

Smart Room Service Set at Petrozavodsk State University: Initial State

Ivan Galov, Dmitry Korzun

Petrozavodsk State University
Department of Computer Science



This project is supported by grant KA179 of Karelia ENPI - joint program of the European Union, Russian Federation and the Republic of Finland



12th FRUCT conference
November 5–9, Saint-Petersburg, Russia



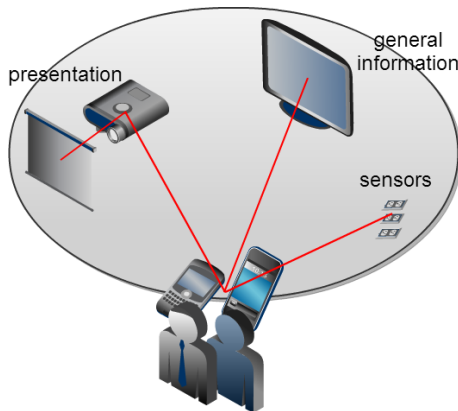
Table of Contents

- 1 Introduction
- 2 SmartRoom service set
- 3 SmartConference services
- 4 Conclusion



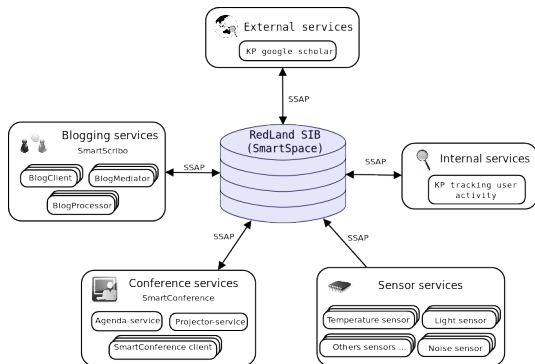
Smart Room at PetrSU

- holding automated conferences, meetings, and lectures
- personalized interaction with room visitor
- participating of visitors via mobile devices



Service set concept

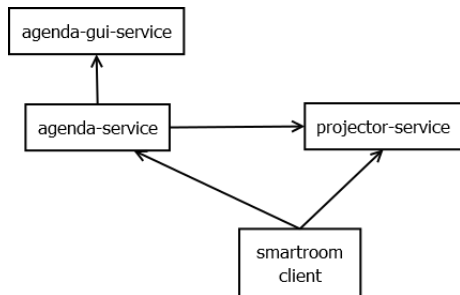
- service performs functions on client demand and/or provides information related to specific component of the room
- some set of services are available at the moment and are offered (personalized) to participants in the room
- services can be accessed from client installed on mobile devices
- service types: smart conference services, internal services, external services



SmartConference services

The idea was borrowed from SPIIRAS SmartConference and adopted to service set concept




- agenda service
(manages conference)
- agenda GUI service
(displays conference information)
- projector service
(displays current presentation)



These services will be demonstrated on next session!



Agenda GUI

Photo	Time	Speaker	Presentation title	Information
	12:30 - 12:45	Aleksandr Lomov	SmartSlog Session Scheme for Smart-M3 Applications	Email: lomov@cs.karelia.ru Phone: Not specified Interests: Semantic Web, Ontological modeling, automot software engineering
Speaker is absent	12:45 - 13:00	Kirill Yudenok	Distributed service environment (smart spaces) security model development	
Speaker is absent	13:00 - 13:15	Ilya Nikolaevskiy	Securing Interactions of Smart Objects in Smart-M3 Spaces	
	13:15 - 13:30	Rustam Kadirov	Sensors In a Smat Room: Preliminary Study	
	13:30 - 13:45	Francesco Morandi	RedSib: a Smart-M3 Semantic Information Broker Implementatio	

7:30

the current presentation is highlighted

this speaker is absent

presentation ending timer

Future improvement: several data panels (agenda, person information, sensors, etc) and dynamic panel layout



Projector

slide 1

Multilingual Ontology Library Generator for Smart-M3 Application Development

Aleksandr A. Lomov, Pavel I. Varag, Dmitry G. Korzun

Petrozavodsk State University
Department of Computer Science



SP FRUCT Conference, April 25-29, Petrozavodsk, Russia



slide 2

Table of Contents

- 1 Smart-M3 platform and applications
- 2 SmartSleg tool
- 3 Ontology manipulations
- 4 Optimizations for generated code
- 5 Conclusion

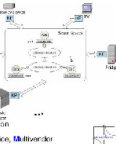


slide 3

Smart-M3 platform

A kind of publish/subscribe system

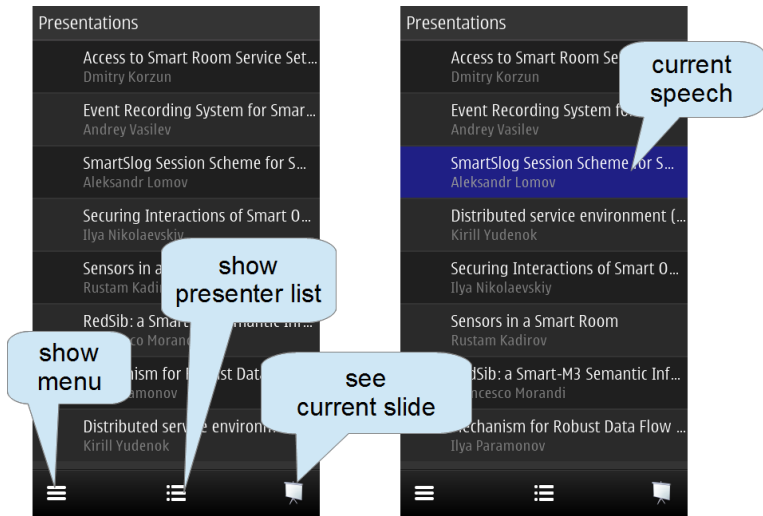
- Semantic information brokers (SIBs) maintain RSS content in low-level RDF triples
- Application consists of several knowledge processors (KPs) running on each device
- Smart space access protocol (SSAP) for SIBs (KPs) communication
- Smart-M3: Multidomain, Multidevice, Multivendor



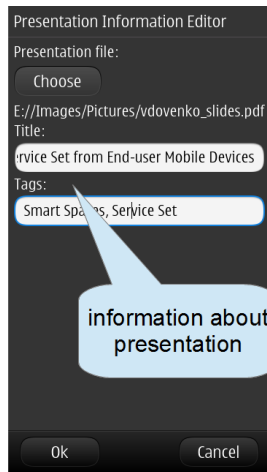
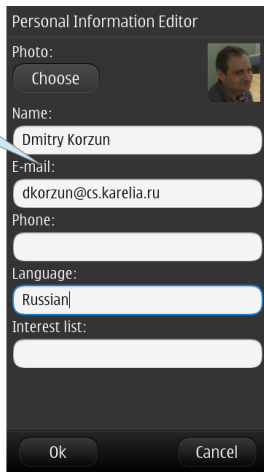
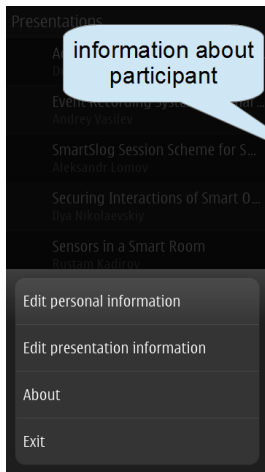
...



Client: presenters list



Client: profile editor



Client: slide viewer

spectator: SmartSlog Session Scheme for Smart-M3 Appl...

current slide number and total slide count

spectator slide changing buttons are deactivated

close slide viewing

presenter: Access to Smart Room Service Set from End-u...

buttons for slide changing

presenter must press this button to complete the presentation



Conclusion

- smart room architecture, ontology and other high-level solutions that support service set concept
- initial prototype of conference services, see our demo on session: Smart Space Technologies (after lunch)
- recent phase (listen our talks in the next session):
 - ▶ waiting for equipment (sensors, whiteboards, etc)
 - ▶ new client is being developed
 - ▶ advanced functionality and scenarios

