

Business from technology



Open International M3 Semantic Interoperability Workshop

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Purpose of the workshop

- Kick of the open M3 community.
- Presenting the latest developments and results in M3
- Discussing about the future of M3 community.
- We have 23 presentations from 13 organisations covering the areas of developments related to M3 concept itself, to M3 based infrastructures, to use cases based on M3, and to the ideas related to M3 community.



Brief history of M3

- Smart-M3 concept developed at Nokia Research Center (-2009)
- Starting of two major projects: Artemis Smart Objects For Intelligent Applications (SOFIA) and Tivit Device Interoperability Ecosystems (DIEM)
 - Smart-M3 open source distribution
 - Sofia Interoperability Platform and ADK
 - RIBS for small embedded systems
- FRUCT M3 activities
- M3 used in various projects:
 - CHIRON, OPUTE, MIOTE, iCore, IoT-A, ...



Current state-of-the-art

- M3 community is scattered
- Several approaches being developed -> collaboration need to be strengthened
- Industrial lead missing, small use cases exist but real commercialization is to be seen
- Semantic interoperability is widely seen as the solution for future smart environments, IoT, and system interoperability
 - E.g. LinkedData



Agenda

- Registration
- Opening
- Session 1: M3 Community
- Coffee break
- Session 2: M3 Technology
- Lunch
- Session 3: M3 Infrastructures
- Coffee
- Session 4: M3 Case examples
- Discussion
- Social event



Session 1: M3 Community

Smart Spaces Development: Activity Status from Open Innovations Association FRUCT

- Dmitry Korzun, Sergey Balandin
- HIIT, Aalto University, Petrozavodsk State University, FRUCT

M3 in education and research: experiences and lesson learned

- Fabio Vergari, et al.
- University of Bologna

Approaching the Raspberry community with M3

- Francesco Morandi, et al.
- University of Bologna

An OCPP interoperable services system based on a SmartM3 core

- Ángeles Rodríguez Serrano
- University of Seville

Resolution Infrastructure for M3 based Systems

- Jussi Kiljander
- VTT



Session 2: M3 Technology

A scalable distributed M3 platform on a low-power cluster

- Anders Berg, et al.
- Åbo Akademi

KSP: A SPARQL-like Knowledge Sharing for Resource Restricted Devices

- Jussi Kiljander
- VTT

A portable implementation of Semantic Information Broker in OSGI technology

- Alfredo D'Elia
- University of Bologna

SMOOL – A tool to design, develop and deploy Smart Spaces

- Adrian Noguero Mucientes
- Tecnalia

Event Processing Interoperability using Smart Spaces and Semantic Web technologies

- Francesco Morandi
- University of Bologna

Performance Evaluation of Operations in RedSib with Substitution Mechanism

- Andrey Vasilev, Ilya Paramonov
- P. G. Demidov Yaroslavl State University



Session 3: M3 infrastructures

RoDaFlow: A Framework for Development of Dataflow Network Agents in Smart-M3 with Substitution Method

- Denis Laure, Ilya Paramonov
- P. G. Demidov Yaroslavl State University

Context-Based Access Control for Ridesharing Service

- Nikolay Teslya, et al.
- St.Petersburg Institute for Informatics and Automation of the Russian Academy of Sciences

Reusable, semantic, and context-aware micro-architecture

- Susanna Panzar-Syväniemi
- VTT

The SmartRoom Infrastructure: Service Runtime Reliability

- Ivan Galov, Dmitry Korzun
- Petrozavodsk State University, HIIT

M3 Based Knowledge Sharing Protocol applied to Bluetooth LE sensors and actuators

- Arto Ylisaukko-oja, et al.
- VTT

Programming Android Client for Smart-M3 Applications: SmartRoom Case Study

- Pavel Kovyreshin, Dmitry Korzun
- Petrozavodsk State University, HIIT



Session 4: M3 case examples

M3 interoperability for remote rehabilitation with Kinect

- Natalia Díaz Rodríguez, et al.
- Åbo Akademi, University of Turku

Smart Space and Geo2Tag Platforms Integration Agent Uses-Cases

- Kirill Yudenok
- St.Petersburg Electrotechnical University

Recommendation System for Tourist Attraction Information Service

- Alexander Smirnov, et al.
- St.Petersburg Institute for Informatics and Automation of the Russian Academy of Sciences

Smart Room Services on Top of M3 Spaces

- Dmitry Korzun, et al.
- Petrozavodsk State University, HIIT

Personalized Delivery of SmartRoom Services using Mobile Clients

- Andrey Vdovenko, Dmitry Korzun
- Petrozavodsk State University, HIIT

Presence Detection in Smart Room with Innorange Sensor

- Sergey Marchenkov, Dmitry Korzun
- Petrozavodsk State University, HIIT





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