

School of Computer and Communication Sciences

Karl Aberer, Ali Salehi, Manfred Hauswirth

6/2006

Sensor Networks Everywhere



Sensor Networks Everywhere

Example Applications

Monitoring of the physical world. Acting to changes in real-time.

Various statistics about the environment.

Problem

Heterogeneous sensor networks which are not integrated and use incompatible technologies.

Our vision : Sensor Internet



Plug & Play deployment



GSN Abstraction

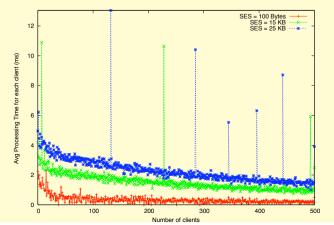


On-the-fly reconfiguration, sensor "mobility"

NOTIFY SMS://0786810931 WHEN SELECT TEMPERATURE FROM CHAMBER WHERE TEMPERATURE > 10 [LAST 10 MIN]

Our Solution

Zero-programming sensor network setup. Declarative description of sensor setup. Global discovery of sensor networks. On-the-fly reconfiguration. Very Light : less than 2 msec processing time per client while handling 500 requests.



All Implemented & Tested

http://globalsn.sourceforge.net

Supported Hardware : TinyNode, Mica2, Mica2Dot, WiseNodes, Texas Instruments RFID readers, Alien Technology RFID readers, OV511 Chip wired cameras, Axis Wireless Cameras, and many more.

The work presented in this poster was supported (in part) by the National Competence Center in Research on Mobile Information and Communication Systems (NCCR-MICS), a center supported bySwiss National Science Foundation.

Contact email :ali.salehi@epfl.ch