Program of

14th Conference of Open Innovations Association FRUCT

Helsinki, Finland

11-15 November 2013

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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Conference Secretaries:	Ulya Trifonova, Ekaterina Balandina
General Chair:	Sergey Balandin

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The program of 14th FRUCT conference

November 11-15, 2013, Helsinki, Finland

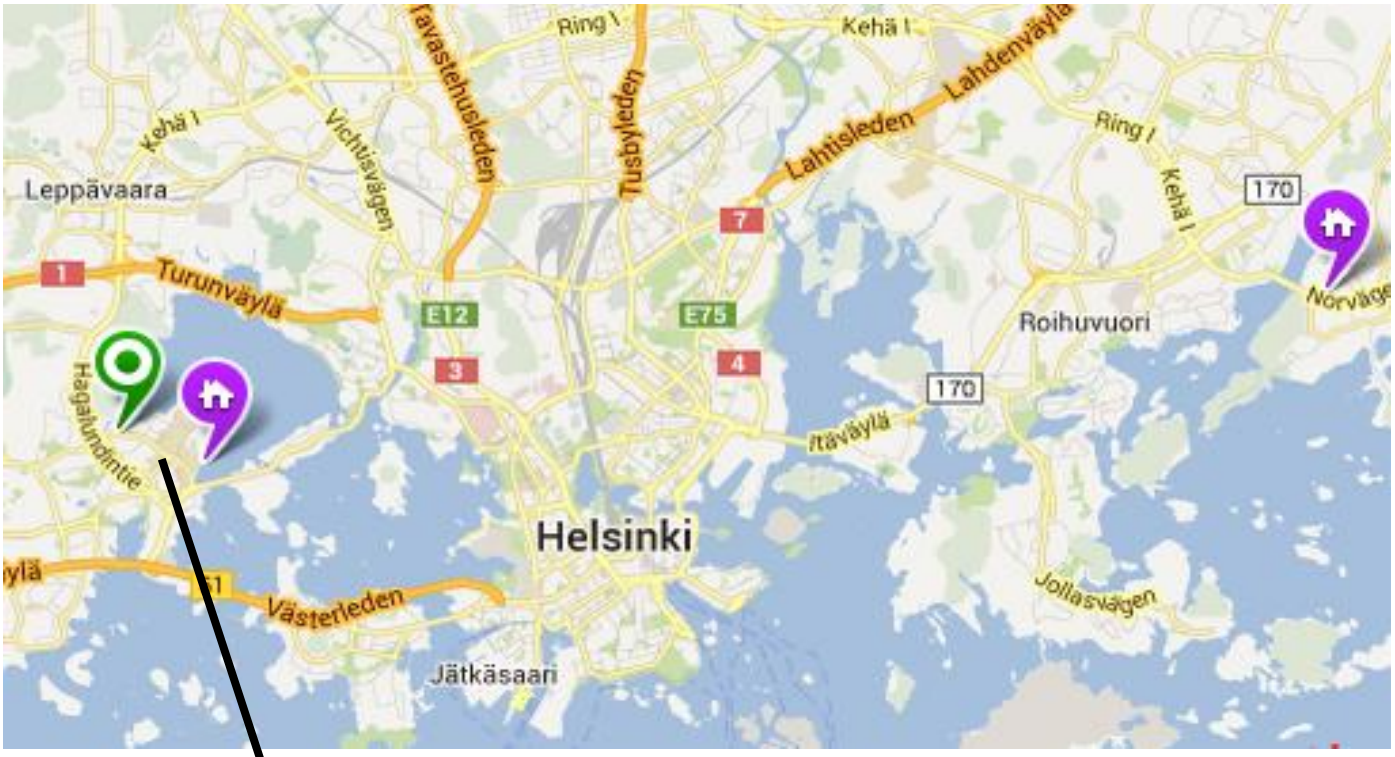
All events are free of charge, but all participants must be registered at www.fruct.org/conference14

EIT Open Innovation House, Otaniementie 19B, Espoo, Seminar Hall A116 and meeting room A117

DATE	TIME	PROGRAM	
11.11.13	09:30-17:30	The Nokia Developers Workshop in Russia Seminar Hall A116	
12.11.13	08:30-09:00	**Workshop and Conference Registration and Coffee**	
	09:00-13:00	Open International M3 Semantic Interoperability Workshop Room: Seminar hall 2nd floor	Developers training for Nokia Asha Room: Meeting room A117
	13:00-18:00		
	18:00-20:00	Social event of M3 Workshop	
13.11.13	08:30-09:00	**Conference Registration and Coffee**	
	09:00-10:30	**Opening of 14th FRUCT conference:** Welcome words and the Main Plenary Session, Seminar hall A116	
	10:30-11:00	**Coffee break**	
	11:00-12:30	Mobile Healthcare, Early Diagnostics and Fitness I, Seminar hall A116	
	12:30-13:30	**Lunch break**	
	13:30-15:00	Mobile Healthcare, Early Diagnostics and Fitness II, Seminar hall A116	
	15:00-15:30	**Coffee break**	
	15:30-17:00	Mobile Healthcare, Early Diagnostics and Fitness III, Seminar hall A116	Work Group meeting: Smart Spaces and IoT, Room: Meeting room A117
	17:00-17:30	**Break and preparation to Demo Session**, Seminar hall A116	
	17:30-20:30	**Demo Session and Social Event**, Seminar hall A116	
14.11.13	09:00-09:40	**Conference Registration and Coffee**	
	09:40-12:00	Network Technologies, Seminar hall A116	
	12:00-13:00	**Lunch break**	
	13:00-15:00	Data and Knowledge Management Seminar hall A116	Work Group meeting: Web WG Room: Meeting room A117
	15:00-15:30	**Coffee break**	
	15:30-17:00	Software Technologies, Seminar hall A116	
15.11.13	09:00-09:30	**Conference Registration and Coffee**	Work Group meeting: mHealth Room: Meeting room A117
	09:30-11:30	Energy Efficient Solutions Seminar hall A116	
	11:30-12:00	**Official closing of the 14th FRUCT conference**, Seminar hall A116	

Practical Information

The 14th FRUCT conference will be held in EIT Open Innovations House (Otaniementie 19B, Espoo). You can get there from center of Helsinki by bus 103 or 194. The single way regional ticket in capital region is 4,50e. Alternative you can buy 3 days regional ticket for 18e. To get more information you can visit web: http://www.reittiopas.fi/en.



Training: Game Development for Windows Phone 8

Training date: 11 November 2013 Place: EIT Open Innovation House, Otaniementie 19B, Seminar Hall A116

Overview

Nokia and FRUCT invite you to take part in game development for Windows Phone 8 training. The event program consists of two professional trainings on Working with Nokia Imaging SDK and Game development for Windows Phone 8 with Unity.

Working with Nokia Imaging SDK

Nokia Imaging SDK is new set of tools available for all Windows Phone 8 developers. It includes specially optimized libraries for various filters suitable for offline and real-time image processing. In this training you will learn how to work with Nokia Imaging SDK, how to apply spectacular effects to the images from device gallery or camera viewfinder and how to work with full resolution images.

Training is targeted to developers being familiar with Windows Phone 8 development. Knowledge of Windows Phone camera APIs is not mandatory.

For the hands-on you need following tools installed: Windows 8, Windows Phone 8 SDK and Nokia Imaging SDK.

Game development for Windows Phone 8 with Unity

Unity is popular games development environment which has support for Windows Phone 8. In this training you will learn how to get started and create games for Windows Phone 8:

- What is Unity and how to build cross platform games
- Unity visual tools and scripting
- Assets, user input and game controls
- Working with Unity projects and Visual Studio

Training is targeted to developers being familiar with Windows Phone 8 development. Knowledge of Unity is not mandatory. For the hands-on you need following tools installed: Windows 8, Windows Phone 8 SDK and Unity 4.2.1.

The training is free of charge, but requires registration via the training web page www.fruct.org/wp8. Also please use the training 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.

Program

November 11 (Monday)

EIT Open Innovation House, Otaniementie 19B, Espoo, Seminar Hall A116

Hands-on training: Game Development for Windows Phone 8 **Room:** Seminar Hall A116		Trainer: Michael Samarin
09:30	30m	**Registration**
10:00	3h	Working with Nokia Imaging SDK
13:00	1h	**Lunch break**
14:00	3h	Game development for Windows Phone 8 with Unity
17:00	30m	Questions & Answers session
17:30		**Closing of Training (Day 1)**

Training: Developing Applications for Nokia New Asha

Training date: 12 November 2013 Place: EIT Open Innovation House, Otaniementie 19B, Room A117

Overview

Nokia and FRUCT invite you to take part in developing applications for Nokia New Asha training. The training is free of charge, but requires registration via the training web page www.fruct.org/newasha. Also please use the training web page to get more information and follow the latest updates of the trainings program.

Summary

In this training you will learn what is new in Nokia Asha platform, and how to benefit its features to create applications and games for the Nokia Asha smartphones.

- New Asha Platform, key APIs and tools overview
- Nokia Asha UI
- How to port from Series 40
- Games development
- Here Maps
- Publishing

Training is targeted for developers familiar with Java ME and having experience on developing Java apps for Series 40 phones or Nokia Asha smartphones.

Pre-requirements

It is expected that participants know principles of object-oriented programming. For the hands-on, you need install the latest SDK and watch the getting started tutorials before the training. Those are available at Nokia Developer Asha-pages http://developer.nokia.com/Develop/asha/java/.

Program

November 12 (Tuesday)

EIT Open Innovation House, Otaniementie 19B, Espoo, Meeting room A117

Hands-on training: Game Development for Windows Phone 8 **Room:** Meeting room A117		Trainer: Michael Samarin
09:00	30m	**Registration**
09:30	3h	New Asha Platform, key APIs and tools overview Nokia Asha UI How to port from Series 40 Games development Here Maps Publishing
12:30	30m	Questions & Answers session
13:00		**Closing of Training**

Workshop: Open International M3 Semantic Interoperability

Workshop date: 12 November 2013 Place: EIT Open Innovation House, Otaniementie 19B, 2nd floor

Overview

The first open international M3 semantic interoperability workshop invites the researchers and developers interested in semantic interoperability and Smart-M3 open source solution to see the latest developments and results in this area and to discuss about the future of M3 community. The workshop is jointly organised by Open Local Data Application activity at EIT (European Institute of Innovation and Technology) smart spaces thematic action line and Open Innovations Association FRUCT. The one day workshop contains 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. The workshop presents the state-of-the-art in this topic and intends to serve as launch pad for open M3 community. The workshop will be first event to collect the community together.

Registration is open at: http://fruct.org/eit-m3. Participation to the event is free. Workshop is open for everyone interested, but registration is mandatory. Updates of the workshop program and latest news can be found at event web page.

Program

November 12 (Tuesday)

EIT Open Innovation House, Otaniementie 19B, Espoo, Seminar Hall on the 2nd floor

08:30	30m	**Registration**
09:00	15m	Opening of workshop, J.-P. Soininen, P. Liuha, Finland
Session: M3 Community **Room:** Seminar Hall on the 2nd floor		Chairman: Juha-Pekka Soininen
09:15	15m	Smart Spaces Development: Activity Status from Open Innovations Association FRUCT, Dmitry Korzun, et al., HIIT, Aalto University, Petrozavodsk State University, FRUCT
09:30	15m	M3 in education and research: experiences and lesson learned, Fabio Vergari, et al., University of Bologna
09:45	15m	Approaching the Raspberry community with M3, Francesco Morandi, et al., University of Bologna
10:00	15m	An OCPP interoperable services system based on a SmartM3 core, Angeles Rodriguez Serrano, University of Seville
10:15	15m	Resolution Infrastructure for M3 based Systems, Jussi Kiljander,VTT
10:30	30m	**Coffee break**
Session: M3 Technology **Room:** Seminar Hall on the 2nd floor		Chairman: Tullio Salmon Cinotti
11:00	15m	A scalable distributed M3 platform on a low-power cluster, Anders Berg, et al., Abo Akademi
11:15	15m	KSP: A SPARQL-like Knowledge Sharing for Resource Restricted Devices, Jussi Kiljander, VTT
11:30	15m	A portable implementation of Semantic Information Broker in OSGI technology, Alfredo D'Elia, University of Bologna
11:45	15m	SMOOL – A tool to design, develop and deploy Smart Spaces, Adrian Noguero, Mucientes Tecnalia
12:00	15m	Event Processing Interoperability using Smart Spaces and Semantic Web technologies, Francesco Morandi, University of Bologna
12:15	15m	Performance Evaluation of Operations in RedSib with Substitution Mechanism, Andrey Vasilev, Ilya Paramonov, P. G. Demidov Yaroslavl State University
12:30	1h	**Lunch break**

Session: M3 infrastructures **Room:** Seminar Hall on the 2nd floor		Chairman: Sergey Balandin
13:30	15m	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
13:45	15m	Context-Based Access Control for Ridesharing Service, Nikolay Teslya, et al., St.Petersburg Institute for Informatics and Automation of the Russian Academy of Sciences
14:00	15m	Reusable, semantic, and context-aware micro-architecture, Susanna Panzar-Syvaniemi, VTT
14:15	15m	Smart Room Services on Top of M3 Spaces, Dmitry Korzun, et al., Petrozavodsk State University, HIIT
14:30	15m	M3 Based Knowledge Sharing Protocol applied to Bluetooth LE sensors and actuators, Arto Ylisaukko-oja, et al., VTT
14:45	15m	The SmartRoom Infrastructure: Service Runtime Reliability, Ivan Galov, Dmitry Korzun, Petrozavodsk State University, HIIT
15:00	30m	**Coffee break**
Session: M3 case examples **Room:** Seminar Hall on the 2nd floor		Chairman: Johan Lilius
15:30	15m	M3 interoperability for remote rehabilitation with Kinect, Natalia Diaz Rodriguez, et al., Abo Akademi, University of Turku
15:45	15m	Smart-M3 and Geo2Tag Platfroms Integration Agent Uses-Cases, Kirill Yudenok, St.Petersburg Electrotechnical University "LETI"
16:00	15m	Recommendation System for Tourist Attraction Information Service, Alexander Smirnov, et al., St.Petersburg Institute for Informatics and Automation of the Russian Academy of Sciences
16:15	15m	Personalized Delivery of SmartRoom Services using Mobile Clients, Andrey Vdovenko, Dmitry Korzun, Petrozavodsk State University, HIIT
16:30	15m	Programming Android Client for Smart-M3 Applications: SmartRoom Case Study, Pavel Kovyrshin, Dmitry Korzun, Petrozavodsk State University, HIIT
16:45	15m	Presence Detection in Smart Room with Innorange Sensor, Sergey Marchenkov, Dmitry Korzun, Petrozavodsk State University, HIIT
Round table: Discussion about the future of M3 and M3 community **Room:** Seminar Hall on the 2nd floor		Moderator: Tullio Salmon Cinotti
17:00	1h	Discussion about the future of M3 and M3 community
18:00	2h	**Social Event**

The program of the 14th FRUCT conference

November 11-15, 2013, Helsinki, Finland

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November 13 (Wednesday)

EIT Open Innovation House, Otaniementie 19B, Espoo, Seminar Hall A116

Session: Official opening of the 14th FRUCT conference **Room: Seminar Hall A116** Chairman: Sergey Balandin			
08:30	30m	**14th FRUCT Conference Registration**	
09:00	10m	Official opening of the 14th FRUCT conference	
09:10	20m	Welcome presentation from EIT ICT Lab, Marko Turpeinen, EIT ICT Lab Helsinki, Finland	
09:30	20m	Skolkovo2FRUCT: IT Innovation Hub, Albert Efimov, Skolkovo Fund, Russia	
09:50	20m	Welcome presentation from Aalto University, Aalto University, Finland	
10:10	20m	Overview of ENPI Karelia CBC projects lead by Petrozavodsk State University, Anton Shabaev, PetrSU, Russia	
10:30	30m	**Coffee break**	
Session: Mobile Healthcare, Early Diagnostics and Fitness I **Room:** Seminar Hall A116 Chairman: Kiran Patil			
11:00	45m	The next step - merge of m-health technologies for healthy and sick people, Oleg Medvedev, MSU, Russia	
11:45	15m	Designing telemedicine apps that health commissioners will adopt, Alison Marshall, University of Cumbria, UK	
12:00	15m	Particularities of Visualisation of Medical and Wellness Data through a Digital Patient Avatar, Vadym Kramar, Markku Korhonen and Yury Sergeev, Oulu University of Applied Sciences, Finland	
12:15	15m	Wellbeing and occupational engagement, Karen Morris and Alison Marshall, University of Cumbria, UK	
12:30	1h	**Lunch break**	
Session: Mobile Healthcare, Early Diagnostics and Fitness II **Room:** Seminar Hall A116 Chairman: Vadym Kramar			
13:30	45m	Indian Rural Healthcare: Exploring ICT for Rural India, Kiran Patil, REVA institute, India	
14:15	15m	Exchange, administration and integration of electronic medical information in USA and Russia. Comparison of standards (HL7 vs. decree FSTEC №21 18.02.2013), Vladimir Ermolaev, Maria Kuznetsova and Ekaterina Andreeva, MEDICARD, Russia	
14:30	15m	Cardiac Screening Device for Community Healthcare Services: Phonocardiogram, Shantala Devi Patil and Kiran Kumari Patil, REVA institute, India	
14:45	15m	The Research Platform for the Medical Diagnostic Services Building, Yury Apanasik, Irina Shabalina and Larisa Kuznetsova, PetrSU, Russia	
15:00	30m	**Coffee break**	
Session: Mobile Healthcare, Early Diagnostics and Fitness III **Room:** Seminar Hall A116 Chairman: Alison Marshall			**WG meeting:** Smart Spaces and IoT **Room:** A117 Chairman: Sergey Balandin
15:30	15m	Wireless Technology to Monitor Remote Patients- A Survey, Nirmala S Guptha, Thanuja K and Kiran Kumari Patil, REVA institute, India	FRUCT Smart Spaces and Internet of Things Working Group Meeting
15:45	15m	"Accessibility Passports" Service for Information Social Infrastructure, Yury Apanasik, Irina Shabalina and Anton Shabaev, PetrSU, Russia	
16:00	15m	A Novel System to Monitor Fetal Heart Rate (FHR) for a Women during Gestation, Lakshmi B.N and Kiran Kumari Patil, REVA institute, India	
16:15	15m	Development and Testing of Ventricular Fibrillation	

		Detection Software Module, Alexander Borodin, Artem Pogorelov and Yuliya Zavyalova, PetrSU, Russia	
16:30	15m	Mobility-Supporting Adaptive Authentication Scheme Based Secure Health Monitoring in Wireless Sensor Networks, Shantala Devi Patil and Vijayakumar B P, REVA institute, India	
16:45	15m	Medicine Tracker for Smart TV, Murad Yusufov, Ilya Paramonov and Ivan Timofeev, YarSU, Russia	
17:00	30m	**Preparation to Demo Session**	
Session: Conference social event combined with Demo session and presentation of demos in Pecha Kucha format **Room:** Seminar Hall A116 Chairman: Ilya Paramonov			
17:30	3h	**Demo Session and Social Event**	
20:30		**Closing of seminar (Day 3)**	

November 14 (Thursday)
EIT Open Innovation House, Otaniementie 19B, Espoo

09:00	40m	**Conference registration**	
Session: Network Technologies **Room: Seminar hall, A116** Chairman: Roman Zharinov			
09:40	20m	Energy Aware Power Save Mode Management in Wireless Mesh Networks, S.P.Shiva Prakash, JSS Research Foundation, T.N. Nagabhushan, JSS Academy of Technical Education, India, Kirill Krinkin, FRUCT OSLL SPbETU "LETI", Russia	
10:00	20m	Application for Video Analysis Based on Machine Learning and Computer Vision Algorithms, Vladimir Pavlov, Vladimir Khryashchev, Eugeny Pavlov and Lev Shmaglit, YarSU, Russia	
10:20	20m	Short-Range Communications within Emerging Wireless Networks and Architectures: A Survey, Aleksandr Ometov, Tampere University of Technology, Finland	
10:40	20m	Undetectable Interception of Network Traffic on LAN Technologies, Roman Zharinov, Dmitriy Virovlyanskiy and Yuri Shvedov, SUAI, Russia	
11:00	20m	Analytical Approaches for Short-range Wireless Technologies Evaluation, Vitaly Petrov, Tampere University of Technology, Finland	
11:20	20m	Throughput Modeling in IEEE 802.11b WLAN-based Wireless Networks, Kirill Ermolov, Aalto University, Finland	
11:40	20m	Different Implementation of Network Level in Embedded Networking with QoS, Nadezhda Matveeva and Elena Suvorova, SUAI, Russia	
12:00	1h	**Lunch break**	
Session: Data and Knowledge Management **Room: Seminar hall, A116** Chairman: Ilya Paramonov			**WG meeting:** Web and Backend **Room:** A117 Chairman: Sergey Balandin
13:00	15m	Transact Temporal Column Level System, Michal Kvet and Karol Matiasko, University of Zilina, Slovakia	FRUCT Web and Backend Hosting Working Group Meeting
13:15	15m	Development of St. Petersburg's linked open data site using Information Workbench, Dmitry Mouromtsev, Vitaly Vlasov, Mikhail Galkin, Vitaly Knyazev and Olga Parkhimovich, NRU ITMO, Russia	
13:30	15m	Food Product Ontology: Initial Implementation of a Vocabulary for Describing Food Products, Maxim Kolchin and Dmitry Zamula, NRU ITMO, Russia	
13:45	15m	Technology Innovations in Public Space Management: Example of City Central Parks, Anna Potanina and Tatiana Gavrilova, Graduate School of Management St. Petersburg State University, Russia	
14:00	15m	MneMojno - Design and Deployment of a Semantic Web Service	

		and a Mobile Application, Dmitry Zamula and Maxim Kolchin, NRU ITMO, Russia	
14:15	15m	Directions of the Internet of Things, Oleg Dementev, TUT, Finland	
14:30	15m	Stop-words in keyphrase extraction problem, Svetlana Popova and Dmitriy Mouromtsev, NRU ITMO, Liubov Kovriguina, St-Petersburg State University, Ivan Khodyrev, SPbETU "LETI", Russia	
14:45	15m	Short text clustering based on keyphrase extraction, Svetlana Popova, NRU ITMO, Russia, Vera Danilova, Autonomous University of Barcelona, Spain	
15:00	30m	**Coffee break**	
Session: Software Technologies **Room:** Seminar Hall A116		Chairman: Dmitriy Mouromtsev	
15:30	15m	Methodology of agile software development by representation programs as categories, Stanislav Kapulkin and Sergey Popov, NRU ITMO, Russia	
15:45	15m	Development of Planning System for Plywood Production Using "Matrix Designer", Anton Shabaev, Ivan Arhipov, Maxim Spirichev, Alexander Urban and Mikhail Torozerov, PetrSU, Russia	
16:00	15m	3-D Reconstruction through Monocular Vision for Mobile Devices, Alexandr Prozorov, Vladimir Volokhov and Andrew Priorov, YarSU, Russia	
16:15	15m	TourMe: Tourist Application for Mobile Platforms, Alexander Troshkov and Kirill Kulakov, PetrSU, Russia	
16:30	15m	Too Young to be Secure: Analysis of UEFI Threats and Vulnerabilities, Vladimir Bashun, Anton Sergeev, Victor Minchenkov and Alexandr Yakovlev, SUAI, Russia	
16:45	15m	Virtual HSM Implementation in OpenVZ Containers, Dmitry Kartashov and Kirill Krinkin, St-Petersburg Academic University of Russian Academy of Sciences, Russia	
17:00		**Closing of Day 4**	

November 15 (Friday)
EIT Open Innovation House, Otaniementie 19B, Espoo

09:00	30m	**Conference registration**	**WG meeting:** mHealth WG **Room:** A117 Chairman: Oleg Medvedev
Session: Energy Efficient Solutions **Room: Seminar hall, A116**		Chairman: Dmitry Korzun	
09:30	20m	Solar Energy Harvesting Strategies for Portable Devices such as Mobile Phones, Christian Schuss and Timo Rahkonen, University of Oulu, Finland	FRUCT Mobile Healthcare Working Group Meeting
09:50	20m	Developing of energy resources accounting and controlling system for the Internet of Things, Sergey Popov and Evgeniy Chernyy, NRU ITMO, Russia	
10:10	20m	A Low-Power Detection System for Wireless Sensor Networks, Ardalan Forootaninia, Tehran University, Mohammad Bagher Ghaznavi-Ghoushchi, Shahed University, Iran	
10:30	20m	Implementation of the Power Save Mode 802.11s in NS-3, Olga Sholokhova, FRUCT OSLL SPbETU "LETI", Russia	
10:50	20m	Modeling and Optimization of a Grid-Connected Hybrid Energy System for GSM BTS Sites in Emerging Cities, Michael S. Okundamiya, Ambrose Alli University, Joy O. Emagbetere and Emmanuel A. Ogujor, University of Benin, Nigeria	
11:10	20m	Optimum Power Dispatch for Hybrid Power System, Faisal Rahiman Pazheri and Nazar H. Malik, King Saud University, Saudi Arabia, Mohd Fauzi Othman, UTM, Malaysia	
11:30	30m	**Official closing of the 14th FRUCT conference, Seminar hall, A116**	

The 4th Regional Seminar on Mobile Healthcare, Early Diagnostics and Fitness

Seminar date: 13 November 2013 Place: EIT Open Innovation House, Otaniementie 19B, Seminar Hall A116

Overview

FRUCT Association organizes the 4rd 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, EU and India and support exchange of best practices and ideas with other regions. The seminar program consists of 3 conference sections on Nov 13, a set of m-Health demos at FRUCT demo session (http://www.fruct.org/demo14) and meeting of FRUCT mHealth WG on November 15.The seminar organizers welcome all attendees of the FRUCT conference to join the seminar program.

Seminar Program

November 13 (Wednesday)

EIT Open Innovation House, Otaniementie 19B, Espoo, Seminar Hall A116

08:30	30m	**Registration is collocated with registration to the 14th FRUCT conference**
Session: Mobile Healthcare, Early Diagnostics and Fitness I **Room:** Seminar Hall A116 Chairman: Kiran Patil		
11:00	45m	The next step - merge of m-health technologies for healthy and sick people, Oleg Medvedev, MSU, Russia
11:45	15m	Designing telemedicine apps that health commissioners will adopt, Alison Marshall, University of Cumbria, UK
12:00	15m	Particularities of Visualisation of Medical and Wellness Data through a Digital Patient Avatar, Vadym Kramar, Markku Korhonen and Yury Sergeev, Oulu University of Applied Sciences, Finland
12:15	15m	Wellbeing and occupational engagement, Karen Morris and Alison Marshall, University of Cumbria, UK
12:30	1h	**Lunch break**
Session: Mobile Healthcare, Early Diagnostics and Fitness II **Room:** Seminar Hall A116 Chairman: Vadym Kramar		
13:30	45m	Indian Rural Healthcare: Exploring ICT for Rural India, Kiran Patil, REVA institute, India
14:15	15m	Exchange, administration and integration of electronic medical information in USA and Russia. Comparison of standards (HL7 vs. decree FSTEC №21 18.02.2013), Vladimir Ermolaev, Maria Kuznetsova and Ekaterina Andreeva, MEDICARD, Russia
14:30	15m	Cardiac Screening Device for Community Healthcare Services: Phonocardiogram, Shantala Devi Patil and Kiran Kumari Patil, REVA institute, India
14:45	15m	The Research Platform for the Medical Diagnostic Services Building, Yury Apanasik, Irina Shabalina and Larisa Kuznetsova, PetrSU, Russia
15:00	30m	**Coffee break**
Session: Mobile Healthcare, Early Diagnostics and Fitness III **Room:** Seminar Hall A116 Chairman: Alison Marshall		
15:30	15m	Wireless Technology to Monitor Remote Patients- A Survey, Nirmala S Guptha, Thanuja K and Kiran Kumari Patil, REVA institute, India
15:45	15m	"Accessibility Passports" Service for Information Social Infrastructure, Yury Apanasik, Irina Shabalina and Anton Shabaev, PetrSU, Russia
16:00	15m	A Novel System to Monitor Fetal Heart Rate (FHR) Women during Gestation, Lakshmi B.N and Kiran Kumari Patil, REVA institute, India
16:15	15m	Development and Testing of Ventricular Fibrillation Detection Software Module, Alexander Borodin,

		Artem Pogorelov and Yuliya Zavyalova, PetrSU, Russia
16:30	15m	Mobility-Supporting Adaptive Authentication Scheme Based Secure Health Monitoring in Wireless Sensor Networks, Shantala Devi Patil and Vijayakumar B P, REVA institute, India
16:45	15m	Medicine Tracker for Smart TV, Murad Yusufov, Ilya Paramonov and Ivan Timofeev, YarSU, Russia
17:00	30m	**Preparation to Demo Session**
Session: Conference social event combined with Demo session and presentation of demos in Pecha Kucha format **Room:** Seminar Hall A116 Chairman: Ilya Paramonov		
17:30	3h	**Demo Session and Social Event**
20:30		**Closing of seminar (Day 3)**

November 15 (Friday)

EIT Open Innovation House, Otaniementie 19B, Espoo, meeting room A117

WG meeting: FRUCT m-Health **Room:** Meeting Room A117 Chairman: Oleg Medvedev		
09:00	2.5h	**FRUCT Mobile Healthcare Working Group Meeting**
11:30	30m	**Official closing of the 14th FRUCT conference, Seminar Hall A116**

Demo Session of the 14th FRUCT conference

Time: 13 November 2013, 17:30-20:30 Place: ICT Open Innovations House, Seminar hall, A116

The Demo section of the 14th 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/demo14.

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 6 slides, and each of them will be displayed for 20 seconds. The slides will be changed automatically. So, the whole presentation will take exactly 2 minutes (it should be noted that usually Pecha Kucha presentation has 20 slides, but we have to reduce the number 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 6 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 October 25*)

1. ***Smart-M3 and Geo2Tag Platforms Integration Agent, K. Yudenok, SPbETU "LETI"***
   Geo-tagging and smart spaces are two promising directions in modern mobile market. Geo-tagging allows to markup any kind of data by geographical coordinates and time. This is the basis for defining geographical context which can be used in different types of applications e.g. semantic information search, machine-to-machine (M2M) interactions. Smart spaces as the basis for seamless distributed communication field for software services provides semantic level for data processing. As most developed open source middleware for smart spaces and geo-tagging we choose Smart-M3 and Geo2Tag platforms. This demo demonstrates a prototype of integration Smart-M3 and Geo2Tag platforms agent (GCSS), which main task is a smart space expansion with new data -- geodata, which will determine the location of each space object (thing, entity) in time. In this prototype will be presented a geo-tags conversion mechanism to space data (triples).
2. ***Private Information AccessControl in Ridesharing Service, N. Teslya, SPIIRAS***
   Ridesharing service provides possibilities of shared use of cars by several passengers and drivers through their mobile devices and allows the passengers to find the reasonably priced transportation means mostly in the regions with a lack of convenient public transport connections. Presented service consists of two parts: client application and ridesharing broker. Interaction between these parts reached through the smart space, based on the Smart-M3 platform.
   Client application is developed for Android operating system using its native Java programming language and libraries. It allows to input information about trip and send request for finding fellow-travelers. The information about trip consists of the start and finish points, date and preferences of the user.
3. ***Tourist Attraction Information Service (TAIS), M. Shchekotov, SPIIRAS***
   Tourist attraction information service is a recommendation system developed for Android-based devices. The service determines the current tourist location and provides recommendations about attractions around (like museums, monuments, and other places) and their textual and photo description. It allows to browse information about attractions which are better to attend and based on the tourist preferences and current situation in the region. The system chooses an Internet source that provides the actual information about the interested attraction based on tourists' ratings.
   The information is extracted by attraction information module from Wikipedia, Wikivoyage, Panoramio, Flickr, internal attraction databases and provided it to the recommendation module.
4. ***CardiaCare - Mobile system for arrhythmia detection, Y. Zavyalova, PetrSU***
   CardiaCare is a mobile system for arrhythmia detection for a permanent monitoring of a patient's heart activity. It is designed to be used with Alive Heart and Activity Monitor by Alive Technologies. Electrocardiogram obtained with help of digital Bluetooth Alive Heart and Activity Monitor transmits to CardiaCare application on smartphone. Then it is filtered by a number of algorithms and sent to the web-server. The Web-server's application carries out the detailed analysis and provides access to its result. Doctor can browse patient's electrocardiograms and examination's results from the doctor's application. The Patient's app and the doctor's app have customizing options along with a friendly interface.
5. ***Application Utilising a Visualisation of Medical and Wellness Data through a Digital Patient Avatar, V. Kramar, OUAS***
   The purpose of this demonstration is to present the developed for health-care professionals application that uses a visualization of medical and wellness data through a digital patient avatar. The application may be used on such mobile devices as Tablet PCs. The application allows a 3D anatomical visualization of the following biological systems: integument, muscular, respiratory, digestive, urinary, skeletal, nervous, circulatory, and lymphatic.
   The application visualizes digital representations of patient's health status by combining data from a variety of data sources in a simple and understandable way. Data for visualization may be obtained from national and commercially available Electronic Health Record (EHR) databases as well as a variety of medical and wellness systems and applications that imply a use of generic medical data models (e.g. such home care supporting systems as HoviMestari). A user can manipulate models (e.g. zooming, rotating, and moving), browse it layer by layer, and observe a history of changes of a health status presented by the model using a timeline slider. A simplified consumers' version of the application would be of interest of anyone who would like to be aware and observe changes of own health status.

6. ***Medicine Tracker for Smart TV, M. Yusufov and I. Timofeev, YarSU***
   This demo shows a prototype of mHealth application for Google Smart TV platform. The application reminds the user of her scheduled medicine intake and allows keeping a diary of intakes. When it is time for the medicine intake, the application issues a notification that appears in top area of the TV screen. If the user ignores the notification for a certain amount of time, the application forcefully displays the activity that allows tracking scheduled intake. The application's target audience is elderly people. They spend a lot of time nearby TV and often need to regularly intake their medicine. The application helps the user not to forget about her scheduled intakes and thereby makes treatment more effective.
7. ***RoDaFlow framework demonstration: prototype of the home light control system, D. Laure, YarSU***
   The demo shows the prototype of the home light control system based on dataflow network implementation for Smart-M3 platform. It is designed to remotely control the light in the whole home or apartment and uses substitution mechanism to prevent system disfunction in case some of its agents is disconected. The primary and substitute agents for the system were developed with the use of RoDaFlow framework. The framework allows creating dataflow network agents by implementing only their programs, which define only how the agents process incoming information.
   Each primary agent of the system uses information from room sensors and remote control unit to control the level of the blinds on the windows and brightness of the lamps in the one room. In case of agent disconnection for some reason it is substituted by substitute agent, which performs almost the same operations as the primary one, but it does not control the blinds actuators in the room.
8. ***Muscle Strategy: Mobile Workout Diary, I. Timofeev, YarSU***
   Muscle Strategy is a workout diary application for mobile devices based on Android OS. This application is intended to simplify keeping a training diary for gym visitors. The application allows creating own workout plan and using it during workouts. All information about workout is stored in the mobile phone. The user can examine total exercise count, time spent during the whole workout or during each of exercises separately, weight in exercises etc. In addition, the user can view all the stored data about workouts on the plot to see her progress in a particular exercise (for example, in barbell bench press exercise).
   The application also provides information about exercise performance techniques and advice for beginners (for example, how to select workout for yourself or from which exercise it is the best to begin). Therefore, it saves time in getting basic knowledge about training and does not require personal trainer participation.
   The limited version of the application is also available for Nokia Asha devices.
9. ***Master School in ICT Innovation, Aino Lyytikainen, Aalto University***
   EIT ICT Labs Master School offers combined technical and entrepreneurial academic education, supported by guaranteed internships in a strong international partner network. Master's programme in ICT Innovation is a two-year course with integrated mobility, leading to a double degree. Come and meet the local programme coordinator and a student representative of Aalto University at the demo session! Read more at www.masterschool.eitictlabs.eu.
10. ***Smart Room services, Ivan Galov, PetrSU***
    SmartRoom is a system for automated holding meeting-like activities localized in a room where a set of digital services is available for organizers and participants. The core SmartRoom services are for Agenda and Presentation. They maintain the activity program in the room and digital presentational content of the speaker, respectively. SmartRoom infrastructure also includes additional services such as microphone and presence detection service. Microphone service allows the speaker to use his own device as microphone during the presentation. Presence detection service evaluates SmartRoom participants activity using Innorange footfall sensor. All infrastructural services are handled by Upstart init daemon.

FOR NOTES

14th Conference of Open Innovations Association FRUCT

Program

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CALL FOR PARTICIPATION

15th Conference of Open Innovations

Association FRUCT

St-Petersburg, Russia, 21-25 of April 2014

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 more than 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 **February 28, 2014**. 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 full papers will be published in IEEE Xplore (Scopus). The templates, conference news and all other details can be found at http://www.fruct.org/conference15.