Applications of Smart Digital Garment (SDG)

Uniforms for Police Officers, Fire Fighters, Body Guards Clothes for seniors who

- live alone
- > Clothes for children who are exposed to missing. and who need to be located when missing



Welfare





- >Mountain and bedrock climbing uniforms
- ➤ Bicycle and motorcycle uniforms
- >Aviation sports uniforms for paragliding and hand aliding
- >Water sports uniforms for windsurfing, kayak and vacht

> Clothes for measuring health status and biosignals





Medical

Public





Sports





- > Working uniforms for workers who make
 - robot, ship, vehicles, and semi-conductors
 - chemical plants
 - bio medicine
 - highway construction workers



> Diapers (Sensing temperatures with alarm-functioning) for 0-to-3-year-old infants and patients with serious cases

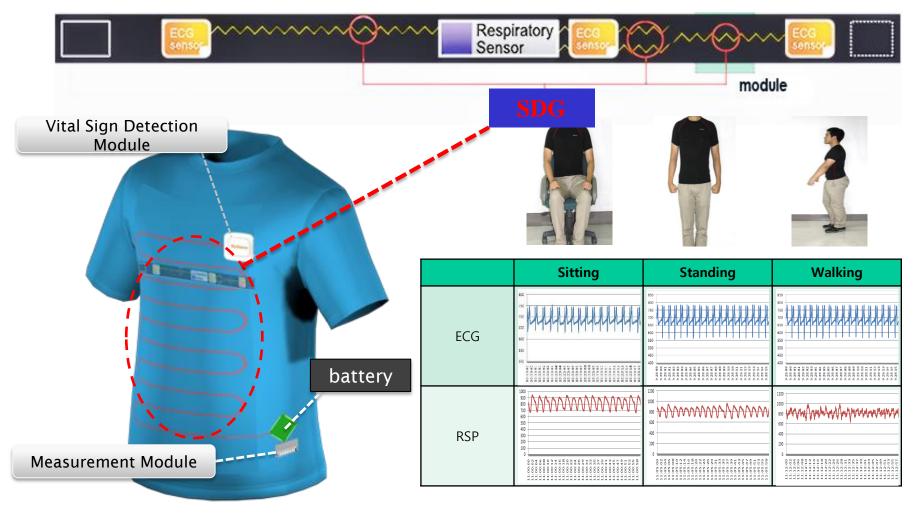


- > RFID can also be used for healthcare of such live-stocks as
 - pets including dogs and cats
 - racehorses
 - cows and pigs



Health Monitoring Wear for Seniors or Disabled People

- Measuring vital signs such as heart rate (ECG) and respiration (RSP) etc.
- Transmitting the health status of individuals to caretakers.



Digital Garment for Seniors or Disabled People

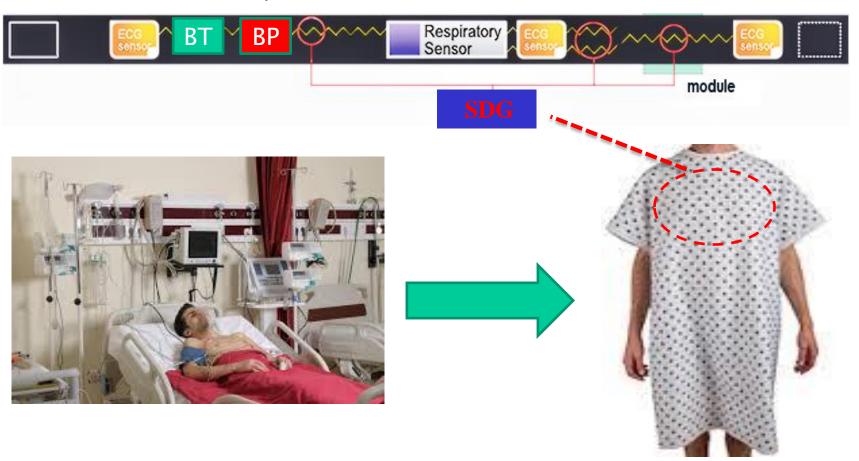
SDG embedded clothes transmits the health status of seniors or disabled people

outdoor **Emergency center Relief Efforts** Relief request receipt Patient information Cell phone Confirmation transmission Hospital indoor Relief request Transmitter Patient in house transport Telephone server **Control center** · Emergency situation Information information receipt delivery of EMERGENCY check emergent situations

Motion/vital sensor

Health Monitoring Patient Gown for SDG Patient Management System

Real time measurement of vitals (temperature (BT), ECG, RSP, blood pressure (BP) etc.) Real time transmission of patient's vitals to medical staffs.



SDG Patient Management System

- Real-time wireless transmission of the patient's vital signs in emergency room, ICU(Intensive Care Unit), and wards
- Integrated management and analysis by monitoring the patient's health status
- The nurses can be liberated from simple and repetitive tasks and concentrate on high-value-added work

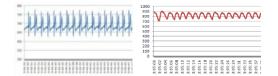
Patients' Vital Signs





Configuration and method of measurement Respiratory Sensor Digital yam Redule

- Electrocardiogram(ECG)
- Pulse
- Respiration
- Body Temperature
- Blood Pressure

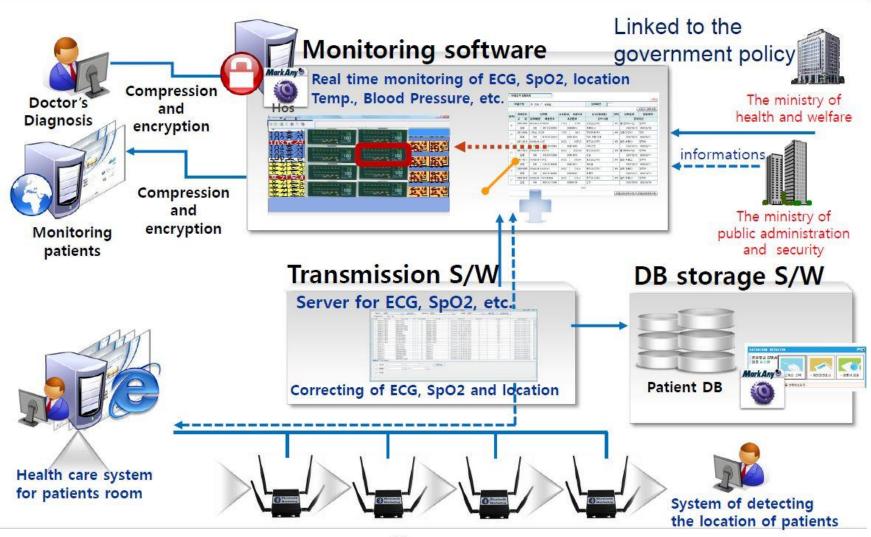


Medical Signal Management Center



- Bio-signal management and analysis
- Rapid treatment of patient with abnormal sign

SDG Patient Management System at a Glance



Why SDG Patient Management System?

- 1. Reduce the number of staffs on duty means the reduction of healthcare cost for caretakers, insurance company, government and patients.
- 2. Significantly increase hospital's revenue by sales and/or lease SDG patient gown.

The use of current vital sign machines cannot be charged. Those machines are hospital's investment to be depreciated.

- 3. Immediate response to patients in life-threatening conditions.

 At least one-third of ER visits are not serious enough to stay in ICU.

 SDG patient management system helps medical staffs to do punctual response to patients with urgent medical needs.
- 4. SDG patient management system improves the quality of telemedicine.

 Patients can lease SDG clothes after discharge in order to be monitored continuously. Medical staffs can check the improvement of patient's condition at anytime.

SDG Patient Management System (S. Korea)



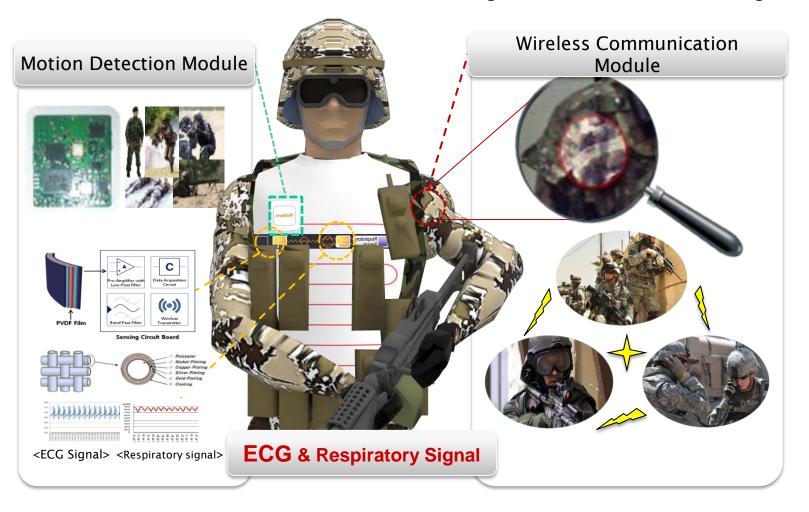






Smart Military Combat Uniform

- Awareness of location, moving distance, and status of soldiers in operation field.
- Acquisition of vital signs of soldiers.
- Multi-directional communication of voice and data among soldiers and/or commanding center.



Smart Military Combat Uniform System (Battle field)



Real-time Vital signs and Location Measurement

Red-dead, yellow-wounded, Blue-normal

Data Transmission

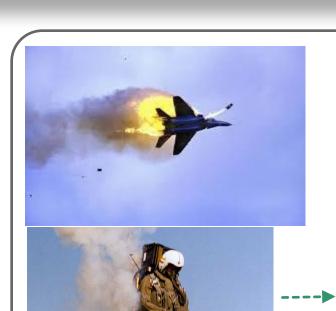


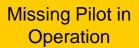
Headquarter

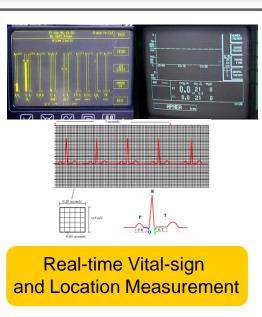
Monitoring vital signs of each soldiers

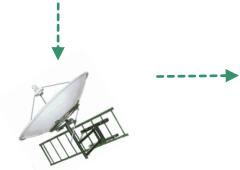
- Discriminate the wounded and dead.
- Save the wounded soldier on time.
- Relocate soldiers to the losing area.

Smart Pilot Uniform Rescues Missing Pilots in Action (Navy / Air Force)









Signal Transmission



Monitoring vital-signals (Management of personnel and situation)