

Summary of: Nordic Internet Conference - Internet Supervision and Control

By Lars Stranden, 2004-11-26

NORDIC
innovation
CENTRE



SP Swedish National Testing and Research Institute

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1 Organisers

The organisers were: Timo Malm VTT Finland and Lars Strandén SP Sweden.

2 From the programme

The text below is an excerpt from the information in the printout and web versions of the conference information.

Background

Controlling and supervising equipment via the Internet is a strongly emerging technology and technically possible today. Now and even more in the future it will be necessary for Nordic interests to understand the consequences when including the Internet in applications. It is especially important for real-time, safety and security related applications. During 2001-2002, SP Swedish National Testing and Research Institute, managed a research project concerning Internet supervision and control i.e. how and to what extent it is possible to control and supervise equipment connected to the Internet. Excerpts of the results can be found at <http://www.sp.se/Electronics/RnD/reports/ELp/2002-30.htm>. SP also arranged a similar conference in April, 2003, which was very successful. This is the background for the upcoming conference. The conference is supported by Nordic Innovation Centre <http://www.nordicinnovation.net> and organized together with VTT Finland <http://www.vtt.fi/indexe.htm>.

Purpose

The focus of the conference is on including the Internet in applications and using it in the same way as a LAN would be used within a distributed local application. Important aspects are real-time, security and safety. The conformity aspect is also interesting and we could use the ISO/IEC definition "any activity concerned with determining directly or indirectly that relevant requirements are fulfilled." This includes topics such as testing, inspection, evaluation, verification, certification, standards and processes. The purpose of the conference is to establish contacts within the Nordic countries, to survey Nordic state of the art both related to R&D and industry and to present the information to Nordic participants.

Conference structure

The main conference day is 24 November 2004 but if you arrive in the evening before, i.e. on 23 November 2004, you have a perfect opportunity to visit the exhibition area and meet speakers, tool developers for informal discussions and presentations. The exhibition opens at 18.00.

At the main conference day there are two parallel tracks; one with aspects originating from industry and one with aspects originating from academia/institutes. There are also talks that are common to both industry and academia. In any case the talks are of a general nature. Within each track there are three different areas: safety, security and infrastructure. You are free to choose any combination of presentations and you do not have to decide in advance.

Note that the conference language is English.

Venue

24 November 2004 (with start-up on the evening of 23 November 2004)

Pulsen Konferens AB

Kyrkängsgatan 8

Borås, Sweden

www.pulsen.se/konferens

3 Conference structure

Concerning the conference contents we have the following orthogonal dimensions:

- Country (Sweden, Finland, Denmark, Norway, Iceland)
- Interest group (industry, academia, authority)
- Contents (security, safety, infrastructure)
- Conformity

Infrastructure contains all aspect that *enables* the application but does not include the application as such. This gives $5 \times 3 \times 3 \times 1$ topics, e.g. a Danish industry discussing safety from the conformity perspective, however too many topics for the conference. The limitation was made in the following way:

- Security, safety and infrastructure are included
- Both academic and industrial perspectives
- One presentation from authorities
- Two key-note presentations; one academic and one industrial

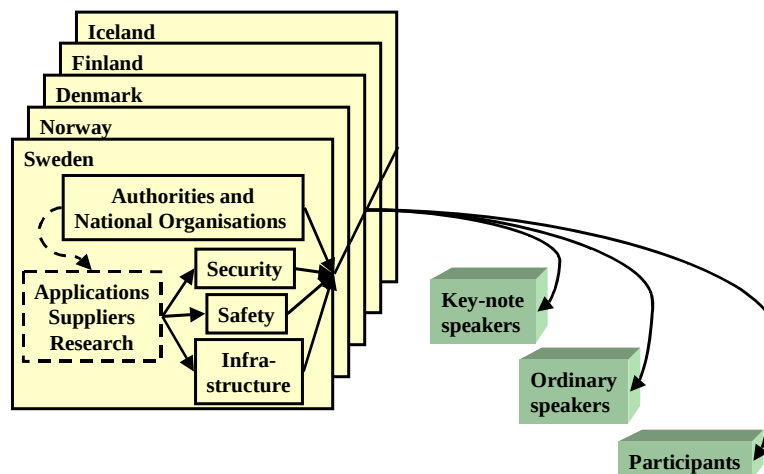
This is made with an overall balance of speakers from the Nordic countries. It is assumed that people are interested in both industrial and academic aspects and thus it should be possible to always have the choice. It shall be possible to:

- listen to all academic talks, or
- listen to all industrial talks, or
- listen to at least one talk for all six combinations: academic / industrial, security / safety / infrastructure

4 Search

4.1 Structure

The picture below shows the approach for finding speakers and participants.



The means for finding speakers and participants are:

- existing contacts (personal, between companies, universities etc.)
- using <http://www1.kompass.com/kinl/sv/>
- yellow pages
- advertisements in technical magazines

- distribution lists e.g. for institute papers, Nordic innovation newsletter

5 Contents

5.1 Goals

The overall goal is to create a meaningful meeting place for all persons involved. This includes:

- Providing interesting topics
- Getting to know each other
- Understanding the Nordic situation

The contents give a

- balance between Nordic countries
- balance between academia and industry
- balance between safety, security and infrastructure
- authority view

5.2 Material

Each participant got:

- The programme
- Summary of all talks
- List of participants
- Copies of all presentations
- SP report: Machine Control via Internet
- An evaluation form

5.3 Programme

23 November 2004

18.00 – 21.00	Social event; extra talks, refreshments, meet your colleagues, check the posters etc.
18.50 – 19.00	Welcome. Lars Strandén, SP, Sweden, Timo Malm, VTT, Finland
19.00 – 19.30	Internet Worms and Critical Infrastructures, Marko Helenius, University of Tampere, Finland
19.30 – 20.00	ADM Autonomous Decision Maker Lars Strandén, SP, Sweden

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	General track / From industrial perspective	From academic perspective
8.00 registration, coffee		
8.45	Welcome. Lars Strandén, SP, Sweden, Timo Malm, VTT, Finland	
9.00	Perspectives on Control via the Internet Eric Jul, DIKU, Denmark	

9.45	Orchestrated systems Johan Westman, IBM, Sweden	
10.30	Coffee break	Coffee break
10.45	Secure Process Automation Environment Markku Henttu, Metso DNA, Finland	Safety challenges when implementing remote operations/eFields of the Oil and Gas industry in the North Sea Stig O Johnsen, SINTEF, Norway
11.15	Is it possible to remote control a chemical plant, using public infrastructure? Mikael Thorén, EKA, Sweden Urban Thorsson, EKA, Sweden	Security in Wireless Sensor and Ad Hoc Networks Lars Westerdahl, FOI, Sweden
11.45	Failsafe solutions in today existing automation solutions Patrik Moberg, Siemens, Sweden	Internet Performance Issues for Safety-Critical Applications Markus Fiedler, BTH, Sweden
12.15	Lunch break	Lunch break
13.00	Restart	
13.15	Internet vulnerability – from the authority perspective Anders Rafting, PTS, Sweden	
14.00	Remote Operation of Railway Alarm System, Use of the IEC 61508 design standard in instrumented safety critical applications Therese Lyngstøl, Scandpower, Norway	Measurement of security level in automation industry applications Reijo Savola, VTT Electronics, Finland
14.30	E-government and the Internet Håkon Styri, DIGME, Norway	Network Intrusion Detection using Artificial Neural Networks Christian Damsgaard Jensen, Technical University of Denmark
15.00	The network walls are falling down: Is the Internet secure enough for serious critical business operations? Janne Saarikko, SSH, Finland	Risks and Solutions for Critical Applications Utilising the Internet Marko Helenius, University of Tampere, Finland
15.30	Coffee break	Coffee break
16.00	Remote Monitoring, Control or Maintenance of offshore installations, Increasing the reliability of instrumented safety critical applications by utilizing remote monitoring and control Erik Korssjøn, Kongsberg, Norway	Safety considerations related to communication via Internet Timo Malm, VTT Industrial Systems, Finland
16.30	Wireless Internet access based on GPRS for Industrial use Rune Domsten, IO Technologies, Denmark	MM2M – DELTA's mobile Machine-to-Machine network Rune Andersen, DELTA, Denmark
17.00	Summary Lars Strandén, SP, Sweden Timo Malm, VTT, Finland	

6 Marketing

The following marketing action have been done:

- Advertisement in Teknisk Ukeblad (No), Ingenjören (Dk) and Elektronik i Norden (Se)
- Paper copy sent to ca 1500 selected persons
- Email sent to another ca 1500 selected persons
- Registration form at <http://www.sp.se/conf>
- Press release sent (in Swedish and English)
- Article (in Swedish and English) on www.nordicinnovation.net
- Information on VTT web page
- Advertisement in SP paper (Provning och Forskning)
- Reminders via email

7 Results

More than 50 highly qualified persons attended the conference. The answer of “Could you recommend this conference to a colleague?” gave 14 YES and 2 NO. Overall there was a very positive feeling e.g. Eric Jul pointed out the importance of academia and industry meeting each other. Since the whole group represented such a competence there were the following aspects:

- How do we maintain the group?
- How do we find more relevant information, how do we spread it?
- How can people find each other e.g. what do different companies and universities represent?
- There are topics not included e.g. operator view and requirement specification

To some it all; some kind of continuation is needed.