Program

The 13th Conference of Open Innovations Association FRUCT and 2nd Seminar on e-Tourism for Karelia and Oulu Region

Petrozavodsk, Russia
22-26 April 2013

ENPI CBC KARELIA

NOKIA Connecting People

EMC²

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This project is co-funded by the European Union, the Russian Federation and the Republic of Finland.

GAUDEAMUS IGITUR,
JUVENES DUM SUMUS!
POST JUCUNDAM JUVENTUTEM,
POST MOLESTAM SENECTUTEM
NOS HABEBIT HUMUS.

UBI SUNT, QUI ANTE NOS
IN MUNDO FUERE?
VADITE AD SUPEROS,
TRANSITE AD INFEROS,
UBI JAM FUERE.

VITA NOSTRA BREVIS EST,
BREVI FINIETUR,
VENIT MORS VELOCITER,
RAPIT NOS ATROCITER,
NEMINI PARCETUR.

VIVAT ACADEMIA,
VIVANT PROFESSORES!
VIVAT MEMBRUM QUODLIBET,
VIVANT MEMBRA QUAELIBET!
SEMPER SINT IN FLORE!

VIVANT OMNES VIRGINES
FACILES, FORMOSAE!
VIVANT ET MULIERES,
TENERAE, AMABILES,
BONAE, LABORIOSAE!

VIVAT ET RESPUBLICA,
ET QUI ILLAM REGIT!
VIVAT NOSTRA CIVITAS,
MAECENATUM CARITAS,
QUAE NOS HIC PROTEGIT

PEREAT TRISTITIA,
PEREANT DOLORES,
PEREAT DIABOLUS,
QUIVIS ANTIBURSCHIUS,
ATQUE IRRISORES!

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The program of 13th FRUCT conference in Petrozavodsk

April 22-26, 2013 Petrozavodsk, Russia

All events are free of charge, but all participants must be registered at www.fruct.org/conference13

22.04.13-25.04.13 IT-Park of Petrozavodsk State University, Lenin ave., 31

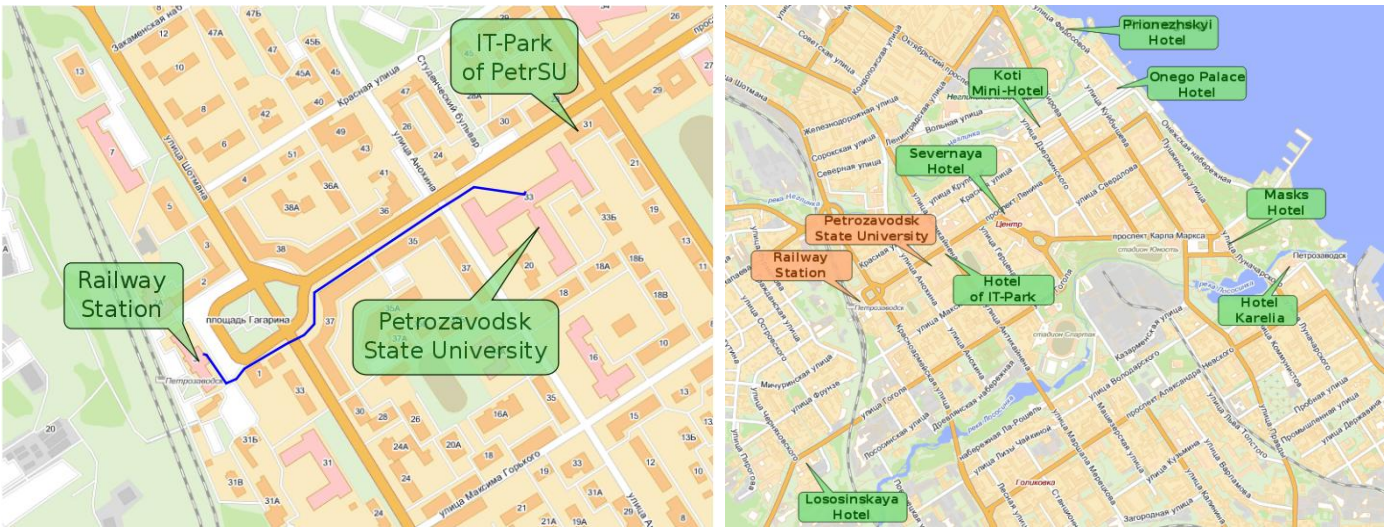
24.04.13-26.04.13 Petrozavodsk State University (main building), Lenin ave., 33

DATE	TIME	PROGRAM	
22.04.13	09.30-18.00	Hands-on training: Windows Phone 8 for developers training: Part 1, Tony Torp, TAMK, Finland, room: 403/IT-park (max 25 persons)	
23.04.13	09.30-14.00	Hands-on training by ENPI KA-322: Geo2Tag Open Source LBS Platform, Kirill Krinkin, FRUCT, Russia, room: 403/IT-park (max 25 persons)	
	14.00-15.00	**Lunch break**	Hands-on training: Windows Phone 8 developers training: Part 2, Tony Torp, TAMK, Finland, room: 403/IT-park (max 25 persons)
	15.00-18.30	ENPI KA-322: 2nd Seminar on e-Tourism in Karelia and Oulu Region, room: 221/PetrSU	
24.04.13	09.30-12.15	ENPI KA-322 training: 3D Internet, Mika Rantakokko, Jarkko Vatjus-Anttila, CIE/UoO, Finland, room: 221/PetrSU	Hands-on training: Java ME for Nokia Asha developers, Tony Torp, TAMK, Finland, room: 403/IT-park (max 25 persons)
	12.00-13.00	**Conference Registration (near Main Conference Hall, 2nd fl., PetrSU building)**	
	13.00-15.00	**Opening of 13th FRUCT conference:** Welcome words and the Main Plenary Session **Keynote talk:** Challenges in Nanocomunications, by Yevgeni Koucheryavy, Tampere University of Technology, room: Conference Hall of PetrSU	
	15.00-15.20	**Coffee break (Cafeteria in the main building of PetrSU)**	
	15.20-17.00	Advanced Challenges and Opportunities for Developers, room: Conference Hall of PetrSU	
	17.00-18.30	**Walking excursion in Petrozavodsk downtown and free time**	ENPI KA-179 and KA-322 projects meeting, IT-Park Conference Hall, room 103 (***only by invitation***)
	18.30-21.00		**Meeting of the FRUCT Advisory Board (*only by invitation*)**
25.04.13	10.00-12.00	Internet of Things and Smart Spaces I, IT-Park Conference Hall, room 103/IT-park	
	12.00-13.00	**Lunch break**	
	13.00-15.00	Software Technologies **Keynote talk:** Russian Software Industry - new trends and challenges, by Valentin Makarov, Russoft, room: 152	
	15.00-15.30	**Coffee break (main Cafeteria of PetrSU)**	
	15.30-17.30	Internet of Things and Smart Spaces II, room: 152	FRUCT Communications and Web WG meeting, room: 146
	17.30-18.00	**Break and preparation to Demo Session**, room: main Cafeteria of PetrSU	
	18.00-21.00	**Demo Session and Social Event**, room: main Cafeteria of PetrSU	
26.04.13	10.00-12.00	Mobile Healthcare, Early Diagnostics and Fitness I, room: 152	Privacy and Security, room: 146
	12.00-13.00	**Lunch break**	
	13.00-14.30	Mobile Healthcare, Early Diagnostics and Fitness II, room: 152	FRUCT Internet of Things and Smart Spaces WG meeting, room: 146
	14.30-15.00	**Coffee break (main Cafeteria of PetrSU)**	
	15.00-17.00	FRUCT m-Health WG meeting, room: 152	Network Technologies, room: 146
	17.00	**Official closing of 13th FRUCT conference**, room: 152	

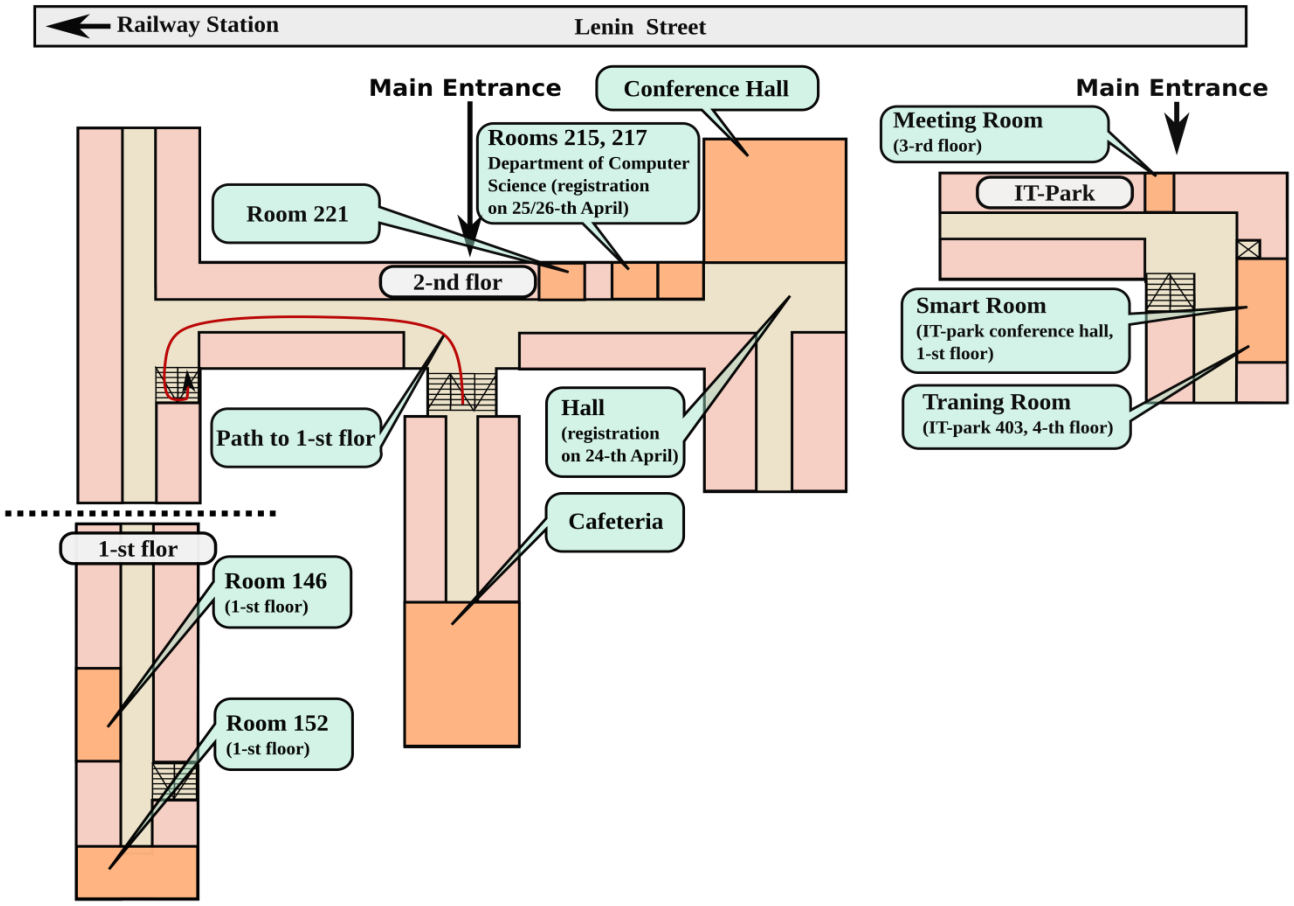
Practical Information

All sessions of the 13th FRUCT conference and 2nd Seminar on e-Tourism in Karelia and Oulu Region (including 3D Internet training) will be held in the main building of Petrozavodsk State University, address: Lenin ave. 33, and majority of trainings (i.e. Windows Phone 8 training, Geo2Tag training, and Java ME for Asha developers training) will be held in the computer class (room 403) of IT-Park of PetrSU, address: Lenin ave. 31. This location is in the center of Petrozavodsk downtown, only a few minutes away from the railway station.

The map of Petrozavodsk city center with the marks of the most important conference locations (railway station, university building, recommended hotels and so on) is presented below:



For navigation inside the PetrSU building you can use the following scheme that shows location of the registration desk, main conference rooms, places for coffee break and social events and recommended place for lunch.





The program of 13th FRUCT conference in Petrozavodsk

April 22-26, 2013 Petrozavodsk, Russia

All events are free of charge, but all participants must be registered at www.fruct.org/conference13

April 22 (Monday)
IT-park of Petrozavodsk State University, Lenin ave., 31

Hands-on training: Windows Phone 8 for developers **Room:** 403		Trainer: Tony Torp
09:30	30m	**Registration**
10:00	45m	Intro to WP8 development, Tools
10:45	15m	**Coffee break**
11:00	2h	Designing WP applications, UI development
13:00	1h	**Lunch break**
14:00	1.5h	Using Phone Resources, Watchers and Choosers
15:30	15m	**Coffee break**
15:45	1h	Application Lifecycle, Files and Storage
16:45	1h	Web Services (HTTP, XML, JSON)
17:45	15m	Questions & Answers
18:00		**Closing of Day 1**

April 23 (Tuesday)
IT-park of Petrozavodsk State University, Lenin ave., 31
Petrozavodsk State University, Lenin ave., 33

Hands-on training by ENPI KA-322: Geo2Tag Open Source LBS Platform **Room:** 403/IT-Park			Trainer: Kirill Krinkin
09:30	30m	**Registration**	
10:00	4h	Training Agenda: Geo2Tag architecture overview; Installation process: how to get working platform in 5 min; Client libraries overview; Raw JSON interface; Practical examples	
14:00	1h	**Lunch break**	**Hands-on training:** Windows 8 developers (cont) **Room:** 403/IT-Park Trainer: Tony Torp
Session: 2nd Seminar on e-Tourism in Karelia and Oulu Region **Room:** 221/PetrSU		Chairman: Anton Shabaev	Camera, Audio, Maps, NFC
15:00	20m	Registration	
15:20	10m	Welcome words, Anton Shabaev, IT-park of PetrSU, Russia	
15:30	15m	Tourism in Russian Karelia, Alexey Tigushkin, Tourist Information Centre of the Republic of Karelia, Russia	
15:45	15m	Tourism in Oulu region, Janne Soini, Travel Marketing Oulu Ltd, Finland	
16:00	15m	e-Tourism: The Role of ICT in Tourism Industry, Sergey Balandin, FRUCT Oy, Santa Laizane, CIE University of Oulu (CIE/UoO), Finland	**Coffee break**

16:15	15m	3D Internet in tourism CASE: Meri-City-Tunturi, Mika Rantakokko, CIE/UoO, Finland	Background Agents
16:30	15m	Intelligent Tourist Guiding Service for e-Tourism Application, Alexey Kashevnik, SPIIRAS, Russia	
16:45	15m	Ideas of e-Tourism services for Karelia region, Kirill Kulakov, PetrSU, Russia	Tiles, Push Notifications, Windows Phone Store
17:00	90m	**Coffee & Networking of seminar participants**	Closing Note, Q&A and Certificates Distribution
18:30		**Closing of Day 2**	

April 24 (Wednesday)
Petrozavodsk State University, Lenin ave., 33
IT-park of Petrozavodsk State University, Lenin ave., 31

Training: 3D Internet **Room:** 221 Trainers: Mika Rantakokko, Jarkko Vatjus-Anttila			**Hands-on training:** Java ME for Asha developers **Room:** 403/IT-Park Trainer: Tony Torp
09:30	30m	**Registration**	**Registration**
10:00	40m	3D Internet background and business aspects	Java ME for Asha training introduces: new UI APIs, latest tools and APIs for Location, Maps, Sensors, Monetizing, etc.
10:40	10m	Break and time for questions	
10:50	70m	3D Internet demonstrations	
12:00	15m	Hands on demo, questions, conclusions	
12:00	1h	**13th FRUCT Conference Registration (near Main Conference Hall, 2nd fl., PetrSU building)**	
Session: Official opening of the 13th FRUCT conference **Room:** Main Conference Hall of PetrSU Chairman: Anton Shabaev			
13:00	20m	Opening of the 13th FRUCT conference and welcome words on behalf of Petrozavodsk State University	
13:20	10m	Karelia ENPI CBC programme promoting crossborder cooperation, Dmitry Bazegsky, ENPI Karelia CBC, Russia	
13:30	20m	EMC Company Presentation. Overview of Technology trends: Cloud Transforms IT, Big Data Transforms Business, Security Needs Big Data, Mikhail Salamatov, EMC, Russia	
13:50	30m	Status Update for FRUCT and partner programs, e.g., NordSecMob, Sergey Balandin, FRUCT, Finland	
14:20	40m	**Keynote talk:** Challenges in Nanocomunications, Yevgeni Koucheryavy, Tampere University of Technology, Finland	
15:00	30m	**Coffee-break (Main Cafeteria of PetrSU)**	
Session: Advanced Challenges and Opportunities for Developers **Room:** Main Conference Hall of PetrSU Chairman: Mika Rantakokko			
15:30	40m	Qt5 Status Update, Tony Torp, TAMK, Finland	
16:00	20m	Adaptive Content Management for Collaborative 3D Virtual Spaces, J. Vatjus-Anttila, T. Koskela, S. Hickey, CIE University of Oulu, Finland	
16:20	40m	Linux shared library profiler implementation, E. Ryabikov, M. Zaslavskiy, K. Krinkin, FRUCT SPbETU Lab, Russia	
17:00		**Closing of Day 3 followed by Walking excursion in Petrozavodsk downtown**	

April 25 (Thursday)
IT-park of Petrozavodsk State University, Lenin ave., 31
Petrozavodsk State University, Lenin ave., 33

09:30	30m	**Conference registration,** IT-Park Conference Hall, room 103/IT-park	
Session: Internet of Things and Smart Spaces I **Room:** 103/IT-park Chairman: Dmitry Korzun			
10:00	20m	Mobile Multi-Service Smart Room Client: Initial Study for Multi-Platform Development, A. Vdovenko, S. Marchenkov, D. Korzun, PetrSU, Russia	
10:20	20m	Event Recording in Smart Room, I. Galov, R. Kadirov, PetrSU, A. Vasilev, YarSU, D. Korzun, PetrSU, Russia	
10:40	20m	Smart-M3 Security: Authentication and Authorization Mechanisms, K. Yudenok, OSLL FRUCT Lab, Russia, I. Nikolaevskiy, HIIT, Finland	
11:00	20m	Context-Aware Access Control Model for Smart-M3 Platform, A. Kashevnik, N. Teslya, SPIIRAS, Russia	
11:20	20m	Ontology-based KP development for Smart-M3 applications, A. Lomov, PetrSU, Russia	
11:40	20m	Intelligent Tourist Guiding Service Based on Smart-M3 Platform, A. Smirnov, N. Shilov, A. Kashevnik, N. Teslya, M. Shchekotov, SPIIRAS, Russia	
12:00	1h	**Lunch break**	
Session: Software Technologies **Room:** 152 Chairman: Vadym Kramar			
13:00	45m	**Keynote talk:** Russian Software Industry - new trends and challenges, Valentin Makarov, Russoft, Russia	
13:45	15m	Development of open data system for budget of Saint Petersburg, M. Galkin, O. Parkhimovich, D. Mouromtsev, ITMO, Russia	
14:00	15m	On playing encoded media adverts radio-like by using Spring Web Services, V. Sayenko, C. Novykov, A. Zaharchuk, KhNURE, Ukraine	
14:15	15m	Firepoint: Porting Application to Mobile Platforms, A. Timonin, A. Kalinin, A. Troshkov, K. Kulakov, PetrSU, Russia	
14:30	15m	Test Generator System for Adaptive Preliminary Control, O. Bogoyavlenskaya, A. Lukovnikova, PetrSU, Russia	
14:45	15m	STAND: new tool for performance estimation of the block data processing algorithms in high-load systems, V. Bashun, V. Minchenkov, SUAI, A. Povalyaev, EMC, Russia	
15:00	30m	**Coffee break (Main Cafeteria of PetrSU)**	
Session: Internet of Things and Smart Spaces II **Room:** 152 Chairman: Dmitry Korzun			**Session:** FRUCT Communications and Web WG **Room:** 146 Chairman: Roman Zharinov
15:30	20m	Implementation Aspects of Agent Substitution Mechanism in RedSib, I. Timofeev, I. Paramonov, A. Vasilev, YarSU, Russia	Rules of Design Articles for Publishing in Proceedings of FRUCT Conferences, U. Trifonova, SUAI, Russia
15:50	20m	Data Models for Home Services, V. Kramar, M. Korhonen, Y. Sergeev, Oulu University of Applied Sciences, Finland	Towards Semantic Web: Seamless Integration of Services and Devices for the FRUCT Community, V. Kirkizh, SUAI, M. Komar, YarSU, Russia, V. Petrov, TUT, Finland
16:10	20m	Roles of Smart TV in IoT-environments: a Survey, M. Yusufov, I. Kornilov, YarSU, Russia	FRUCT Web WG meeting
16:30	1h	3GPP activities towards IoT implementation, Y. Koucheryavy, TUT, Finland	
17:30	30m	**Break and preparation to Demo Session (Main Cafeteria of PetrSU)**	
Session: Conference social event combined with Demo session and presentation of demos in Pecha Kucha format **Room:** Main Cafeteria of PetrSU Chairman: Ilya Paramonov			
18:00	3h	**Demo Session and Social Event** *(for more details see pages 15-19)*	

April 26 (Friday)
Petrozavodsk State University, Lenin ave., 33

09:30	30m	**Conference registration, room: 217**	
Session: Mobile Healthcare, Early Diagnostics and Fitness I **Room:** 152 Chairman: Alexander Meigal			**Session:** Privacy and Security **Room:** 146 Chairman: Iurii Bogoiavlenski
10:00	40m	Revolution in Medicine, That is not Noticed by Medicine Yet, O. Medvedev, MSU, Russia	Taking Privacy Laws into Account in Service Development, P. Jäppinen, LUT, Finland
10:40	20m		Joint safety and security analysis for complex systems, S. Bezzateev, N. Voloshina, P. Sankin, SUAI, Russia
11:00	20m	Overview of Algorithms for Electrocardiograms Analysis, Y. Zavyalova, A. Borodin, A. Pogorelov, PetrSU, Russia	The Authentication Module Using Existing Infrastructure of Smart Cards in the Personified System for Information Filtering, R. Zharinov, U. Trifonova, SUAI, Russia
11:20	10m	CardiaCare - Mobile system for arrhythmia detection, Y. Zavyalova, A. Borodin, A. Pogorelov, PetrSU, Russia	Module of Text Information Analyze in the Personified System for Information Filtering, R. Zharinov, U. Trifonova, A. Kodyakov, O. Karmaleev, SUAI, Russia
11:30	10m		Approaches to the Detection of Inappropriate Content in Images in the Personified System for Information Filtering, R. Zharinov, U. Trifonova, O. Karmaleev, A. Kodyakov, SUAI, Russia
11:40	20m	Improved Algorithm for Heart Rate Measurement Using Mobile Phone Camera, D. Laure, I. Paramonov, YarSU, Russia	Using RFID Techniques for a Universal Identification Device, R. Zharinov, U. Trifonova, A. Gorin, SUAI, Russia
12:00	1h	**Lunch break**	
Session: Mobile Healthcare, Early Diagnostics and Fitness II **Room:** 152 Chairman: Oleg Medvedev			**WG meeting:** FRUCT IoT and Smart Spaces **Room:** 146 Chairman: Alexey Kashevnik
13:00	30m	Novel methods in biosignal analysis A. Meigal, PetrSU, Russia	FRUCT Internet of Things and Smart Spaces Working Group Meeting
13:30	20m	Pulse recognition by video project development, K. Stepanov, OSLL FRUCT Lab, Russia	
13:50	20m	Search of the Technological Ways to Improve the Patients with Diabetes Mellitus Quality of Life, A. Grigorash, SPbETU, Russia	
14:10	20m	Food Ontology: Ontology for Describing Food Products, D. Zamula, M. Kolchin, ITMO, Russia	
14:30	30m	**Coffee break (Main Cafeteria of PetrSU)**	
WG meeting: FRUCT m-Health **Room:** 152 Chairman: Sergey Balandin			**Session:** Network Technologies **Room:** 146 Chairman: Pekka Jappinen
15:00	20m	FRUCT Mobile Healthcare Working Group Meeting	Minimum Battery Draining Rate Aware Optimized Link State Routing in Wireless Mesh Network, T.N. Nagabhushan, JSS Academy, S.P.Shiva Prakash, Sri Jayachamarajendra, India, K. Krinkin, OSLL FRUCT Lab, Russia
15:20	20m		Adaptive power-aware routing algorithms for wireless networks with dynamic topology, A. Alekseeva, E. Kalishenko, SPbETU, Russia
15:40	20m		Mobile notifications for computer network administration, V. Sayenko, R. Usechenko, KhNURE, Ukraine
16:00	20m		NS-3 performance analysis and development of effective load balancing algorithms, O. Lesnova, E. Kalishenko, SPbETU, Russia
16:20	20m		SpaceWire-RT standard simulation models, I. Korobkov, V. Olenev, I. Lavrovskaya, SUAI, Russia
16:40	20m		Toolset for SystemC code generation of heterogeneous platforms, P. Ivanov, E. Gavrin, SUAI, Russia
17:00		**Official closing of the 13th FRUCT conference**, room: 152	

2nd ENPI KA-322 project Seminar on e-Tourism in Karelia and Oulu Region

Seminar dates: 23-25 April 2013 Place: IT-Park of Petrozavodsk State University, Lenin ave., 31, room 403
Petrozavodsk State University, Lenin ave., 33, room 221

Overview

The seminar is organized within scope of Karelia ENPI CBC KA-322 project. It provides great opportunity to foster dialogue and mutual knowledge between academic researchers and tourism business representatives and targets to support develop of R&D and practical cooperation between Finnish and Russian ICT and Tourism business experts. The seminar is aimed at creating a platform for exchanging experiences and best practices of using perspective approaches and latest information technologies for the development of e-tourism services and infrastructures in Karelia and Oulu regions. The main seminar organizers are Petrozavodsk State University, FRUCT Oy, Center for Internet Excellence (University of Oulu), Saint-Petersburg Institute for Informatics and Automation of Russian Academy of Sciences, and Tourist Information Centre of the Republic of Karelia.
The seminar program consists of a number of presentations that present experience and best practices of e-Tourism solutions in the world, summarizes demands of regional tourism industry and initiates discussion around a set of ideas of the innovative tourist services that are planned specifically for Karelia and Oulu Region. Also seminar is an important educational event and its program consists of two free of charge trainings:

1) Technological training on Open Source LBS Platform Geo2Tag (geo2tag.org);
2) Training on 3D Internet that provides introduction to the corresponding technology and its use for tourism.

The seminar is free of charge, but requires registration via the seminar web page www.fruct.org/e-tourism2. Also please use the seminar web page to get more information and follow the latest updates of the seminar program.

Program

April 23 (Tuesday)
IT-park of Petrozavodsk State University, Lenin ave., 31
Petrozavodsk State University, Lenin ave., 33

Hands-on training by ENPI KA-322: Geo2Tag Open Source LBS Platform **Room:** 403/IT-Park		Trainer: Kirill Krinkin
09:30	30m	**Registration**
10:00	4h	Training Agenda: Geo2tag architecture overview; Installation process: how to get working platform in 5 min; Client libraries overview; Raw JSON interface; Practical examples
14:00	1h	**Lunch break**
Session: 2nd Seminar on e-Tourism in Karelia and Oulu Region **Room:** 221/PetrSU		Chairman: Anton Shabaev
15:00	20m	Registration
15:20	10m	Welcome words, Anton Shabaev, IT-park of PetrSU, Russia
15:30	15m	Tourism in Russian Karelia, Alexey Tigushkin, Tourist Information Centre of Karelia, Russia
15:45	15m	Tourism in Oulu region, Janne Soini, Travel Marketing Oulu Ltd, Finland

16:00	15m	e-Tourism: The Role of ICT in Tourism Industry, Sergey Balandin, FRUCT Oy, Santa Laizane, CIE University of Oulu (CIE/UoO), Finland
16:15	15m	3D Internet in tourism CASE: Meri-City-Tunturi, Mika Rantakokko, CIE/UoO, Finland
16:30	15m	Intelligent Tourist Guiding Service for e-Tourism Application, Alexey Kashevnik, SPIIRAS, Russia
16:45	15m	Ideas of e-Tourism services for Karelia region, Kirill Kulakov, PetrSU, Russia
17:00	90m	**Coffee & Networking of seminar participants (Main Cafeteria of PetrSU)**
18:30		**Closing of Day 2**

April 24 (Wednesday)
Petrozavodsk State University, Lenin ave., 33

Training: 3D Internet **Room:** 221		Trainers: Mika Rantakokko, Jarkko Vatjus-Anttila
09:30	30m	Registration
10:00	40m	3D Internet background and business aspects
10:40	10m	Break and time for questions
10:50	70m	3D Internet demonstrations
12:00	15m	Hands on demo, questions, conclusions
12:00	1h	**13th FRUCT Conference Registration (Hall near Main Conference Hall, 2nd fl., PetrSU building)**

April 25 (Thursday)
Petrozavodsk State University, Lenin ave., 33

17:30	30m	**Preparation to Demo Session**
Session: Conference social event combined with Demo session and presentation of demos in Pecha Kucha format **Room:** Main Cafeteria of PetrSU		Chairman: Ilya Paramonov
18:00	3h	**Demo Session and Social Event**

ENPI KA-322: Geo2Tag Open Source LBS Platform Training

Training date: 23 April 2013 Place: IT-Park of Petrozavodsk State University, Lenin ave., 31, room 403

Trainer: Kirill Krinkin, Leader of LBS team, FRUCT, Russia

Overview

Geo2Tag is an open source platform that facilitates development of Location based services. The platform was developed by FRUCT LLC and the project status could be followed via the platform web site www.geo2tag.org. Karelia ENPI KA-322 project uses and enhances functionality of Geo2Tag platform for implementing on top of it new services and solutions for Republic of Karelia and Oulu Region.

Geo2Tag platform provides comprehensive set of programming interfaces and system services like high performance database for geotags, spatial and content filter engine, tag aggregation and other. Unlike traditional analogs of LBS services (like wikimapia, yandex/google maps) that can be used for building mobile applications, the users can install their own instance of Geo2tag platform and so gain total control on resources, security, performance and high availability.

At the moment platform has RESTful API that provides more than 20 functions and is built on HTTP/JSON technologies. The main features are: tag management, time and area filters, spatial filters for indoor services, client libraries for Java and C++. In addition several mobile clients for Android and Qt platforms are available. Geo2Tag is still under development and a set of new features, e.g., user management, multi database support, channel/tag aggregation, map widget, will be released during 2013.

The main goal of this training is introduction into Geo2Tag architecture, technologies and use-cases. Participants will get practical experience in installation platform and development of small mobile application.

Training Agenda

- Geo2Tag architecture overview;
- Installation process: how to get working platform in 5 min;
- Client libraries for Qt and java overview;
- Raw JSON interface;
- Practical examples.

Pre-requirements

You should have basic experience of programming on Java and Qt plus elementary knowledge of Linux.
We recommend having your own laptop for exercises.

Program

April 23 (Tuesday)
IT-park of Petrozavodsk State University, Lenin ave., 31

Hands-on training by ENPI KA-322: Geo2Tag Open Source LBS Platform **Room:** 403/IT-Park		Trainer: Kirill Krinkin
09:30	30m	**Registration**
10:00	4h	Training Agenda: Geo2Tag architecture overview; Installation process: how to get working platform in 5 min; Client libraries overview; Raw JSON interface; Practical examples

ENPI KA-322: 3D Internet Training

Training date: 24 April 2013 Place: Petrozavodsk State University, Lenin ave., 33, room 221

Trainers: Mika Rantakokko, Vice Director, Center for Internet Excellence, University of Oulu, Finland
Jarkko Vatjus-Anttila, 3D Internet researcher, Center for Internet Excellence, University of Oulu, Finland

Overview

What is 3D Internet?" Gaming industry leading the way, 3D graphics are becoming to be a mainstream way of producing visual content. Even smartphones today have capable enough hardware to support 3D graphics. Combining this into Internet phenomena it opens a new business opportunity: 3D Internet. The applications in this field have wide variance, and are certainly not limited to gaming. In this training session, a view on emerging business opportunities are given with examples; what kind of possibilities are there. Then a closer look is taken into 3D Internet research and its applications with examples, videos and hands on demonstrations. After the training session you will have a view on "What is 3D Internet", "Is there business behind" and "What are the main 3D Internet applications". We recommend you to have your own laptop for exercises.

Pre-requirements

The session provides general introduction to the topic, so no specific pre-requirements are specified.

Program

April 24 (Wednesday)
Petrozavodsk State University, Lenin ave., 33

Training: 3D Internet **Room:** 221		Trainers: Mika Rantakokko, Jarkko Vatjus-Anttila
09:30	30m	**Registration**
10:00	40m	3D Internet background and business aspects
10:40	10m	Break and time for questions
10:50	70m	3D Internet demonstrations
12:00	15m	Hands on demo, questions, conclusions
12:15		Closing of the training

Nokia Developers Workshop: Windows Phone 8 and Java ME for Asha Developers Trainings

Training date: 22-24 April 2013 Place: IT-Park of Petrozavodsk State University, Lenin ave., 31, room 403

Trainer: Tony Torp, Nokia Developer Certified Trainer and Nokia Developer Champion, TAMK, Finland

Overview

On April 22-24, 2013 Nokia, FRUCT and Petrozavodsk State University invite you to take part in the Nokia Developers Workshop in Russia. The workshop program consists of two professional trainings for developers on the perspective mobile platforms - Windows Phone 8 and Series 40 Asha.

Windows Phone 8 for developers training

Windows Phone 8 training introduces you to application development for the latest Windows Phone devices like Nokia Lumia 920. The training consists of small introductions to the most relevant topics and Windows Phone APIs followed by practical hands-on software development. The participants should have practical experience on object-oriented programming as prerequisites.

The goal of the training is to prepare participants to be able to independently develop applications and services on Windows Phone platform.

Java ME for Asha developers training

Java ME for Asha training session gives you the latest updates on development for Nokia Asha device range. New UI APIs are introduced as well as latest tools and APIs for Location, Maps, Sensors, Monetizing etc. are demonstrated during this session.

The goal of the training is to share latest updates for Java ME developers on Nokia Asha/Java ME device range from the development point of view.

The trainings are free of charge, but require registration via the trainings web page www.fruct.org/nokia13. Also please use the trainings web page to get more information and follow the latest updates of the trainings program.

Pre-requirements

It is expected that participants know principles of object-oriented programming. Preferably have some experience of development with C#/XAML.

Windows Phone 8 training: The only tool needed is WP 8 SDK + internet access. Download link, system requirements and detailed instructions: http://dev.windowsphone.com/en-us/downloadsdk. The WP8 SDK requires Windows 8 workstations, but if that is not possible then use WP7.X SDK which can be ran on Windows 7.

Java ME for Asha training: The Asha training will be too short and have not much hands-on coding, but those who are interested trying code themselves can download the latest tools from Nokia Developer pages http://www.developer.nokia.com/Develop/Java/Tools/. Training materials and code examples will be shared during the trainings on USB sticks.




Program

April 22 (Monday)
IT-park of Petrozavodsk State University, Lenin ave., 31

Hands-on training: Windows Phone 8 for developers **Room:** 403		Trainer: Tony Torp
09:30	30m	**Registration**
10:00	45m	Intro to WP8 development, Tools
10:45	15m	**Coffee break**
11:00	2h	Designing WP applications, UI development
13:00	1h	**Lunch break**
14:00	1.5h	Using Phone Resources, Watchers and Choosers
15:30	15m	**Coffee break**
15:45	1h	Application Lifecycle, Files and Storage
16:45	1h	Web Services (HTTP, XML, JSON)
17:45	15m	Questions & Answers
18:00		**Closing of Day 1**

April 23 (Tuesday)
IT-park of Petrozavodsk State University, Lenin ave., 31

Hands-on training: Windows Phone 8 for developers (cont.) **Room:** 403		Trainer: Tony Torp
14:00	2h	Camera, Audio, Maps, NFC
16:00	15m	**Coffee break**
16:15	30m	Background Agents
16:45	1h	Tiles, Push Notifications, Windows Phone Store
17:45	45m	Closing Note, Q&A and Certificates Distribution
18:30		**Closing of Day 2**

April 24 (Wednesday)
IT-park of Petrozavodsk State University, Lenin ave., 31

Hands-on training: Java ME for Asha developers **Room:** 403		Trainer: Tony Torp
09:30	30m	**Registration**
10:00	2h	Java ME for Asha training introduces: new UI APIs, latest tools and APIs for Location, Maps, Sensors, Monetizing, etc.
12:00	15m	Questions & Answers
12:15		**13th FRUCT Conference Registration (Hall near Main Conference Hall, 2nd fl., PetrSU building)**

The 3rd Regional Seminar on Mobile Healthcare, Early Diagnostics and Fitness

Seminar dates: 25-26 April 2013 Place: Petrozavodsk State University, Lenin ave., 33

Overview

FRUCT Association organizes the 3rd Regional workshop on Mobile Healthcare, early diagnostics and fitness. Mobile Healthcare is fast developing area with a lot of growth potential, research and business opportunities. The seminar is targeted to demonstrate state of the art in field of m-healthcare in Russia and Finland and support exchange of best practices and ideas with other regions. The seminar program consists of a set of m-Health demos at FRUCT conference demo session on April 25 (http://www.fruct.org/demo13) and 2 conference sections on April 26.The seminar organizers welcome all attendees of the FRUCT conference to join the seminar program.

Seminar Program

April 25 (Thursday)
Petrozavodsk State University, Lenin ave., 33

17:30	30m	**Preparation to Demo Session**
Session: Conference social event combined with Demo session and presentation of demos in Pecha Kucha format **Room:** Hall near room TS101 Chairman: Ilya Paramonov		
18:00	3h	**Demo Session and Social Event**

April 26 (Friday)
Petrozavodsk State University, Lenin ave., 33

09:30	30m	**Conference registration, room: 217**
Session: Mobile Healthcare, Early Diagnostics and Fitness I **Room:** 152 Chairman: Alexander Meigal		
10:00	1h	Revolution in Medicine, That is not Noticed by Medicine Yet, O. Medvedev, MSU, Russia
11:00	20m	Overview of Algorithms for Electrocardiograms Analysis, Y. Zavyalova, A. Borodin, A. Pogorelov, PetrSU, Russia
11:20	20m	CardiaCare - Mobile system for arrhythmia detection, Y. Zavyalova, A. Borodin, A. Pogorelov, PetrSU, Russia
11:40	20m	Improved Algorithm for Heart Rate Measurement Using Mobile Phone Camera, D. Laure, I. Paramonov, YarSU, Russia
12:00	1h	**Lunch break**
Session: Mobile Healthcare, Early Diagnostics and Fitness II **Room:** 152 Chairman: Oleg Medvedev		
13:00	30m	Novel methods in biosignal analysis A. Meigal, PetrSU, Russia
13:30	20m	Pulse recognition by video project development, K. Stepanov, OSLL FRUCT Lab, Russia
13:50	20m	Search of the Technological Ways to Improve the Patients with Diabetes Mellitus Quality of Life, A. Grigorash, SPbETU, Russia
14:10	20m	Food Ontology: Ontology for Describing Food Products, D. Zamula, M. Kolchin, ITMO, Russia
14:30	30m	**Coffee break (Main Cafeteria of PetrSU)**
WG meeting: FRUCT m-Health **Room:** 152 Chairman: Sergey Balandin		
15:00	2h	**FRUCT Mobile Healthcare Working Group Meeting**
17:00		**Official closing of the 13th FRUCT conference**, room: 152

Demo Session of the 13th FRUCT conference

Time: 25 April 2013, 18:00-21:00 Place: Petrozavodsk State University, Lenin ave., 33, Main Cafeteria

The Demo section of the 13th FRUCT conference will be combined with the demo session of the Regional seminar on Mobile Healthcare, early diagnostics and fitness and with the conference social event. The first part is a promotional section to present/introduce demo projects to the public. Presentations will be done following the Pecha Kucha style. Main idea of this section is to make people aware of the demo and become interested to visit the demo stand at the second part of the session. During the second part of demo session teams get a place to install the demo and poster. If you have some special requirements please contact organizing committee by email info@fruct.org.

Pecha Kucha Presentation Format

Pecha Kucha is a presentation technique where a speaker shows a definite number of slides (usually 20 or 15), each for 20 seconds. The slides are changed automatically during the talk. The main intention for Pecha Kucha presentation style is to prevent participants from being too verbose and to make their talks more dynamic and impressive.

Pecha Kucha Night is an event where each speaker uses Pecha Kucha presentation, and speakers change each other in non-stop fashion. Initially invented by architects, this kind of event is often used to present creative projects or work; nowadays it is also used for R&D talks too. Pecha Kucha Night format allows all participants to make announcements about their demos in attractive and time-efficient way. That is why we have chosen this format for demo promotion section at FRUCT conference. More information can be found at http://www.fruct.org/demo13.

How to prepare Pecha Kucha presentation

Here is an instruction on how to prepare your Pecha Kucha style presentation for Demo promotion section. Your presentation must contain exactly 10 slides, and each of them will be displayed for 20 seconds. The slides will be changed automatically. So, the whole presentation will take exactly 3 minutes 20 seconds (it should be noted that usually Pecha Kucha presentation has 20 slides, but we have to reduce that number in half due to a large amount of submitted presentations). Provide the information about yourself and your presentation on the first slide (name, institution, title of your presentation).

The main purpose of your talk would be to interest people, so your presentation should make absolutely clear the main ideas of your project and explain what you plan to show at the demo stand. Make your presentation fascinating to attract attendees and avoid technical details in your talk. Reveal one main idea on each slide. Do not overload your slides with information. Remember, that each slide is displayed only for 20 seconds. Place no more than 2 lines of text per slide, or one big picture. Avoid using slide titles. Do not duplicate the same slides in your presentation — it is cheating! If you see that 20 seconds for a particular slide is not enough for you, try to decouple it into the two or more, or omit the details. Do not place “Thank you” or “Q&A” slides in the presentation. Pecha Kucha session does not imply any questions from the auditory. All the questions will be asked afterwards in a poster room. Prepare your speech thoroughly and beforehand. As you have only 20 seconds per slide, it is quite impossible to improvise during the talk. Rehearse your speech several times to be sure in the absence of pauses when you wait for the slide change, or accelerations when you fails to follow your slides. Try to speak in the same pace during all the presentation. It definitely depends on your text, so try to prepare near the same amount of text in speech for each slide.

Check list

- Use exactly 10 slides.
- Place information about yourself and your presentation (name, institution) on the first slide.
- Reveal one main idea on each slide.
- Place no more than 2 lines of text or 1 large image per slide.
- Do not duplicate the same slides, do not place “Thank you” or “Q&A” slides in the presentation.
- Do not use any slide change animation.
- Prepare your speech thoroughly and do not forget to rehearse it.

List of Demos (*preliminary list based on submissions done by April 8*)

1. ***Development of a distributed semantic platform for Internet of Things and Internet of Devices, S. Popov, D. Mouromtsev, National Research University of Information Technologies, Mechanics and Optics***
   The development of platforms and services to create the Internet of things and Internet of devices is now one of the main trends in so-called Web 3.0 environment. Such systems allow users to run a variety of monitoring and controlling services in the cloud of smart devices. By connecting all devices to the cloud it is possible to realize interaction between agents of smart environment on a completely new level. The main goal of our work is to build such a system as simple as possible in terms of a high-level architecture.
2. ***Pulse Detector demo, D. Laure, Yaroslavl State University***
   Nowadays there are a lot of different ways to measure person's heart rate.
   One was is to use mobile phone. It is very easy to the person and do not require any special skills or devices. All that is needed for heart rate measurement is mobile phone with on-board camera and equipped flash.
   Pulse Detector is a mobile application allowing to measure person's heart rate by using only mobile phone's camera. Also it allows sharing measured heart rate via Twitter.
3. ***Agent substitution mechanism demonstration: Indoor light level control system, I. Timofeev, D. Laure, Yaroslavl State University***
   The demo shows application of the agent substitution mechanism developed for dataflow networks implemented on top of Smart-M3 platform. This mechanism allows temporarily replacing an unexpectedly disconnected agent with a substitute one till the moment of the original agent reconnection.
   The use of mechanism allows network to appropriately operate despite the agent failure.
   The designed demonstration system controls light level inside the living room. The system consists of:
   - Sensors that measure light level inside and outside the room;
   - Actuators that allow controlling window blinds and lamp light intensity;
   - Remote control unit, which allows user setting desired light level;
   - Agent that controls actuators using information from sensors and remote control.

   The system controlling window blinds and lamp light intensity makes light level in the room corresponding to the desired light level. If the agent loses connection with the network it is substituted by another agent. It allows to prevent interruption of the system operation and not to disturb user in cases, when the agent breaks down.
4. ***"Explain the word!" game for LG Smart TV, M. Yusufov, D. Laure, Yaroslavl State University***
   A Smart TV device is a television set or a set-top box for a television set that provide advanced computing ability and have an Internet access.
   Such devices provide access to online services, interactive media, user-generated content and allow to execute custom applications.
   This demo introduces "Explain the Word!" application for LG Smart TV. It is a game, in which teams of two or three players compete in understanding teammates as fast as possible. The game consists of consecutive one-minute turns for each team. During a turn one of the team members becomes host and has to explain to others the word displayed on the TV screen without using anonymous and teammates have to guess the word. When the word has been guessed or the host chooses to skip it the next word is shown on the screen. The number of guessed words determines how many steps the team moves forward on the game board. The first team to reach end of the game board wins the game.
5. ***Presence Detection of Mobile Participants in Smart Room Environments, I. Galov, D. Korzun, Petrozavodsk State University***
   The Smart Room system aims at automation of holding such events as conferences, meetings, and lectures. The system constitutes a smart environment with providing different services to the room participants. Such services allow the users to participate in the event held in the room (showing a presentation, looking at room sensors measurements) and to offer personalized options (recommending a speech based on user's interests). Services are accessed via a Smart Room mobile client installed on the user personal devices.
   Personalized services need information about user presence in the room (users join or leave the room). For example, it can be used to display on the agenda screen which speakers are now in the room. Presence information can be identified and collected using Innorange Footfall Technology (http://www.innorange.fi/). This demo shows the use of the technology integrated into the Smart-M3 based development of Smart Room.

The technology is based on dedicated sensor (TP-Link WDR3600 with USB Bluetooth dongle), which tracks MAC addresses of participants' mobile devices. Every device produces mobile network traffic (within Wi-Fi or Bluetooth connection). Each traffic unit has received signal strength indication (RSSI) value. The closer device is located to the sensor the higher RSSI value is. The traffic is continuously monitored. If the RSSI value is greater than the threshold then the participant is treated as present in the room. The last presence time is periodically recorded in the smart room user profile (a part of the Smart Room space) and forms user's presence history which can be further analyzed.

6. ***Smart Space clients authorization based on Smart-M3 platform, K. Yudenok, Open Source and Linux FRUCT Lab***

   This demo demonstrates a Smart Space client authorization mechanism prototype of the Smart-M3 platform. As a Smart Space client authorization mechanism serves a set of solutions based on the Smart Space RDF-graph mapping to the virtual file system. These solutions allow using basic security mechanisms of the file system for the Smart Space information.

   The main objectives of the authorization mechanism includes: creation your own virtual file system with the basic operations, file system structure creation when you insert or query information from the space, Smart Space clients authorization based on the composition of access groups and file system information permissions.

7. ***Intelligent Ridesharing Service for e-Tourism Application, N. Teslya, Saint-Petersburg Institute for Informatics and Automation of Russian Academy of Sciences***

   Intelligent ridesharing service provides possibilities of shared use of cars by several tourists and drivers through their mobile devices in a region and allows the tourists to find the reasonably priced transportation means in the regions with a lack of convenient public transport connections. Ridesharing is a shared use of a car by the driver and one or more passengers, usually for commuting. Dynamic ridesharing assumes a special implementation of a ridesharing service that enables a dynamic formation of carpools depending on the current situation.

   The problem of finding a matching path between the driver and the passenger in the ridesharing service is of exponential complexity. Therefore, two heuristics reducing the task dimension have been developed and implemented in the service. The goal of the first heuristic is to reduce the amount of possible drivers. The goal of the second heuristic is to reduce the amount of possible meeting points. These heuristics help to reduce the time of search in more than 1.5 times. Also, a speedup is achieved through using possibilities of multi-core processors via implementing separate threads for independent parts of the searching process.

8. ***Tourist Attraction Information Service (TAIS), M. Shchekotov, Saint-Petersburg Institute for Informatics and Automation of Russian Academy of Sciences***

   The service is developed for Android-based devices as a part of the tourist support intelligent system. It extracts actual at the moment information about attractions from Wikipedia, Wikivoyage, internal attraction databases and provides it to the tourist. The service allows to determine the current tourist location and to provide recommendations about attractions around them (like museums, monuments, and other places) and their textual and photo description using MediaWiki API.

   The main goal of the service is generating the tourist context that includes tourist location and preferences and providing him/her relevant information about attractions from different resources.

9. ***Mobile Clients for Smart Room, A. Vdovenko, S. Marchenkov, A. Kataev, P. Kovyrshin, D. Korzun, Petrozavodsk State University***

   Smart Room provides a service set to automate such research and educational activity as conferences, lectures, and meetings. For human participants the services are accessible via mobile personal end-user devices. A mobile device hosts a smart room client, which registers the participant in the smart room space, shares her/his personal data and context, and accesses available services in the room. This demo shows recent progress of the smart room client development for such mobile platforms as Windows Phone, Windows, Symbian, Android and iOS. Smart Room client for the Windows family (Windows XP/Vista/7/8 and Windows Phone) uses MVVM pattern and consists of the following components:

   1) Client logic performs local processing of obtained data from the Smart Room space. The code is implemented in C#. Access to the Smart Room space is based on C# SmartSlog ontology library.

   2) Graphical user interface (GUI) binds data and commands coming from the logic. The implementation uses the WPF technology for desktop PC, smartphones, and tablets. The client logic is common (within the Windows family), so only GUI needs modification to run on another platform.

Smart Room client for Symbian is Qt-based. The Qt framework allows cross-platform development, so the code can run (with minor modifications) on some other mobile platforms. The user interface uses QML with its declarative way to construct highly dynamic user interfaces. The client logic is implemented using C++ programming language and ANSI C SmartSlog ontology library. Smart Room client for iOS uses IDE XCode, SDK from Apple for creating iPhone & iPad mobile applications. Programming language is Objective-C, so the development can easily inherits the client logic of our client for Symbian. The client architecture is based on Model-View-Controller (MVC) scheme, where the data model, user interface and interaction with user are divided into three separate components.

Smart Room client for Android is implemented in Java. Since Android supports the ANSI C standard the client uses native code and prebuild C/C++ libraries of ANSI C SmartSlog ontology library. The Android runtime environment provides Dalvik Virtual Machine. We use IDE Eclipse as the most widespread for Android application development. GUI is based on XML and supports various screen sizes of mobile devices.

10. ***Wireless authentication for the web services, V. Kirkizh, State University of Aerospace Instrumentation, M. Komar, Yaroslavl State University, K. Alexandrov, V. Petrov, Tampere University of Technology***

    Wireless authentication is a growing research direction within the last several years. In contradiction to currently deployed solutions, mainly focused on login/password scheme, wireless keys allow user not to enter any critical information on the computer, rather than present a physical proof of his privileges. In general, the procedure works as follows. The key establishes a connection with the computer using some short radio technology: Wi-Fi, Bluetooth, NFC, RFID, etc. and sends its ID. Computer validates the ID or either forwards to it to the online server, user is trying to log in. If the validation succeeds, the user gets access to the system, otherwise his request is rejected.

    The major problem of the present protocol is that the ID being sent as a plain text. As such, the eavesdropping attack becomes possible, that ruins the system security. In the following demo, we highlight this drawback and also propose the particular cryptographic algorithm usage to solve the problem. Our solution works for operation system login and FRUCT Social Network access. However, it can be easily extended for almost any application of web service.

11. ***Bluetooth 4.0 for biosensors, Maxim Yatskovskiy, Moscow State University***

    Nowadays Bluetooth 4.0 is becoming increasingly popular among the manufacturers of mobile devices, various gadgets and biosensors. The main advantages of this standard are: variety of types of standard sensors, low energy consumption and wide support in the mobile operating systems. The demonstration will show examples of interaction with Bluetooth 4.0 and Bluetooth 4.0 LE biosensors for use in mobile healthcare solutions.

12. ***Development of Cross-Platform Smart-M3 Knowledge Processors using SmartSlog SDK, A. Lomov, Petrozavodsk State University***

    SmartSlog is SDK for developing Smart-M3 knowledge processors (KPs) in terms of OWL classes, properties and individuals. KPs can be installed on diverse IoT devices (from different classes, on different platforms, by different vendors). For a developer, use of a common development tool is better even if there are many target devices. In this demo we show how SmartSlog can be used for programming KPs for a wide range of devices.

    Recently SmartSlog SDK supports two programming languages: ANSI C and C#. The C# version is written with .NET framework 4.0 and produced KPs can run on desktops with Windows 7&8 and smartphones with Windows Phone.

    The ANSI C version uses cross-platform lightweight C libraries, and can be used with wide-range of Linux-based platforms, Windows OS, Android platform with NDK. The demo shows a mash-up consisting of several KPs developed with SmartSlog SDK. The KPs run on different devices and collaborate by information sharing based on a common OWL data representation model.

13. ***CardiaCare - Mobile system for arrhythmia detection, Y. Zavyalova, A. Borodin, A. Pogorelov, Petrozavodsk State University***

    Cardiovascular diseases are the main reason of peoples dying around the world. CardiaCare is a mobile application for permanent monitoring of heart activity. It is designed to be used with cardiac monitor Alive Heart and Activity Monitor by Alive Technologies. The application is under active development, current solution includes: Bluetooth-connection to cardiac monitor, output of ECG on smartphones screen, adding notes on patient's activity to ECG, personal patient chart, recording data in European Data Format (EDF).

14. ***Use of Sensed Data and SPARQL Queries in Smart Room, R. Kadirov, K. Ustimov, Petrozavodsk State University***

    Smart Room is a system aiming at automation of holding such events as conferences, meetings, and lectures. It is implemented using Smart-M3 platform and uses a common smart space shared by participants. Sensors feed the smart room space with information about physical parameters of the room (temperature, noise/illumination levels, etc.). This information is further processed by other services. For this processing the data can be queried from the space using SPARQL or RDF triple templates. SPARQL allows composing complex queries using condition statements and built-in functions like COUNT. RDF triple templates are "subject -- predicate -- *", where "*" is any object suitable in this triple. They are easy to use while they are not as powerful as SPARQL (e.g., no triple hierarchy and conditions support). This demo shows the use of the above query mechanisms for constructing Smart-M3 knowledge processors with C language. The mechanisms become essential when smart room services are based on more complicated scenarios than simple visualization of sensed information. For example, measurements from many sensors are selected for specific aggregation and the history is collected for post-analysis.

FOR NOTES

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The 13th Conference of Open Innovations Association FRUCT and 2nd Seminar on e-Tourism

Program

Petrozavodsk, Russia
April 22-26, 2013

Printed in Saint-Petersburg State University of Aerospace Instrumentation (Russia)

Approved for publishing on 08.04.2013
Page format 60x84 1/8
Number of copies 300

SUAI university publisher house
190000, Saint Petersburg, B. Morskaya, 67

CALL FOR PARTICIPATION

14th Conference of Open Innovations

Association FRUCT

Helsinki, Finland, 11-15 November 2013

Overview

FRUCT is the largest regional cooperation framework between academia and industry in form of open innovations. FRUCT conferences are attended by the representatives of 20 FRUCT member universities from Russia, Finland, Denmark, Italy, Ukraine, industrial experts from Nokia, Qt community, EMC^2, Ericsson, Nokia Siemens Networks, Siemens and a number of guests from other companies and universities.

The conference is an R&D forum for the most active students, academic experts, industrial researchers and influential representatives of business and government. The conference invites the world-class academic and industrial researchers to give lectures on the most relevant topics, provides an opportunity for student teams to present progress and results of their R&D projects, meet new interesting people and form new R&D teams. The conference program consists of 3 to 5 intensive (½ or full day) trainings on the most promising technologies, plus 3 days of the main conference.

We warmly welcome all university research teams to participate in the conference, present your research and join the FRUCT Program. Thanks to our sponsors, all participants can enjoy free of charge registration to the event, but the online registration must be done by everyone before the conference.

Background and motivation

The distinctive feature of modern IT and Telecommunications industries is in dramatic shortening of the period when technology remains commercially viable. On the one hand, this is due to the competition between key market players that are pushing all manufacturers to accelerate innovations; on the other hand, this is due to technological progress speed up caused by the growing expansion of intellectual resource invested into R&D and design activities. This trend is an important call and challenge for the leading educational and research institutions around the globe. In the FRUCT we believe that it is crucial to combine forces of EU and Russia to follow up the competition in adopting university education to the new industrial trends. The first step is to strength a bridge between Russian and Finnish academic worlds, increase visibility of involved research teams and set direct personal contacts between academic and industrial experts. More information about FRUCT is available at www.fruct.org.

Call for papers and presentations

Submit your full papers (from 6 to 12 pages) and extended abstracts (min 200 words, max 5 pages) for project in progress and to poster/demo section by **September 30, 2013**. All submitted papers will be peer reviewed by the technical committee. Please follow provided paper templates. The list of conference topics is as follows:

- Mobile-Health, fitness and medical mobile solutions
- Open source cross-platform development, Mobile Linux
- Cross-platform development and improvement of Qt platform
- Internet of things, smart spaces, context analysis and data mining
- Technology proofing, modeling, verification, validation, testing techniques
- Smart grids, energy management and alternative sources, green technologies
- Software and services for mobile devices, future applications design, UIs
- Mobile device security, management of personal and business privacy
- Design and optimization of emerging wireless network technologies
- Energy efficient design of sensors, integration of peripherals
- Modern network architectures, air interfaces and protocols
- Inter-device connectivity, embedded networks, co-design
- Mobile multimedia and video services and solutions

All conference papers and abstracts will be published in FRUCT proceeding (ISSN 2305-7254) and selected papers will be submitted for CPCI indexed (Web of Science) and recommended for publication of extended version in IEEE journals. The templates, conference news and all other details can be found at http://www.fruct.org/conference14.