AUTHENTIC for Home Area Networks (HAN)



Project Acronym:	AUTHENTIC
Project Details:	Autonomic Home Area Network Infrastructure (AUTHENTIC)
Start Date:	January 2013
Duration:	24 Months
End Date:	December 2014



Project Description

This project seeks to design and deliver a HAN infrastructure capable of supporting opportunistic decision making pertaining to effective energy management and other services in a residential setting. This will necessitate the potential integration of key enabling technologies including a variety of physical sensors within the building (temperature, contact sensors, passive Infra-Red), cyber sensor sources outside of the home (e.g. meteorological data and energy providers' dynamic pricing sites), together with effective interfacing with the smart grid and support services beyond the residence.

Such interventions will necessitate intelligent decision-making based upon a variety of potentially distributed, incomplete, contradictory and noisy sensor inputs and will thus harness multi-agent based reasoning. Recommendations or actuations will be governed by a number of operational constraints that must be adhered to and as such will utilize constraint based reasoning.

Within this project the HAN is viewed as a key enabling technology to accommodate the co-existence of multiple applications. These may consist of a variety of services for example Ambient Assisted Living (AAL), home security and home entertainment together with energy management functions. AUTHENTIC will thus seek to future proof such requirements within its design. The design of the AUTHENTIC system will be framed within the key drivers of cost, ease of deployment, ease of use, adherence to standards and the need for it to be an ambient technology offering.

Participating Research Organisations	Contact
CLARITY: Centre for Sensor Web Technologies, based in UCD, Dublin	Prof. Gregory O'Hare (Leader)
Tyndall National Institute, Cork	Dr Brendan O'Flynn
Cork Institute of Technology	Dr Susan Rea
UCC – 4C	Prof. Barry O'Sullivan
Department of Computer Science and Engineering, University of Texas at Arlington (Technical Advisor)	Prof. Sajal Das
Director, Responsive Environments Group, MIT Media Laboratory (Technical Advisor)	Joseph A. Paradiso
Computing Department, Lancaster University (Technical Advisor)	Dr Adrian Friday

For more information please contact us at **info@ierc.ie** International Energy Research Centre, Tyndall National Institute, Lee Maltings, Dyke Parade, Cork, Ireland