWAN

-many sensors
-sounds instead of speech
-army, firefighters

Talking Signs

-audio signals via infrared beams
-permanently installed transmitters



RFID InfoGrid

-RFID chips and readers
-cheap

ShopTalk

-help with shopping in supermarkets
-map of supermarket
-barcode reader

vOICe

-images to sounds
-left to right processing
-loudness/brightness
-height/pitch

K Sonar

-ultrasound
-sound clues about obstacles

MiniGuide

-vibrations

iSONIC Electronic cane

-vibrations

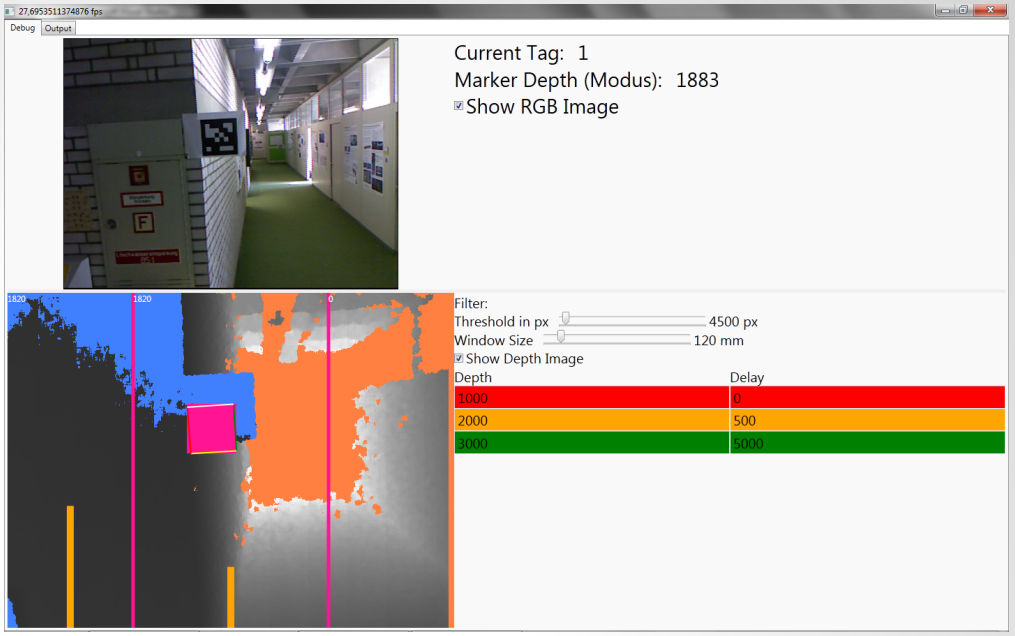
-colors/brightness

Sonic pathfinder

-5 emitters
-musical tones

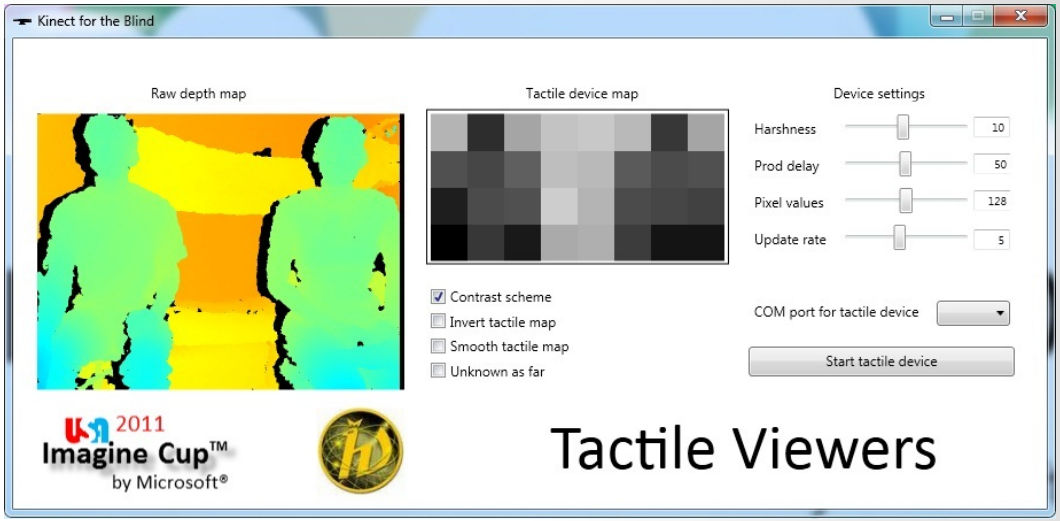
NAVI

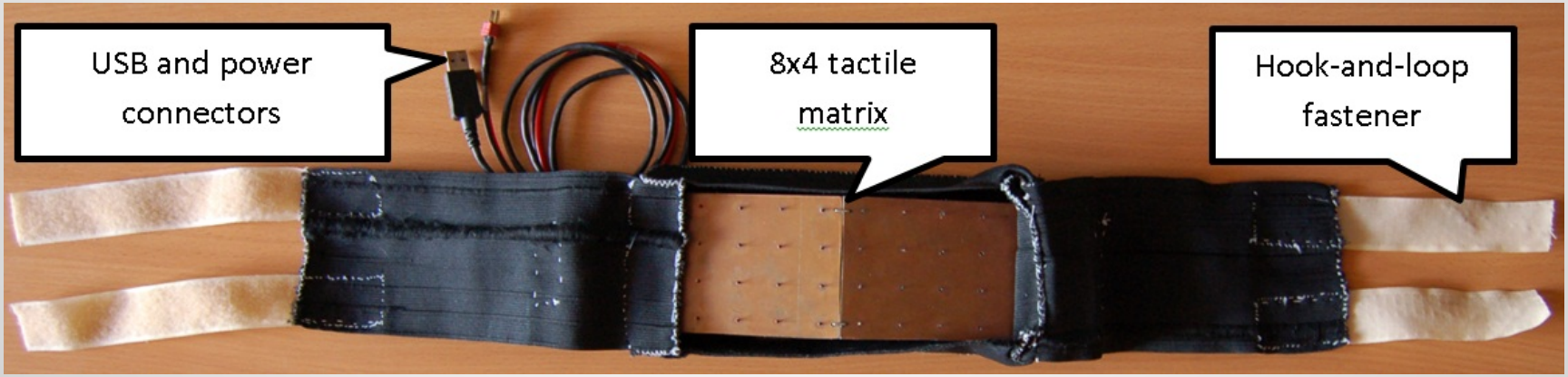
-MS Kinect
-vibrational belt



Kinect for the Blind

-tactile matrix





Traffic lights problem

-important aspect of safe navigation
-cars, color blind
-processing power/portability
-classifiers

OnTheBus

-android
-free