



eltic-Plus⁺

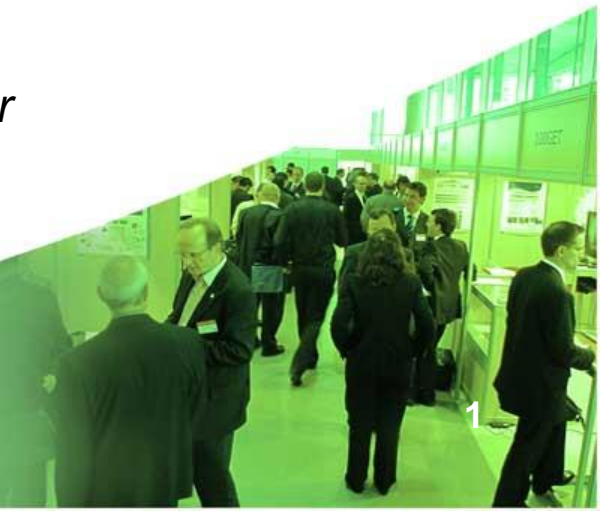
Smart Connected World



Celtic-Plus Event
Project Ideas and Networking
19st May 2017, Barcelona

Pitch of the Project Proposal Safe and Secure Vehicular Communication Systems

Ali Balador, Senior Researcher
Hossein Fotouhi, Senior Researcher



Connected Vehicles

Vehicle Automation

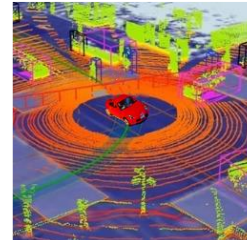
Internet of Things

Safety & Security

Machine Learning

Big Data

Mobility on Demand



Connected-Automated Vehicles



Smart Cities

Benefits

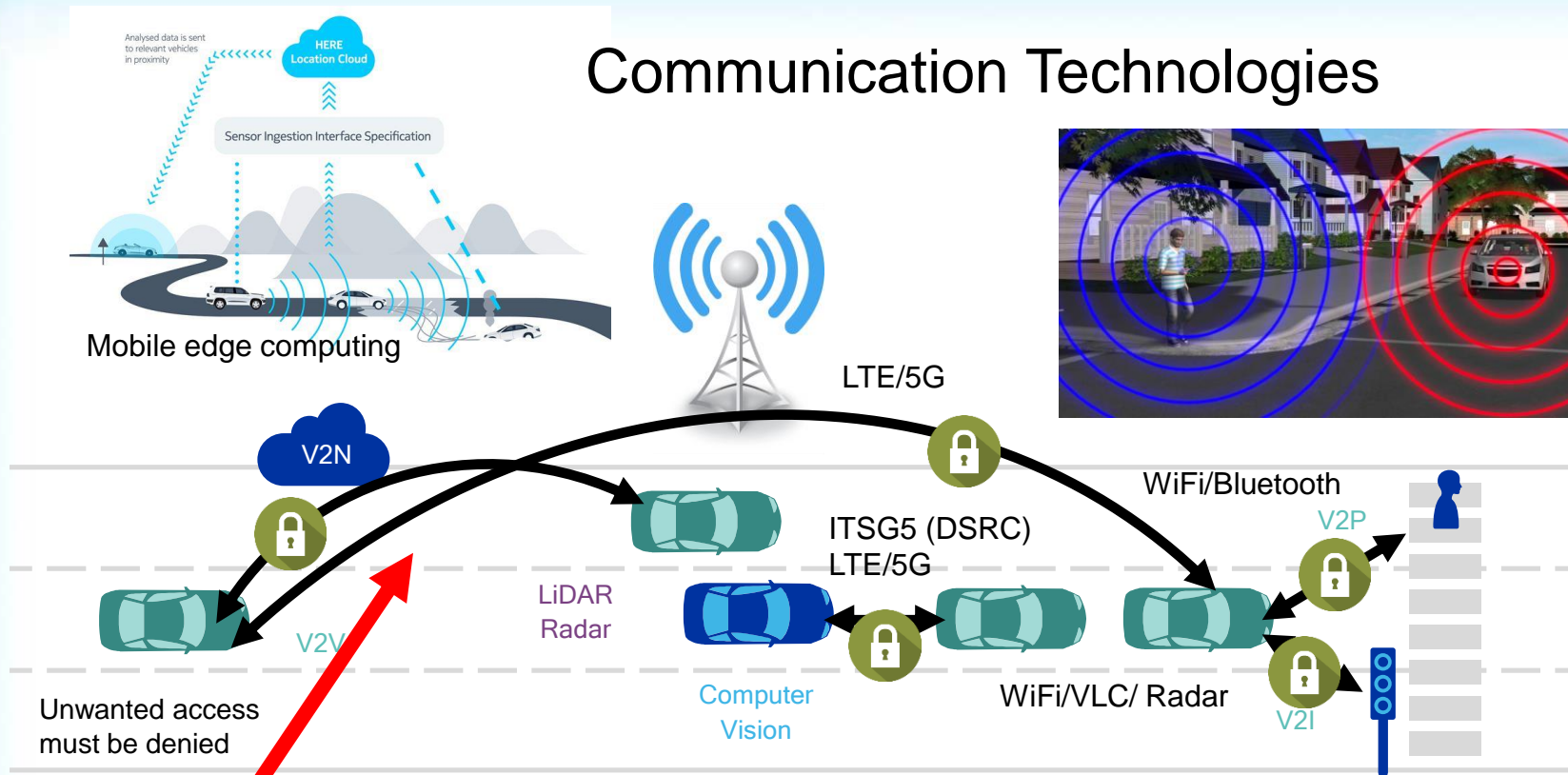
- Improved Safety
- Reduced congestion
- Reduced emissions and use of fossil fuels
- Improved access to jobs and services
- Reduced transportation costs for gov't and users
- Improved accessibility and mobility

- Mälardalen University (MDH) is located in Västerås and Eskilstuna, Sweden, founded in 1977.
- MDH has 14,000 students and 900 employees with 71 professors.
- Embedded systems is among the most prioritized research areas at MDH, where it has internationally leading competence.
- MDH is involved in several projects on data communication, cyber-physical systems, real-time systems, safety critical systems, and cloud computing.

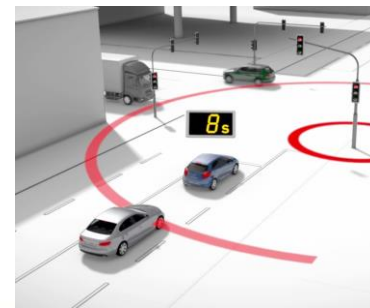
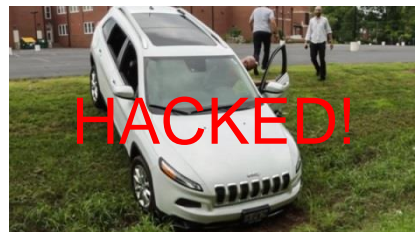
- RISE SICS is a leading research institute for applied information and communication technology in Sweden, founded in 1985.
- Non-profit research organization and funded by governmental research programs, industry and the EU.
- 202 Staff (76 Ph.D., 32 Professors)
- Application areas, such as Internet of Things, Industrial Automation and Maintenance, Automotive and Rail, Telecom, Digital Health, Decision support and business intelligence, Data Centers

Proposal Introduction (1)

Communication Technologies



Safety & Security

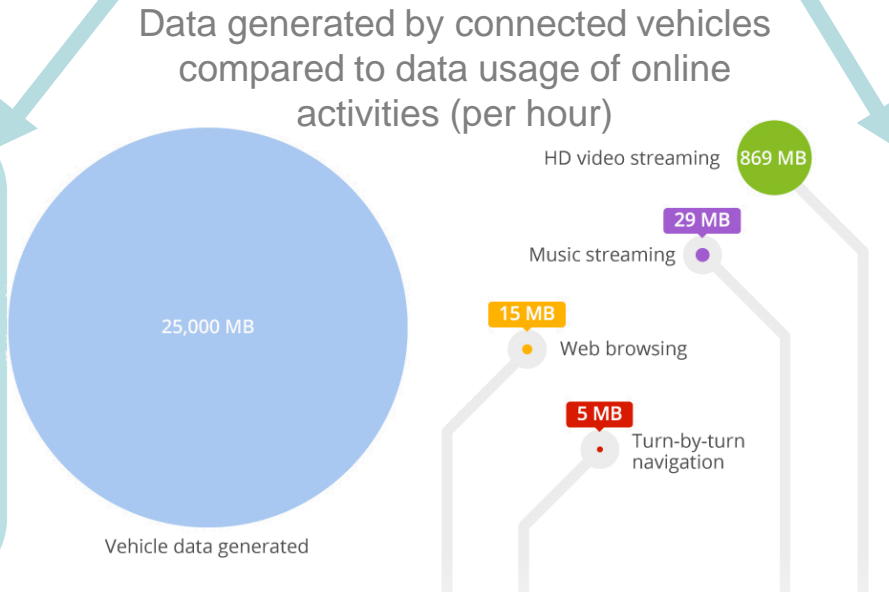




Volume:
25 GB
of data per hour
generated from
a Plug-in hybrid
vehicle

Variety:
80%
of data is
unstructured –
traffic, weather,
docs

Velocity:
38
microsecond
response to
millions of
events per
second



Veracity:
3% - 5%
of warranty
claims are
fraudulent

Source: AT&T, McKinsey, Verizon

Proposal Introduction (2)

- **Expected Outcomes:**
 - Safe and secure vehicular communication system
 - New services and efficient operation based on analyzing connected car data
- **Impacts:**
 - Reduction of pollution (air pollution, noise, ..)
 - Reduction of congestion
 - Increased safety
 - Reduction of transfer cost and Increased transfer speed
 - More services and infotainments
- **Schedule:**
 - Target for October 2017 call

- **Partners involved:**
 - Mälardalen University
 - RISE SICS Research Institute
- **Our expertise on:**
 - Wireless communication and mobile computing
 - Safety and security
- **Looking for partners in:**
 - Big data
 - Machine learning and artificial intelligence
 - Network and communication security
 - Safety

For more information and for interest to participate please contact:



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