IST FP7-ICT-2011-7
STREP
Project Proposal: 287305

Future Internet Assembly Standards brokerage event
May 11th-12th, 2012

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Cloud Computing
Linked Data
Internet of Things
Open Source
Scope of the OpenIoT Project (http://openiot.eu)

- STREP Project, Timeframe: December 2011 - November 2014
- Main Goal: Research and Development of (open source) middleware platform enabling the setup of utility/cloud based infrastructures for IoT Services
- Example:
  - Utility-based Sensor Clouds (i.e. Sensing-as-a-Service)
- Main Research Topics:
  - Semantic Interoperability for ICO
  - Linked Sensor Data
  - Pay-as-you-go IoT Services
  - Utility Driven Security and Privacy
Planned Standardization Activities

- Use and Enhancement of W3C SSN Ontology towards:
  - A Standardized Solution for Dynamic Discovery of Sensors and Internet-Connected Objects (ICO)

- Open Architecture for IoT/Cloud Integration:
  - Best Practice Paper for OGC (Open Geospatial Consortium)

- De-facto Open Source Standardization:
  - Sensor/Cloud open source community
  - Partners are founders and main contributors to Global Sensor Networks (http://sourceforge.net/apps/trac/gsn/) and AspireRfid (wiki.aspire.ow2.org) projects

- Use of IETF COAP protocol for RESTful access to sensors and ICO

- The consortium has presence and liaisons within both W3C and OGC
OpenIoT Standardization Expectations

- Implement W3C SSN Incubator Group Recommendations, notably:
  - Promote uptake of the SSN ontology
  - Continue investigation of SSN within W3C

- Provide a Standardized Sensor Cloud Integration solution:
  - Along with a blueprint implementation

- Become a popular open source project for ICO:
  - Within both research and industrial communities
  - For education, research and solution implementation

- Promote uptake of IETF COAP
OpenIoT: Open Source blueprint for large scale self-organizing cloud environments for IoT applications