

Multimedia alarm pages on multiple Smartphone platforms

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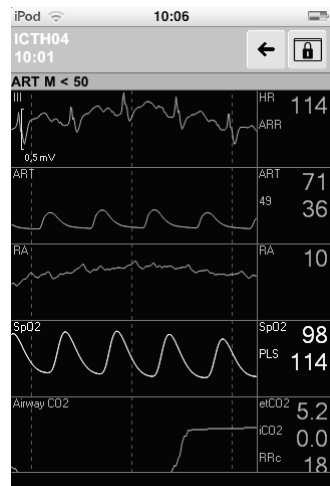
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At the Critical Cardiac Care unit a patient is monitored closely by different devices. These devices generate alarms when an abnormality is detected. These alarms are typically provided by the patient monitor at the bedside or at the nurse desk. Caregivers aren't always at either of these locations. Additionally most alarms do not signify a life-threatening event.

At Department of Cardiology of the Erasmus MC patient monitors are connected to a central gateway. An application was developed to collect and manage alarms from the central gateway. The alarm manager stores the alarm messages; a web-interface provides access to the data. The web-interface can be used from many platforms including the following Smartphone platforms: iPhone, Android and Symbian. The web-interface provides the alarm messages to the caregiver. The interface can be configured to display alarms for each patient bed or for an entire care unit and is updated every 5 seconds. The alarms received by the Smartphone do not yet generate an audible alarm. However the current setting is that audible alarms can be heard within the ward. The user can look up the alarm on a Smartphone by clicking on it, the message and vital signs displayed by the monitor at the moment of the alarm are provided, enabling the user to make an informed decision regarding further action.

The system also provides a mechanism to add additional messages. For example lab results can be shown when new lab results are available, messages from a clinical decision support system could be integrated into the system as well as messages that aid nurses to follow clinical pathways.

The multimedia paging application allows delivery of alarms and clinical data directly to the caregiver on a portable electronic device, enables evaluation of alarm data and provides a platform for generating "smart" alarms.



Screenshot made of the application on an iPod Touch