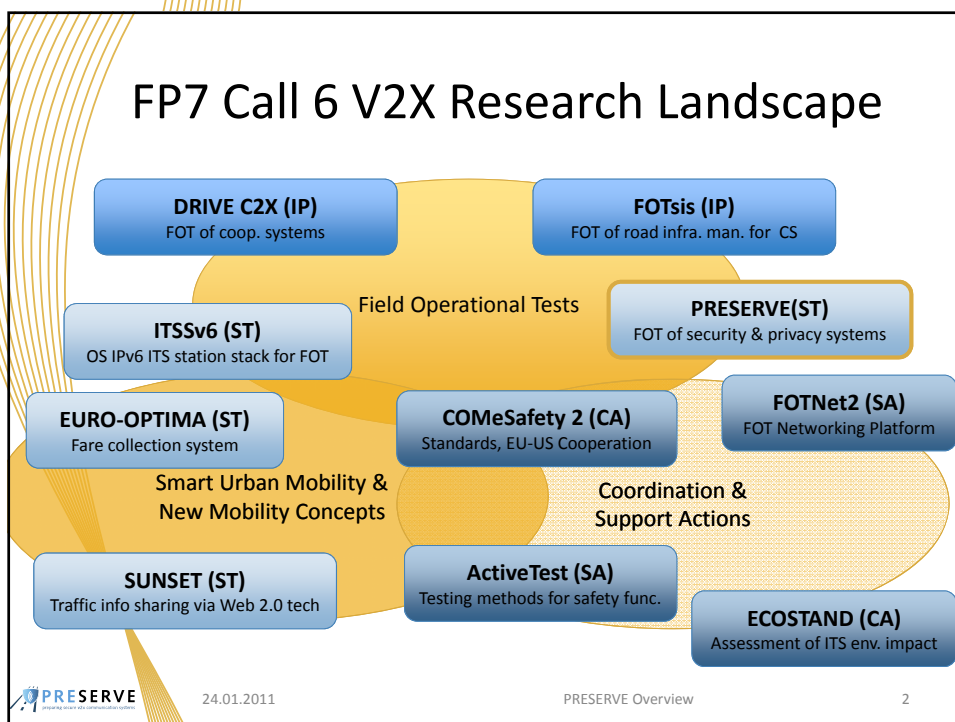





PRESERVE – Overview

Panos Papadimitratos (papadim@kth.se)
 Presentation – TIMS EIT ICT Labs activity – W3C meeting





FP7-ICT-2009-6.2, STREP, No. 269994
1.1.2011 – 31.12.2014





UNIVERSITY OF TWENTE.






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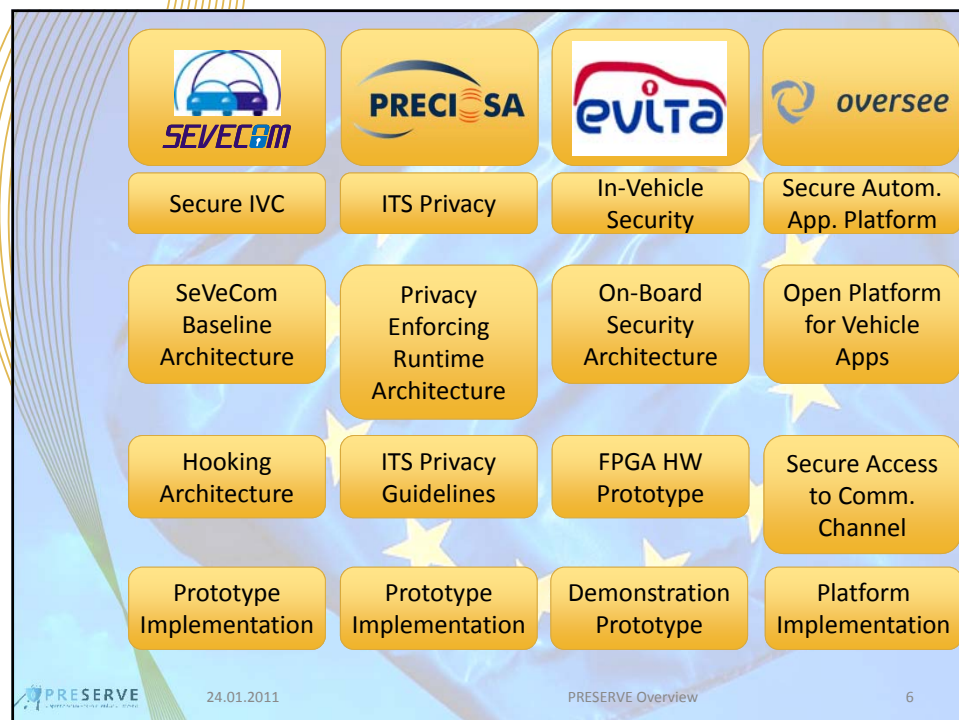
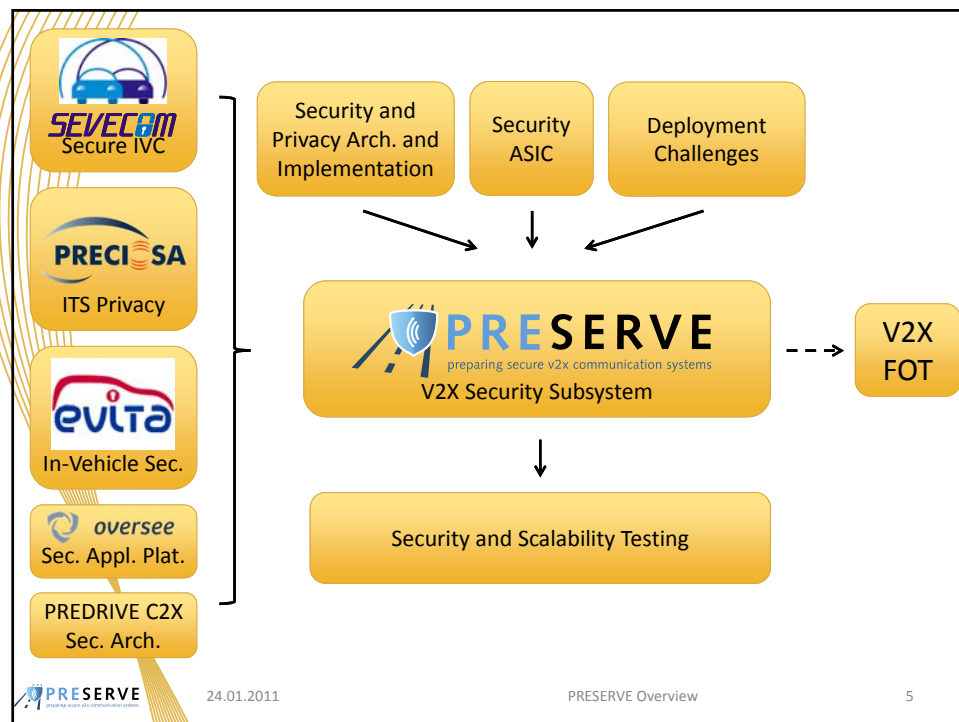
PRESERVE Challenges and Mission

- No existing V2X security solution is **complete**!
- No existing V2X security solution **scales**!
- Open **research and deployment questions**!

Mission: Design, implement, and test a secure and scalable V2X Security Subsystem for realistic deployment scenarios.



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SeVeCom



- FP6 STREP Project
- 1.1.2006 – 31.3.2009



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PRESERVE Overview

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PRECIOSA



- FP7 STREP Project
- 1.3.2008 – 31.8.2010



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PRESERVE Overview

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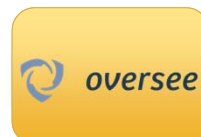
EVITA



- FP7 STREP Project
- 1.7.2008 – 30.6.2011



OVERSEE



- FP7 STREP Project
- 1.10.2010 – 31.3.2013



PRESERVE Objectives

Integrated V2X security architecture and implementation based on SeVeCom, EVITA, and PRECIOSA results

Meet performance and cost requirements of current FOTs and future products, esp. build security ASIC

Provide “ready-to-use” V2X security subsystem

Solve open deployment and technical issues hindering standardization and product development

PRESERVE WPs

WP1: Integration Project Results in VSA (V2X Security Architecture)

WP2: Close-to-Market VSS (V2X Security Subsystem) Development

WP3: Field Operation Test

WP4: VSS Distribution and Support

WP5: Deployment Issues

WP6: Dissemination, Exploitation, Liaison

WP7: Administration

PRESERVE WPs (cont.)

WP1: Integration Project Results in VSA (V2X Security Architecture)

WP2: Close-to-Market VSS (V2X Security Subsystem) Development

WP3: Field Operation Test

WP4: VSS Distribution and Support

WP5: Deployment Issues

WP6: Dissemination, Exploitation, Liaison

WP7: Administration

- Harmonize security architectures of previous projects
- Create a refined V2X Security Architecture
- Contribute to Harmonization and Standardization

PRESERVE WPs (cont.)

WP1: Integration Project Results in VSA (V2X Security Architecture)

WP2: Close-to-Market VSS (V2X Security Subsystem) Development

WP3: Field Operation Test

WP4: VSS Distribution and Support

WP5: Deployment Issues

WP6: Dissemination, Exploitation, Liaison

WP7: Administration

- Integrate and refine prototype implementations of previous projects
- Design and produce a security ASIC in sufficient quantities to run internal and external tests

PRESERVE WPs (cont.)

WP1: Integration Project Results in VSA (V2X Security Architecture)

WP2: Close-to-Market VSS (V2X Security Subsystem) Development

WP3: Field Operation Test

WP4: VSS Distribution and Support

WP5: Deployment Issues

WP6: Dissemination, Exploitation, Liaison

WP7: Administration

- Perform three rounds of tests assessing the scalability, feasibility, and security of the VSS

PRESERVE WPs (cont.)

WP1: Integration Project Results in VSA (V2X Security Architecture)

WP2: Close-to-Market VSS (V2X Security Subsystem) Development

WP3: Field Operation Test

WP4: VSS Distribution and Support

WP5: Deployment Issues

WP6: Dissemination, Exploitation, Liaison

WP7: Administration

- Packaging the different versions of the VSS
- Documentation
- Support of users

PRESERVE WPs (cont.)

WP1: Integration Project Results in VSA (V2X Security Architecture)

WP2: Close-to-Market VSS (V2X Security Subsystem) Development

WP3: Field Operation Test

WP4: VSS Distribution and Support

WP5: Deployment Issues

WP6: Dissemination, Exploitation, Liaison

WP7: Administration

- Work on solutions for challenges that hinder deployment
 - Technical challenges
 - Business challenges

PRESERVE WPs (cont.)

WP1: Integration Project Results in VSA (V2X Security Architecture)

WP2: Close-to-Market VSS (V2X Security Subsystem) Development

WP3: Field Operation Test

WP4: VSS Distribution and Support

WP5: Deployment Issues

WP6: Dissemination, Exploitation, Liaison

WP7: Administration

- Active cooperation with stakeholders, standardization bodies and other projects

PRESERVE WPs (cont.)

WP1: Integration Project Results in VSA (V2X Security Architecture)

WP2: Close-to-Market VSS (V2X Security Subsystem) Development

WP3: Field Operation Test

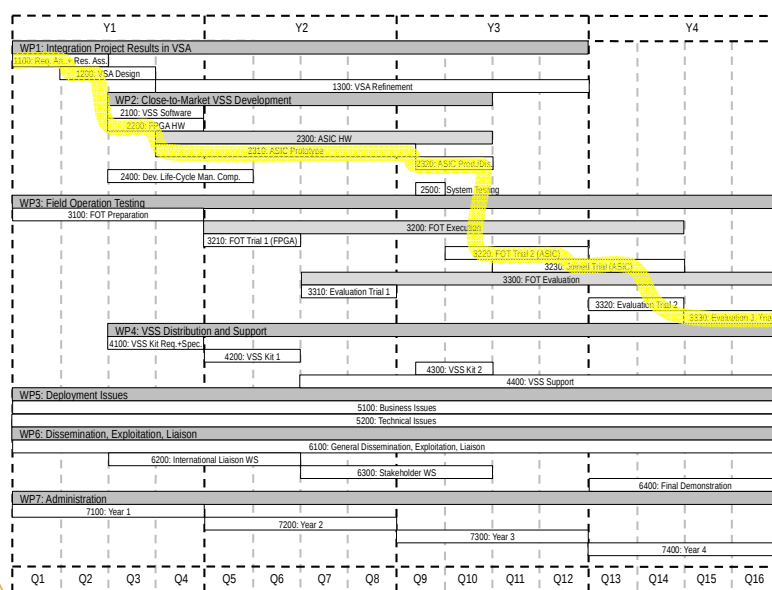
WP4: VSS Distribution and Support

WP5: Deployment Issues

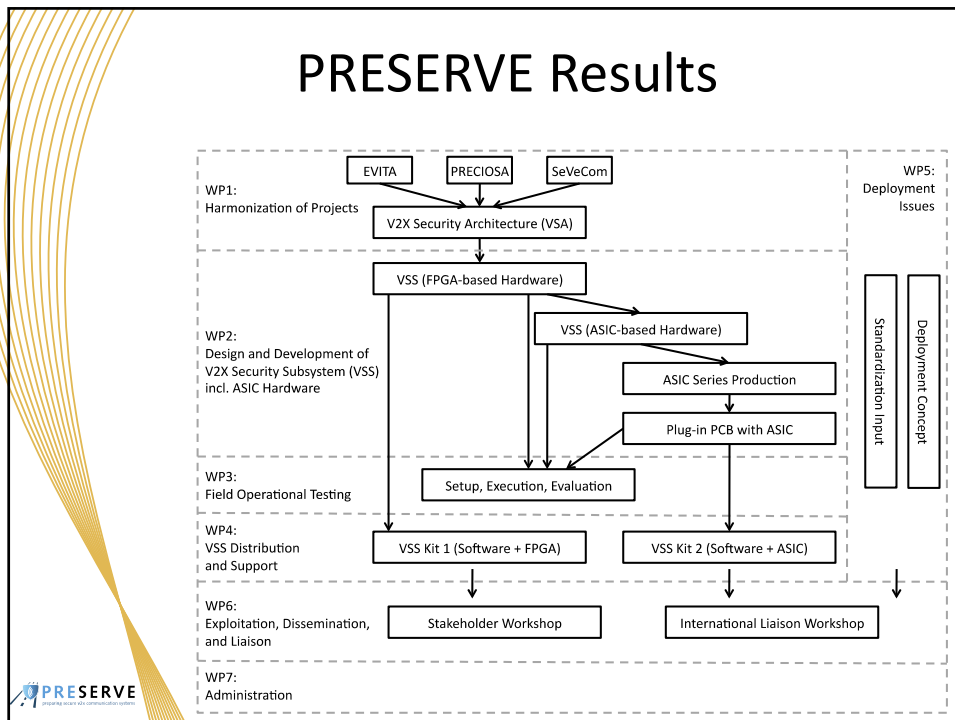
WP6: Dissemination, Exploitation, Liaison

WP7: Administration

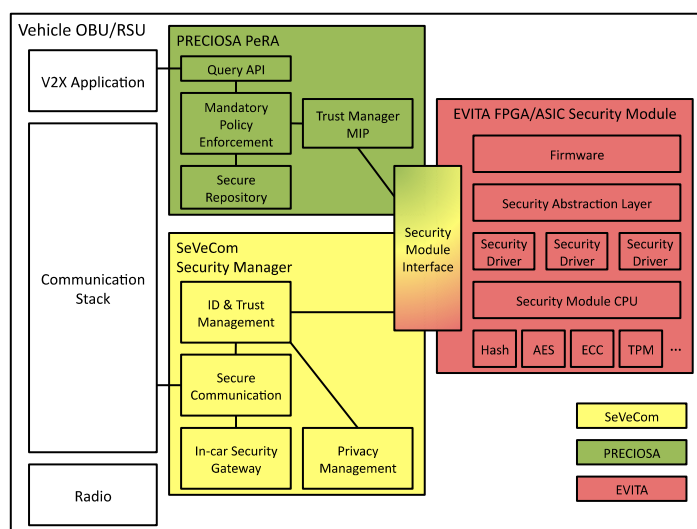
PRESERVE Timing



PRESERVE Results



Structure of the VSS



3 Phase Testing

Trial 1: Internal, small-scale, lab-test

Trial 2: Internal, large-scale, hybrid testbed

Joint trial: with FOT partner, large-scale, real vehicles

 PRESERVE
preparing secure v2x communication systems

Expected Outcome

Harmonized V2X Security Architecture

Implementation of V2X Security Subsystem

Cheap and scalable security ASIC for V2X

Testing results VSS under realistic conditions

Additional results for deployment challenges