Using the smart meter infrastructure to support home based patient monitoring

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Partners

- Atmel
- Brunel University
- Chorleywood Health Centre
- Echelon
- Innova Partnership
- Onzo
- Oracle (SUN)
- Philips
- Scottish Southern Electric
- Silver Spring Networks

- Funded by UK government - TSB and EPSRC
A Statement

• “The UK will install smart (electricity) meters in 80% of UK households by 2020”

• This will create a ubiquitous telecommunication network into 80% of households that will provide secure and reliable communication at low data rate

• Can this be a value added service for utility suppliers?
Our Aims

• Basic Requirements
  - A ubiquitous communication infrastructure for all
  - Simple access to the monitoring service
    - Unobtrusive
    - Take out of the box and plug in
    - Little or no configuration
    - Use anywhere in the home
  - Standards based
  - Supports variety of devices
  - Support telehealth and telecare
Support Equally
– Unified Architecture

- Two domains
  - Disease Management
    - Examples: Pulse oximeter, Heart rate monitor, Blood pressure monitor, Thermometer, Weighing scale, Glucose meter
  - Independent Living (Aging Independently)
    - Examples: Disease management devices plus Independent living activity hub, Medication monitor
Our Approach

- Home domain
  - Much development in the commercial world
  - Zigbee Alliance developing profiles for
    - Smart Energy
    - Home Automation
    - Health
  - We will build first version on Zigbee
Zigbee

Coordinator/Manager

BP (bedroom)

Zigbee Router

Weighing Scales (bathroom)

Eurenesis

External Communication

Ubiquitous around the home
A Standards Approach

BP (bedroom) --> Coordinator/Manager --> Smart Meter

Zigbee/11073-20601/11073-104xx

Proprietary (Standards?) / IHE-PCD01

Health Care Enterprise

WS/IHE-PCD01 (Continua Alliance)

Health Care Professional

Utility Data Management

Information Systems, Computing and Mathematics
Our Purpose

• What is the potential for value add
  ▪ High cost infrastructure
  ▪ Extra revenue
  ▪ Ubiquitous
    ➢ Not all homes have landline
    ➢ Not all places can receive mobile
    ➢ Need not interfere with existing patient services

• Demonstrate potential for business

• Encourage open access standard
Thank you

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