

BRIDGE eTriage Concept Case



eTriage System

BRIDGE eTriage assists in marking and monitoring victims and in creating real-time situation awareness. It aims to ease the triager's task and bridge the process from triage to hospital admission. The eTriage system is made up of several components that work together, but independently, to mark and monitor victims.

Triage Bracelet

A colored, reflective plastic bracelet, just like the ones being used currently for triage in a number of countries, is snapped on a patient's arm. This plastic bracelet is augmented with microelectronic components and various sensors that do not need contact with the victim's body (e.g., air temperature, infrared, etc.).



Triage Relay

The Triage Beacon is a small device that is intended to clip on a normal trouser belt like a beeper. It needs no interaction from the triager; its role is to gather data from the disaster field and transmit them to the command center in case the MESH has a problem.

Clip-on Sensors

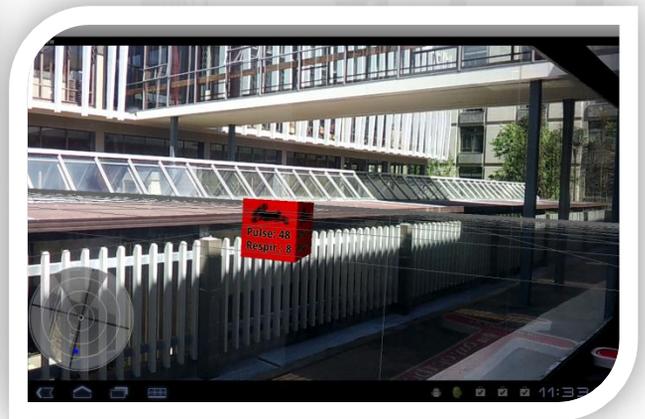
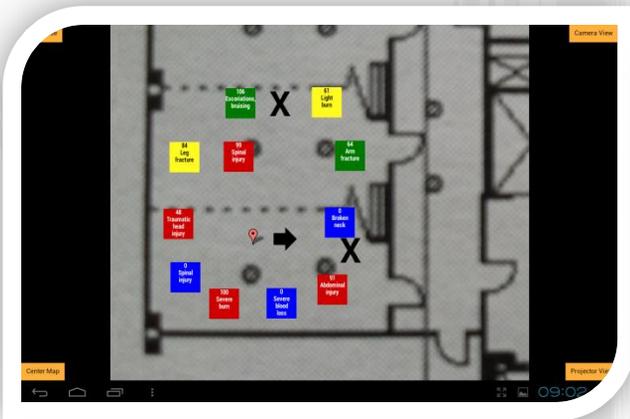
Clip-on sensors are those that need contact with the victim's body, e.g., heart rate, breathing rate, blood pressure, etc. They allow monitoring the victim instead of simply marking him or her. The sensors are intended to be used either by the triagers or by the medical personnel at the assembly point, as needed.



Triage Tablet

The main purpose of the triage tablet is to visualize the triage data. It is intended to be used by either triagers, or by the medical personnel at the gathering place. Two different visualization modes are available: The map mode (figure left) and the augmented reality mode (figure right). In the map mode, icons representing each patient are displayed on a map. Each icon contains the most important triage data category, pulse and respiration rate. For outdoors, a Google Map is used and the users own plus patient's positions are acquired by GPS. For indoors, floor plans and roughly estimated positions are used.

The augmented reality mode presents a camera stream on which again category, pulse and respiration rate are overlaid as icons. The medic uses the tablet as “lens”, scanning the environment by turning and acquiring triage data about his current view.



In both modes, a click on an icon reveals all data about a patient. As alternative, the triage tablet comprehends an RFID reader which allows for scanning a patient's bracelet in order to call up the detailed patient information on the screen. The triage tablet can, additionally, function just like a triage relay.

Availability for Evaluation in the Demo

At the moment, we have five Triage Bracelets available, and we plan to build at least five more. We have one Triage Tablet and we can build a second one. We also plan to build two or three Triage Beacons. At the moment, we have no usable clip-on sensors and we do not foresee being able to build some until the Demo. We can nevertheless provide some plastic prototypes for demonstration, whereas the visualized sensor values shall be computer-generated, for illustration purposes only.