



N4C and Arctic Action ICT Workshop

Test beds for Rural Communities and Arctic Conditions

Tromsø 26 or 28 January 2010

First draft programme



Luleå tekniska universitet

Maria Udén

Postal address: Luleå tekniska universitet, 97187 Luleå, Sweden

Telephone +46 920 49 30 23 or +46 70 533 49 78

www.ltu.se

maria.uden@ltu.se

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1. TEST BEDS FOR RURAL COMMUNITIES AND ARCTIC CONDITIONS

The workshop **Test beds for Rural Communities and Arctic Conditions** is a joint arrangement between the EU FP7 ICT project “Networking for Communications Challenged Communities”, N4C and the Arctic Council Sustainable Development Working Group project Arctic Action ICT.

Test beds are currently thought of as key tools for knowledge-society advancement. Can test beds in the Arctic be integrated in the community level so that Arctic populations via these test beds influence the future technical development and, gain job and SME opportunities? The idea of the workshop is to combine impressions, analysis and experience from

- The EU FP7 ICT aims, in particular the FIRE and FIA processes;
- The field of community informatics, i.e. aiming at the successful integration of local communities in the Arctic in coming initiatives, and;
- The experience from research stations and other tests and experimentation in the Arctic that, since the 19th century has been collected in the “Polar research” tradition

Both technical, community and, business model topics will be covered. In addition the perspectives of user-involvement and the European Living Lab movement will be further explored.

The time will be **26th or 28th January 2010** and the workshop will cover one full day. (The day depends on preferences of participants, Please confirm your participation by e-mail to Maria Udén [maria.uden@ltu.se] latest by Dec 5 2009 for finalization of the programme)

Program outline (breaks and meals not marked in this version):

Theme. NOTE: All themes are preliminary as is their place in the agenda	Speaker. NOTE: In this draft the speaker list is still very preliminary. Speakers are generally non-confirmed except organizers' own staff.
Welcome by hosts and organizers	TBD
Polar research today – and many years of	Representative from the Norwegian Polar

experience from test beds in the Arctic	Institute
Test beds as tools for Knowledge society inclusion in the North	Administrative or elected representative from the North Calotte Council or municipality/county
The European Living Lab movement – an overview	Annika Sällström, Anna Ståhlbröst or Marita Holst, Centre for Distance-spanning Technology, Luleå University of Technology
Future Internet Research and Experimentation - ceating test bed facilities in Europe	N4C-project and PanLab
The N4C test plans summer 2010 and their value from technical research point of view	Speaker from Trinity College Dublin or Intel, Ireland (N4C members)
The Barrow Science Consortium – What do we do, how does it work?	Dr. Richard Beck, University of Cincinnati and USA contact for Arctic Action ICT
An indigenous peoples' perspective: targets, expectations and experiences	To be confirmed
Business models for rural communities and Arctic conditions	Barbro Fransson, Power Lake AB, leader for the business development and dissemination in N4C
Additional themes	Suggestions for speakers most welcome
Road map – a session for ideas and time lines	Facilitator to be decided

Interested participants are encouraged to contact Maria Udén via e-mail maria.uden@ltu.se or telephone +46-(0)70-5334978, or local host Sigurd Sjursen, e-mail Sigurd.sjursen@norut.no. Other contact details:

http://www.itek.norut.no/norut_troms/om_oss/ansatte_i_norut_troms/sjursen_sigurd

2. ARCTIC ACTION ICT AND N4C

Even if generic technologies such as TCP/IP have formed the powerful core, the conditions for building and establishing Information and Communication Technologies differ throughout the world. The Arctic conditions challenge ICT state-of-the art both in terms of software, hardware, business models, infra structure and regulations. Arctic Action is an initiative to develop solutions for Arctic populations, especially the rural populations that cannot benefit from technology effectively developed for urban conditions, and for demanding tasks in unsettled areas such as mobile outdoor work e.g. reindeer herding, and climate monitoring.

Arctic Action is an initiative to develop solutions for Arctic populations, especially the rural populations. Arctic Action ICT is coordinated by Luleå University of Technology, Sweden. The

activity is organized as research and development in N4C, and exchange of ideas between the N4C environment and research and development in U.S.A/Alaska with contact person Richard Beck. The coordinator is Luleå University of Technology in Sweden, Dr. Maria Udén. The present set of Arctic Action will be able to present technical developments of interest for Arctic populations, publicly accessible through the N4C wiki. However, throughout the Arctic there are a number of initiatives to develop, test and implement both technical and business model solutions. Arctic Action could play a supporting role if developed to a platform for exchange of ideas and experiences. The workshop is one step to develop the idea.

The N4C project aims to foster eInclusion by extending access to the Internet to people, businesses and authorities. Starting in May 2008, N4C, is a 36 month research project in the Seventh Framework Programme (www.cordis.lu/fp7). The project designs and experiments with ICT architecture, infrastructure and applications in field trials and builds two test beds. N4C jointly studies the problem of making available broadband communication for areas that today lack coverage and further to development of Delay Tolerant Network (DTN) for such areas. N4C develops two test beds to study possible techniques and usage; one located in Swedish Lapland the other in the mountain area of Slovenia. Some of the aims of the N4C project are to test its use for tracking reindeer, for the use by hikers in the fells, and to gain meteorological and environmental data.

Through N4C, two organizations in Arctic Council member states participate in Arctic Action. It is Luleå University of Technology, located in Luleå, Sweden and, Northern Research Institute Tromsø AS located in Tromsø, Norway. Additionally, via the Technical Advisory Board there is presence in N4C from USA and Canada. These are personal appointments of Dr. Vinton G. Cerf, Mr. Kevin Fall and Dr. Michael Gurstein.

3. THE EUROPEAN LIVING LAB MOVEMENT

As the economy has become global and based on knowledge, innovation has become an increasingly important factor for the European companies. As a result of this globalization and growing markets, the amount of technological innovations increases. Following this, the life cycle of innovations is shortened and that has consequences on the innovation process. In the ICT-sector, the demand to find more innovations has led to a so called innovation spiral which results in more innovations but also more failures. In this competitive climate, technology is one imperative factor, but equally important is to strive to gain a deep understanding of user needs and goals. Hence, user-driven innovation is starting to become a competitive factor for technology developing companies. The ability to identify user needs and to incorporate this knowledge into the development of products and services as well as to enhance user experiences has the potential to provide companies with a competitive edge and to speed up the innovation capacity.

Living Labs are open innovation environments in real-life settings which addresses, among others, the developers need to involve users in the process of creation of new services, products and societal infrastructures, as one way to speed up the innovation cycle for companies, public-authorities etc.

Living Labs have become a powerful instrument for effectively involving the user at all stages of the research, development and innovation process, thereby contributing to European competitiveness and growth.

The Living Labs are important mechanisms for RDI activities by

- bringing the users early into the creative process in order to better discover new and emerging behaviours and user patterns;
- bridging the innovation gap between technology development and the uptake of new products and services involving all relevant players of the value network via partnerships between business, citizens, and government;
- allowing for early assessment of the socio-economic implications of new technological solutions by demonstrating the validity of innovative services and business models.

The Living Labs movement started as a series of regional bottom-up initiatives throughout Europe. It was initially strong in the northern part of Europe which has strong traditions of usability and participation, innovation friendly environments, advanced IT infrastructure and high accessibility among SMEs and citizens. One of the first European Living Labs was in Luleå, Sweden. However, pilots and regional programmes have been set up in technically advanced areas all over Europe to develop and strengthen the ability of industry and organisations to co-operate with users and customers in order to produce competitive ICT-based services and products.

The European Network of Living Labs (ENoLL) was first launched by the Finnish EU Presidency in 2006 and had initially 19 members. During the Portuguese, Slovenian and French EU Presidencies the network has grown and consists by today in total of 129 Living Labs (the figure includes also 10 affiliated Living Labs from non European Countries) .(www.openlivinglabs.eu)

This vision behind the Living Lab movement is to empower the users of Future Internet technologies from a position where they are seen as a traditional stakeholder and consumer of industry led innovations, to a position where the user and user communities are contributors and co-creators of new innovations. To realize this vision usage of new ICT-solutions and the potential of Future Internet technologies are core to mobilize people independent of time and place and to incorporate them into the whole innovation-process to foster new innovative ICT-solutions with higher market relevance.

In Northern Europe there are different existing Living Lab initiatives like:

- Botnia Living Lab: hosted by Centre for Distance-spanning Technology at Luleå University of Technology)
- NorthRuLL (Northern Northern Rural-Urban Living Lab) hosted by Oulu University
- Far North Living Lab initiated by Norut-IT in Tromsø

In this workshop we plan to exchange experiences from ongoing strategic initiatives within EU and to explore the potential of the Living Lab methodology for the Arctic innovation climate and the Arctic society.

Document history		
Status	Date	Author
First draft	2009-11-12	Maria Udén

Dissemination level	
	Level
PU = Public	x
PP = Restricted to other programme participants (including the Commission Services).	
RE = Restricted to a group specified by the consortium (including the Commission Services).	
CO = Confidential, only for members of the consortium (including the Commission Services).	