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MOBILE DATABASE · PROJECT

HSW

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Organisation

September

Human Sensor Web

Methodology (September 2010)

The Human Sensor Web (HSW) is pioneered by a consortium of three partners: the Faculty of Geo-Information Science and Earth Observation ITC of the University of Twente, Twente Institute of Mobile Communications and the 52North. Geospatial Open Source Software GmbH.

Where and with which partner organizations piloted

The Human Sensor Web (HSW) was implemented in Zanzibar by the Zanzibar Water Authority (ZAWA) with two local partners: Zantel, the mobile telephone company partly owned by the Government of Zanzibar and Inet, a local Internet Service Provider. HSW is a part of the h2.0 initiative of Google.org and UN-Habitat.

Monitoring gap it aims to address

HSW objective is to provide continuous data on the quality of the service provision, thus water availability and water quality for selected water points. Data is collected primarily by the user and the water service provider. The traditional water related surveys like waterpoint inventories do not capture this type of information. Furthermore HSW will serve as a community and ZAWA driven information provider on the functionality of public water points. Zawa personel or dedicated community members can send a coded SMS, reporting the functionality status of the waterpoint, that invokes a mass-SMS to registered community members.

Compliant with the paragraph above the system continuously monitors water availability and quality at selected water points. At a number of selected monitoring locations the flow through the tap is electronically monitored in 10 litre units. This is formally not part of HSW but to test the reliability of the citizen response.

Data capture methods

Two methods for data capture are used. 1) Anyone can report "no water" or "bad water" by sending a coded SMS to the HSW database. Special agents (eg ZAWA personel or a water kiosk owner) can report the return of water. Recording water meters are used to monitor continuously the water use at a view selected points.

Data types

Two types of data bases are created: The HSW creates a database of time-stamps when water failures are reported, and when proper functioning is reported. The automatic water meter records the timestamps of every 10 liters of consumption.Unlike other systems the data collectors are the water users themselves or automatic logging devices.

Key users

Since all data is without restrictions available via the Internet, "key users" are not yet defined. In principle the data is meant for the end-user, local communities and civil society to advocate for better services, if deemed necessary. The service provider can use this data to analyse and improve the water service provision, whereas the Government can use the data for general planning and reporting on progress for the water related MDG targets.

Up-scaling considerations

In theory the HSW can be easily up-scaled. However there are some constraints. 1) For massive use the technology may not have enough capacity. 2) If the user of HSW has to pay for SMS's sent out, with massive use this may become very expensive. 3) The Zanzibar experience has shown that just making the system available is by way not enough for success. Educating the users of HSW is a absolute necessity and time consuming. Per waterpoint meetings with the users need to be organized communicating the ideas behind HSW. Whether this personal approach can be replaced by communications through mass media (newspaper, radio, TV) is not known. Technical upscaling is foreseen in a later phase: the software will be tranfert to a Android/Google environment and a user friendly interface that allows the adaptation of the system to other requirements such as health, education or environmental monitoring. Also the use of voice directed system is planned.

Go to Human Sensor Web

Use this link when you are logged in at the ITC network.

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