Open Innovations Framework for Partnering Industrial and Academic R&D:
Finnish-Russian University Cooperation in Telecommunications

WEB: www.fruct.org **E-Mail:** info@fruct.org

FRUCT in a Nutshell

- The largest Open Innovations Framework program (in Community of Practice format) in Russia and Baltic Region
    - Member teams from 18 universities and R&D center of RAS
    - Supported by Nokia, Nokia Siemens Networks and Symbian
    - Member teams are based in Russia, Finland and Denmark
- Mission - development of the regional R&D ecosystem around modern ICT and mobile technologies
    - Special focus on competence renewal and brain-drain problem
- Members primary benefit by getting new competences and expanding professional network
    - FRUCT is sandbox for piloting cooperation and starting new activities
    - New opportunities for professional growth and business

FRUCT Activities (1/2)

- Renewal of education
  - Help creating new courses and MSc programs
  - Advanced training of students in R&D projects
  - Invited lectures given by industrial experts

- Exchange best materials and practices
  - Support of exchange courses and invited lectures
  - Support of students exchange programs
  - Involvement to industrial internship programs

- System of scientific and technological trainings
  - Series of trainings that on request can be given in any place in Russia
  - Training materials are available at FRUCT web (e.g. lecture slides)

FRUCT Activities (2/2)

- Incubator of young scientists / professionals
  - FRUCT conferences are organized every half a year
  - FRUCT has agreements with a number of conferences and journals
  - Best students get Nokia support, i.e. publication and travel grants
  - Organize trainings on scientific writing, legal, management, etc.
  - Organization and partnering with summer and winter schools

- Support of professional ICT communities
  - Created and maintaining network infrastructure
  - Organize contests, conferences, seminars, workshops, etc.
  - Building professional social network and online CV

- Consortia for publicly funded programs in ICT
  - Finding right partners, building trust, culture of preparing applications

Calendar of the Main Activities in 1H10

- January, 28-29   Seminar on "Quality aspects in Mobile Software development" in Petrozavodsk

- February, 8-13   Nokia-NSN FRUCT Winter school on "Qt platform" in Petrozavodsk

- March 1 – April 15   Student Qt contest for graduates of the winter school

- March 1 – April 15   Open contest for the best Russian MAEMO application

- March, 23-25   MAEMO training & 2nd MAEMO conference in Moscow

- April, 26-30   4th Nokia week & 7th FRUCT conference in St-Petersburg

- May, 11-15   Mobile Technologies Week in Nizhny Novgorod

- June, 7-9   PetrSU-Nokia-NSN lab participates in celebration of 90 years anniversary of Republic Karelia

List of Events where FRUCT has Free Packages

Conference	Dates	Deadline	Comments
7th FRUCT	26-30.04	14.02.10	free of charge
N.Novgorod week	11-15.05	07.05.10	free of charge
SQA Days 2010	14-15.05	03.04.10	free for authors
AMICT 2010	25-27.05	01.04.10	free for members
ESWC2010	30-03.06	22.12.09	1 registrations
SibirCon 2010	11-15.07	01.03.10	3 registrations
ruSMART 2010	23-24.08	25.03.10	4 registrations
New2AN 2010	23-25.08	25.03.10	4 registrations
AIS/CAD 2010	02-10.09	10.04.10	10 packages
FRUCT-South	02-10.09	10.04.10	10 packages
ICUMT 2010	18-20.10	22.06.10	4 registrations
UbiComm 2010	25-30.10	10.05.10	4 registrations
8th FRUCT	09-12.11	27.09.10	free of charge

FRUCT Principles (1/2)

- Despite a fact that FRUCT focus regions are Russia and Finland, participants from other regions are welcome

- Student-driven small technology exploration projects allow to lower cooperation entering threshold and help to exchange knowledge and develop new competences

- Regular seminars are important educational events, the place to present R&D work, face-to-face meet colleagues, attract new partners and discuss new project ideas

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FRUCT Principles (2/2)

- When possible we preserve FRUCT informal and open
  - No formal agreements and membership fees
  - Interested university team should define activities in which it wants to participate and make a request for the membership

- FRUCT defines two levels of membership
  - Full-members – run R&D projects and other competence building activities; they are conference organizers and key contributors; full-members are entitled to all FRUCT benefits
  - Observers – could participate in the conferences and projects; follow program's progress; partly entitled to FRUCT benefits

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FRUCT Members

- **FRUCT membership is invitation based**
  - Any university and company can apply for the FRUCT observer status
  - Active observers can be promoted to full-members and the full-members passive for over ½ year return to observer status
- **Industrial Full-members**
  - Nokia Research Center & Universities Cooperation Program in Russia, contact person: Sergey Balandin
  - Nokia Siemens Networks, contact person: Alexander Sayenko, Roman Katiti
  - Symbian Foundation, contact person: Lawrence Simpson
- **Full-member universities**
  - St. Petersburg State University of Airspace Instrumentation (SUAI), contact person: Alexey Koren
  - University of Turku (TU), contact person: Jarkko Paavola
  - Helsinki University of Technology (HUT), contact person: Olav Tirkkonen
  - Petrozavodsk State University (PetrSU), contact person: Anton Shabaev
  - St. Petersburg State Electrotechnical University "LETI", contact person: Kirill Krinkin
  - Lomonosov Moscow State University, contact person: Dmitry Petrov
  - Tampere University of Technology (TUT), contact person: Yevgeni Koucheryavy
  - N.I. Lobachevsky State University of Nizhni Novgorod (NNSU), contact person: Diana Ilina, Svetlana Surova
  - Moscow Technical University of Communications and Informatics (MTUCI), contact person: Vladimir Deart
  - St. Petersburg State University (SPbSU), contact person: Katherina Chizhova
  - Bonch-Bruevich St. Petersburg State University of Telecommunications, contact person: Gennady Yanovsky
  - University of Jyväskylä, contact person: Vitaliy Tykhomyrov
  - Technical University of Denmark, Fotonik, contact person: Søren Forchhammer, Ann Ukhanova
- **Observer universities**
  - St. Petersburg Institute for Informatics and Automation of Russian Academy of Sciences, contact person: Nikolay Shilov, Alexey Kashevnik
  - Southern Federal University / Taganrog State University Of Radioengineering, contact person: Vladimir Kureychik
  - Siberian State University of Telecommunication and Computer Science, contact person: Boris Ryabko
  - Lappeenranta University of Technology (LUT), contact person: Pekka Jäppinen
  - Novosibirsk State University, contact person: Igor Skopin
  - Demidov Yaroslavl State University, contact person: Dmitry Chaly

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New FRUCT sites family

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New FRUCT sites family, Russian version

Group of FRUCT web resources

Educational and Networking Functions

www.fruct.org

fruct.org/forum

social.fruct.org

trainings.fruct.org

Support of Professional Communities

meemo.fruct.org

wiki.fruct.org

mhealth.fruct.org

meego.fruct.org

R&D Cooperation Infrastructure

osll.fruct.org

oss.fruct.org

wl.fruct.org

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History of FRUCT name

1. Simple explanation – is an acronym for Finnish-Russian University Cooperation in Telecommunications (FRUCT)

2. Practical KHOW-HOWs are the fruits (Lat.: fructus, Rus.: fruct) of the knowledge-tree

Industry

Research & Development

Universities

Applied Science

Academia

Fundamental Science

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Contact Information

www.fruct.org

info@fruct.org

You are welcome to subscribe to FRUCT news mailing list

Lets make together FRUCT be fruitful cooperation framework!

Discussion and Q&A
Frequently Asked Questions (1/2)

- Could one see FRUCT as a form of industrial subcontracting?

  - NO! FRUCT is about partnering where involved parties benefits by new competences, visibility and ability to tune research towards actual industrial needs. Companies give access to the unique knowledge and competences + when needed support in form of different donations (books, devices, etc.) and grants

- What is the ownership status of FRUCT project deliverables?

  - All FRUCT results are PUBLIC DOMAIN and the author rights are shared between all project contributors

Discussion and Q&A
Frequently Asked Questions (2/2)

- What if there is clear commercial future of FRUCT project?

  - Then it is the FRUCT GRADUATE, as mission of making bridge between corresponding teams and project incubation is completed. Graduates shall mention FRUCT roots in later publications and welcome to present progress at seminars

- Why Nokia and NSN invest in FRUCT?

  - It is duty of socially responsible company and part of world donations program targeted in expressing good corporate citizen altitude, community responsibility and support of academic research; it also helps implementing principles of open innovation and networking academy and industry

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How Academic Team Can Get an Invitation to FRUCT? (1/2)

1. Candidate team shall select/propose research topic for cooperation

   - When joining existing activity, the team shall clearly define its niche
   - When proposing new activity, the team shall clearly define the available and missing competences, the expected timeline and deliverables; and optionally it could request for other forms of support

2. The team shall prepare the overview presentation about itself and institution, the recommended list of points to present is as follows:

   - General facts about the team and university/organization
   - Present team's cooperation experience and best coop. practices it had
   - What competences team has and what resources (people, equipment, etc.) is ready to use for FRUCT activities now and potentially in future
   - Overview of recently completed and ongoing projects

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How Academic Team Can Get an Invitation to FRUCT? (2/2)

3. Appoint contact person for interacting with FRUCT and request FRUCT invitation by email

    - Following listed above steps will allow faster integration of a new team into FRUCT activities. In case of questions don't hesitate to ask help via info@fruct.org

Benefits for Member Organizations (1/2)

- FRUCT provides framework to find right partner for cooperation, building trust and setting direct contacts between experts

- FRUCT helps to universities to identify R&D niches that they can take for cooperation with industrial partner

- FRUCT helps university to incubate new competences demanded by the industry

- Partnering with industry provides association with strong brand, challenging and interesting research tasks and additional resources, which attracts best students, keeps them at the departments and so helps to solve resourcing problem

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Benefits for Member Organizations (2/2)

- Industry is interested in long-term, high risks research run by the universities
    - Companies would benefit to get closer to the edge of science
    - Early-phase industrial feedback is in mutual benefit as it helps directing studies and enables right tuning and presenting of the results
- Higher openness between academic and industrial research, joint actions for getting stronger visibility and making joint publications are in the mutual benefit

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Background and Motivation

- Innovation cycle getting shorter

  - Scientific results must be faster adopted to practice

- Russian science has a strong innovation potential

  - But visibility of the existing teams has to be improved

- Traditionally strong American R&D and emerging Asia create competitiveness challenge for Europe and Russia

  - To stay competitive Russian and European academic and industrial R&D groups have to consider joining forces

- Before starting serious cooperation is important to learn about partner in activity with low obligations

  - The corresponding playground framework is required

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Open Innovations Framework FRUCT

- Community of students, academic and industrial experts

- Identify niches of world-class R&D and incubator of competences

- Chance for students to realize scientific and R&D ambitions

- Develop strategic partnership between industry and universities

- Support of education and science by socially responsible business

- Promote idea of open communications & Europe without borders

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Our Approach (1/2)

- **Help bridging Finnish and Russian academic worlds**
- Increase visibility of the involved research teams and set more direct personal contacts between experts
  - Supporting joint R&D projects and publishing of the best student works at the world top conferences
- Encourage exchange of competences and best practices in education and R&D
- Establish more direct contacts between people from universities and industry
- Promote telecom and mobile device oriented research and technologies

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Our Approach (2/2)

- Give students a framework to realize R&D ambitions
- Involve students in research projects oriented to the industrial needs
  - Provide students with the advanced technology trainings
  - Find best university & industry supervisors for the projects
  - Help identify perspective niches for new research projects
  - Inform about existing mechanisms of supporting R&D work

- **Program is an incubator of new competences**

Organization of the Project Work (1/2)

- Any representative of the full-member organization can propose the new project at any time

- Project can be initiated by professor, industry expert or student:

  - If professor initiates a project $\rightarrow$ he becomes supervisor of the team

  - If the proposal comes from industry expert $\rightarrow$ he becomes a tutor

  - Also member students with new project ideas could ask FRUCT for evaluation of the proposal and to help find a supervisor/tutor

- The project teams can ask FRUCT board for professional advices, results review and other types of mentor help and support, plus different types of donations (books, devices, etc) are possible

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Organization of the Project Work (2/2)

- The expected project deliverable is a paper, but depending on the scope some other deliverables are also possible and appreciated
- Yearly we organize two educational & info sharing seminars
  - Traditionally, spring seminars held in Russia, autumn in Finland
  - Seminars are educational and scientific events, where a number of top experts give lectures around program's subject
  - Also the seminar is a place to present project progress and results
- Based on seminar presentations FRUCT board might recommend some papers to publication at world top conferences and Nokia allocates several travel grants
- More information about FRUCT structure and work principles available at www.fruct.org
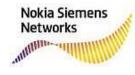
Benefits for Students (1/2)

- FRUCT projects are supported, e.g. by donations of books, devices, scientific databases and library access, etc.

- FRUCT students can ask for travel grant (full/part covering of travel expenses, conference fees, accommodation) for participation in a scientific conference with accepted article recommended for publication by FRUCT (*now works only for students from Russia*)

- FRUCT students can join existing teams and organize new projects
  - The procedure is very simple, you need to write e-mail to a project leader or send a proposal project plan to info@fruct.org

- Students involved in research project can ask academic and industrial experts from other FRUCT members for feedback, advice and professional opinion about their research

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Benefits for Students (2/2)

- Student can ask FRUCT for a supervisor/tutor for a new project

- FRUCT board can help students to find reviewers and/or opponent for MSc/PhD theses done on top of the FRUCT projects

- FRUCT has agreements with high class seminars and conferences, where FRUCT members special discounts and other benefits

- FRUCT projects can publish articles and other materials via FRUCT publishing infrastructure

- FRUCT projects can request help in finding new project members or tutor, when they need some competences or expert knowledge in certain areas

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