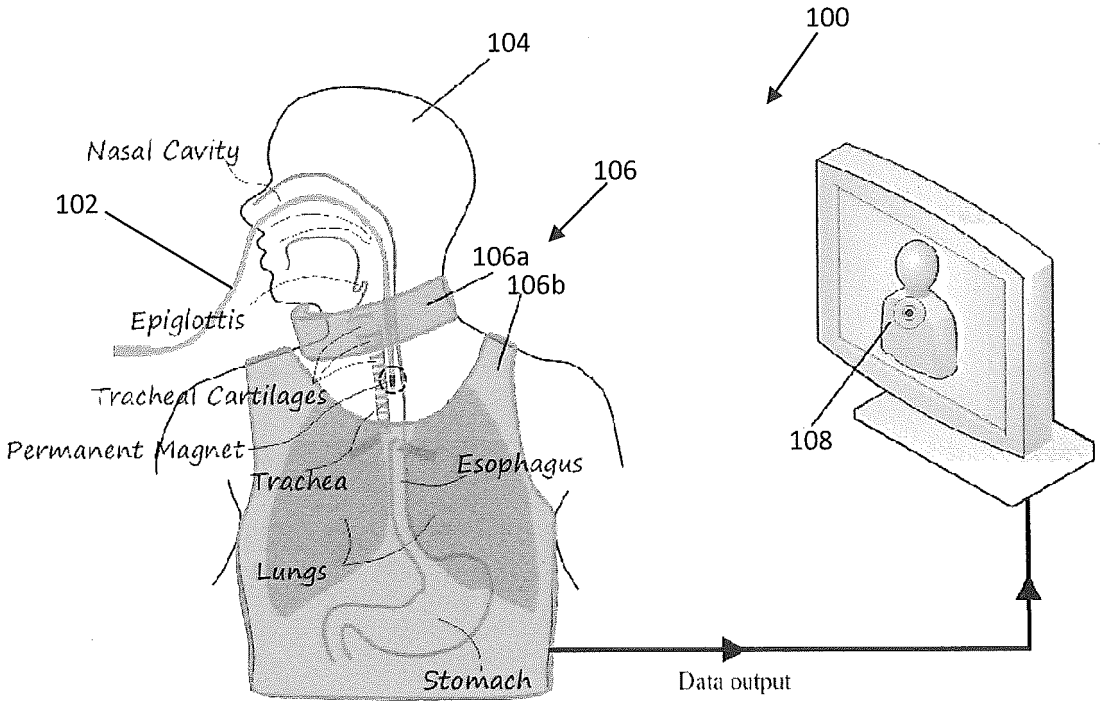

100
104
Nasal Cavity
106
102
106a
106b
Epiglottis
Tracheal Cartilages
Permanent Magnet
Trachea
Esophagus
Lungs
Stomach
108
Data output

Fig. 1

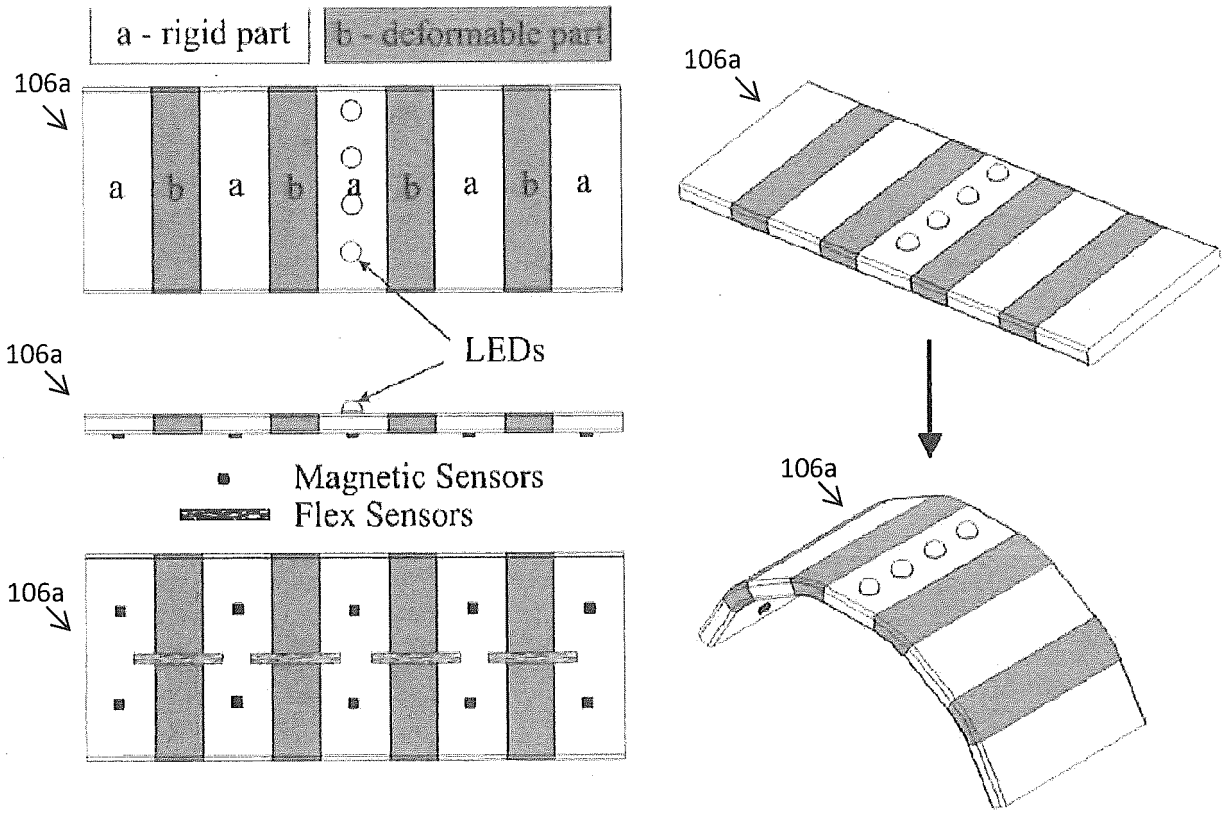

a - rigid part
b - deformable part
106a
a
b
LEDs
Magnetic Sensors
Flex Sensors

Fig. 2

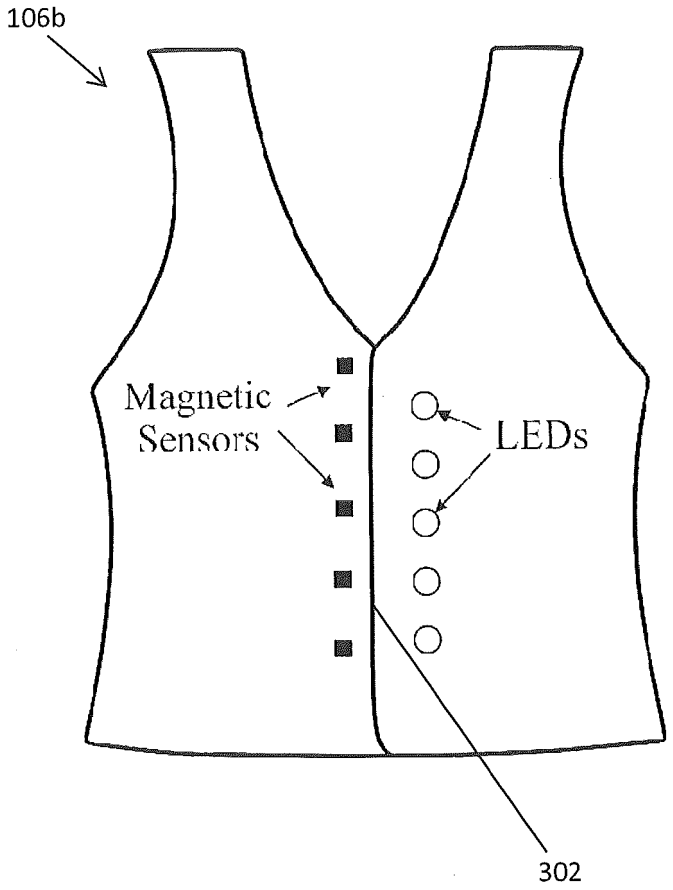


Fig. 3

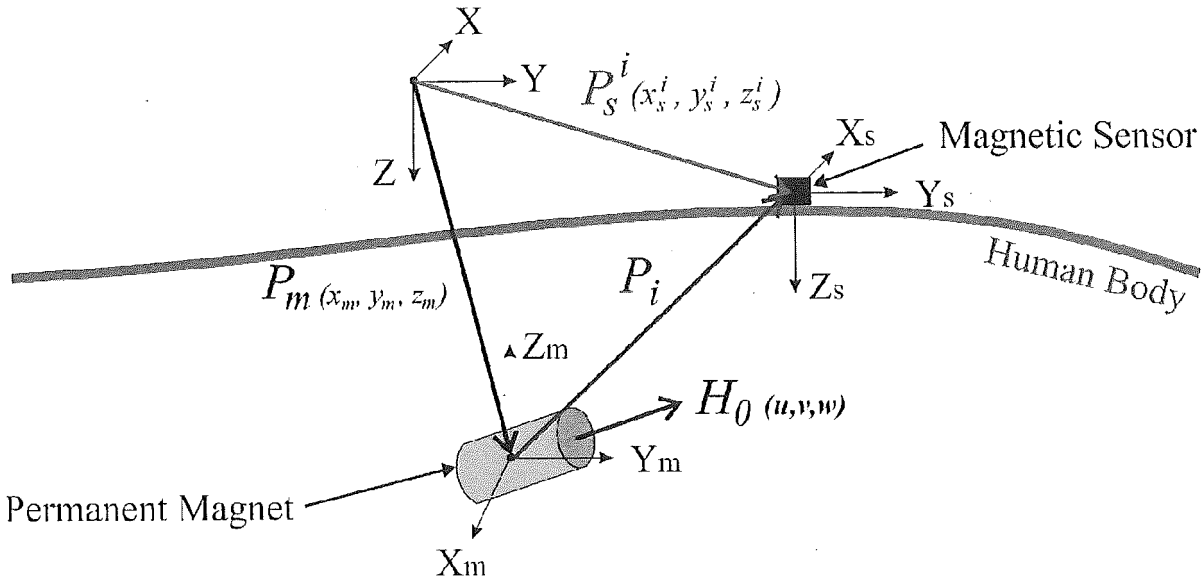
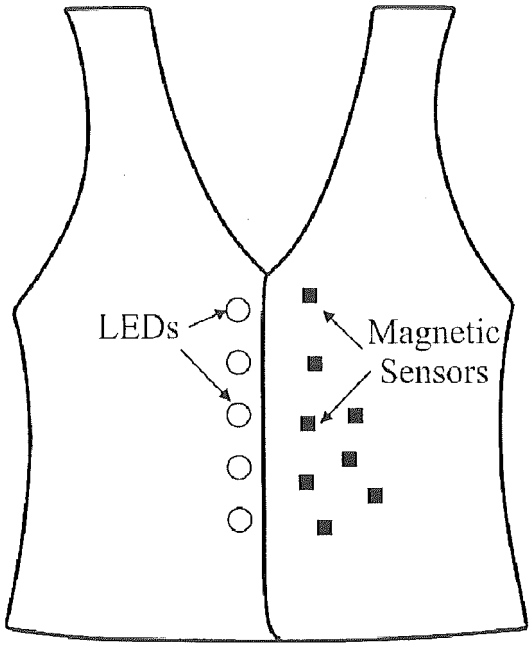
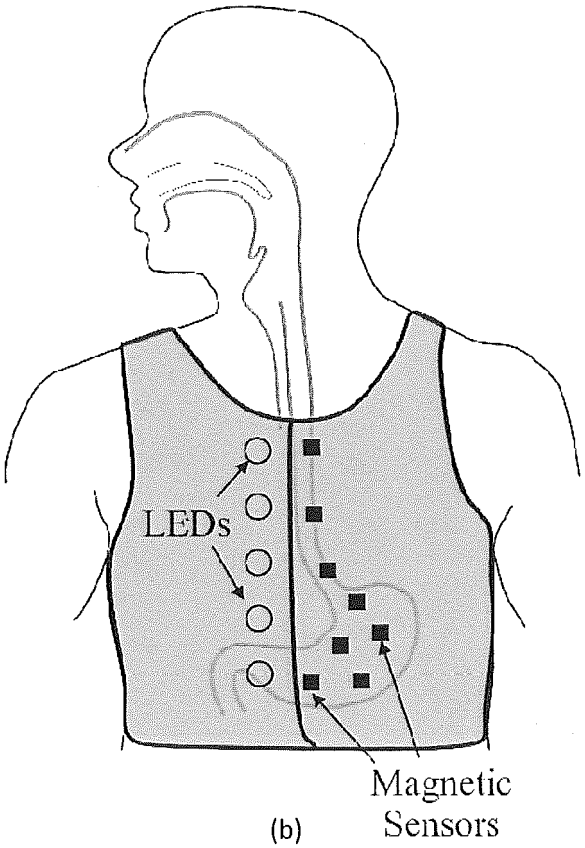

X
Y
$P_s^i (x_s^i, y_s^i, z_s^i)$
Z
Xs
Magnetic Sensor
Ys
Human Body
$P_m (x_m, y_m, z_m)$
P_i
Zs
Zm
H_0 (u,v,w)
Ym
Permanent Magnet
Xm

Fig. 4



(a)



(b)

Fig. 5