eSecurity Working Group of the eSafety Forum

Security and Privacy issues related to the use of cooperative automotive systems

André Groll, Christoph Ruland
Co-Chair of the eSecurity WG of the eSafety Forum
University of Siegen

Agenda

- Embedding of eSecurity in i2010
- eSecurity Working Group
- Expected Outcome of the WG
- Timetable of the eSecurity WG
- Conclusions

European Strategy of Automotive Security

- In Europe (of 27) in 2005
 - 1.3 million accidents happened
 - 1.7 million people were severely injured
 - 41 000 people were killed
- Action: Intelligent Car Initiative (ICI)
 - ICI is part of the i2010 Strategy
 - Goal: Halving the number of killed people till 2010
 - Three main actions of ICI
 - eSafety Forum
 - Create awareness of ICT based transport solutions
 - ICT based research and development for smarter, safer and cleaner mobility



eSafety Forum Working Groups



Terms of Reference

- Investigate security needs, that address the vulnerability of Road Transport caused by misuse of networked and cooperative systems
- Integrate existing and emerging RTD initiatives to
 - Provide a communication platform of all major stakeholders
 - Support the introduction of security technologies in parallel to the progress of the technology infrastructure
 - Ensure compatibility to legal and certification aspects
- Provide qualified recommendations regarding
 - Research, Technology and Development requirements
 - Standardisation needs for implementation
 - Legal provisions

Participants

- More than 40 participants from
 - Industry stakeholders (OEMs and suppliers)
 - Public authorities
 - Participation of OEMs and public authorities is critical to discuss
 - Organisational requirements
 - Measures for quality assurance and responsibilities
 - Network operators and service providers
 - Researchers

Topics of the eSecurity WG

- In-Vehicle ICT Systems
 - Increased number of electronics and software
 - Risks: Manipulation, misuse, unauthorized access...
- Vehicle to Vehicle Communication
 - Better and faster traffic information between vehicles
 - Risks: Falsified messages, location tracking...
- Vehicle to Infrastructure Communication
 - Telematics services, entertainment download, services based on position tracking, eCall
 - Risks: Faked RTTI and routing information, fraudulent telematics services, manipulated software, privacy violation
- Privacy (article 28)

Scope of Analysis

- Prerequisites
 - Inspections
 - Legal constraints
 - Long Term Development
 - Supplier Independency
- Compatibility to Security Standards
- Security Analysis

Requirements

- Security requirements
- Organisational requirements
- Measures for quality assurance and responsibilities
- Legal requirements
- Research requirements
- Mechanisms to maintain eSecurity measures

Expected Outcome

- Document containing
 - State of the Art
 - Analysis
 - Recommendations for actions to be initiated
 - Legal
 - Organisational
 - Technical
 - Quality assurance and responsibilities
 - Research

Time Table

- April 2007 Start of Working Group
- 5 Working Group meetings
- May, 27th 2008 Internal workshop
 - 9.30 to 16.00 in Brussels, Belgium
 - First draft of document will be presented and discussed
 - Invitation: Interested parties, particularly public authorities, legal representatives and privacy delegates are invited
- Autumn 2008 Public + "external" workshop

Related Work

- C2C-CC Car to Car Communication Consortium
- CVIS Cooperative Vehicle Infrastructure Systems
- GST Global System for Telematics
- Sevecom Secure Vehicle Communication
- Preciosa
- EVITA
- ISO-Standards (ISO/IEC JTC 1 SC 27)
 - Management of ICT security
 - Code of practice for information security management
 - Evaluation criteria for IT-Security

Conclusions

- The eSecurity WG works under the focus of Safety and with respect to Privacy as part of the eSafety Forum
- The goal is to
 - Identify the risks for safety and privacy given by the fact of more and more electronics (hardware), software and services in and for vehicles
 - Give recommendations for technical and non-technical measures
- No Safety without Security
- First draft of document will be available May, 27th 2008
 - Final version after feedback from concerned organisations
- More information:
 - http://esafetysupport.org/en/esafety_activities/ esafety_working_groups/esecurity.htm
 - info@esafetysupport.org