



# **Use & dissemination**

*Geographic addressing and routing for vehicular communications*

***GeoNet Final Workshop***  
*INRIA-Paris Rocquencourt, France*

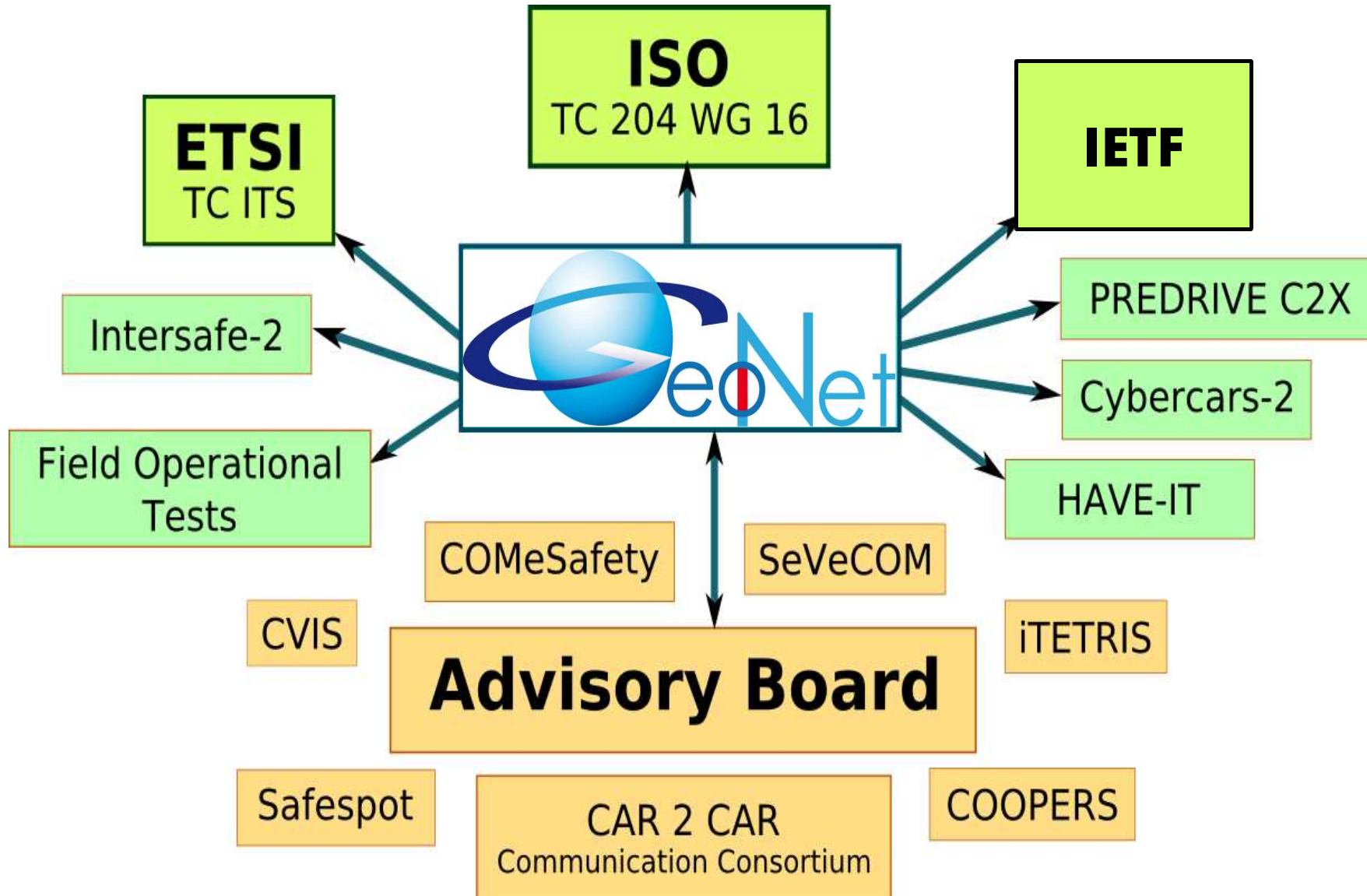
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- Introduction
- Dissemination in Standard Organisations (SDOs) and Forums
- Dissemination in European and National Projects
- Dissemination in Conferences
- Other Dissemination Activities
- Conclusion



Standardisation is important for industrials. Production of such cooperative systems is possible only if standards are available.

## - ETSI TC ITS

ETSI TS ITS WG3 Transport and Network

- *Requirements for GeoNetworking [ETSI-TS-102-636-1]*
- *Scenarios for GeoNetworking [ETSI-TS-102-636-2]*
- *Media independent functionalities [ETSI-TS-102-636-4-1]*
- *Media dependent functionalities [ETSI-TS-102-636-4-2]*
- *Transmission of IPv6 Packets over GeoNetworking Protocols [ETSI-TS-102-636-1]*

## - ISO TC204 WG16

Geonetworking capability is listed in the CALM architecture [ISO-21217], but not specified. Could be contributed by ETSI.

- *GeoNet has thus investigated how IPv6 geonetworking as specified by GeoNet could fit in the CALM set of standards*

## - CEN TC278 WG16

CEN group has been set-up and GeoNet participated to the first meeting and pointed out combination of IPv6 and geonetworking

Information about GeoNet was provided to meeting attendees.

## - IETF

### **MeXT** (Mobility EXTensions for IPv6)

- NEMO Routing Optimisation (RO) issues in ITS architectures
- Solution for IP-based V2V communications (MNPP: Mobile Network Prefix Provisioning) submitted to the IETF in the form of an Internet-Draft

### **Autoconf** (Ad-Hoc Network Autoconfiguration)

### **IntArea** (IntArea)

- Requirements for traffic safety applications (Internet-draft)

## - COMeSafety

GeoNet architecture can be considered as the sub-part of overall COMeSafety system architecture, which deals specifically with IPv6 geonetworking.

GeoNet is referenced in the Architecture document of COMeSafety

## - C2C-CC

GeoNet partners are very active in C2C-CC, which makes GeoNet in-line with C2C-CC

GeoNet specifications are considered in C2C-CC as complementary to their specification.



## - **FP6 CVIS**

- CVIS is the targeted platform for integrating of GeoNet IPv6 geonetworking
- Geonetworking capabilities are needed in CVIS and CVIS is developing around IPv6.
- GeoNet and CVIS worked together at the design level

## - **FP6 SeVeCom**

- SeVeCom output considered for security and privacy task.
- GeoNet extends the usage of pseudonyms to improve location privacy and analysed how to use it within the context of an IP geonetworking.

## - **FP7 iTETRIS**

- In WP 600 (Routing and Data Distribution Strategies), GeoNet specification are adopted in the implementation of the C2CNet stack in the iTETRIS simulation platform.
- GeoNet specification are also considered in the iTETRIS sepcification.



## - **FP7 PreDriveC2X**

- GeoNet specifications are adopted
- C2CNet layer in the PreDriveC2X platform is compliant to GeoNet specification.

## - **French MobiSeND**

- INRIA has specified and implemented MNPP (Mobile Network Prefix Provisioning) in the context of GeoNet
- MobiSeND has decided to validate its research output on security issues using IPv6 geonetworking as provided by GeoNet in the vehicular test platform owned by INRIA.

## - **ETSI ITS Workshops 2010**

“Combination of IPv6 and geonetworking: Output of the GeoNet project” has been accepted for presentation by INRIA.

## - **Fully Networked Workshop 2010**

“The GeoNet project: combination of IPv6 and geonetworking” has been accepted for presentation by INRIA.

## - **IX Feria Madrid es Ciencia 2008**

IMDEA Networks had a stand there to disseminate to the general public its research activities and GeoNet work was one of the shown activities.

## - **ITST 2009**

- Plenary speech
- iTETRIS Workshop
- GeoNet Workshop



- J.H. Choi, et al, "IPv6 support for VANET with Thaila geographical routing", in 8th International Conference on Intelligent Transport System Telecommunications (**ITST'08**), Phuket, Thailand, October 2008.
- W. Zhang, et al, "Congestion Control for Safety Messages in VANETs: Concepts and Framework", in **ITST'08**, Pucket, Thailand, October 2008.
- Y. Khaled, et al, "Geographical information extension for IPv6: application to VANET", in **ITST'09**, Lille, France, October 2009.
- Y. Khaled, et al, "Application of IPv6 multicast to VANET", in **ITST'09**, Lille, France, October 2009.
- A. Gordillo, et al, "Enabling IP geomulticast services for vehicular networks ", in **ITST'09**, Lille, France, October 2009.
- M. Drigo, et al, "Distributed Rate Control Algorithm for VANETs (DRCV) (Poster)", **VANET 2009**, Beijing, China, September 2009.
- W. Zhang, "Analysis of Packet Forwarding in VANETs Using Probabilistic Channel Model", in **IEEE VTC Spring'09**, April, 2009.
- N. Mariyasagayam, et al, "GeoNet: Aproject Enabling Active Safety and IPv6 Vehicular Applications", in **ICVES'08**), Columbus, Ohio, USA, September 2008.
- Invited talk given by Carlos J. Bernardos (IMDEA Networks), with title: "Optimising vehicular communications from a MANEMO perspective", **EuWIT Workshop 2008**.
- invited lecture given by Carlos J. Bernardos (IMDEA Networks), with title: "Las comunicaciones vehiculares: una realidad cada vez más cercana" (Vehicular communications: a reality which is closer and closer)", **Imaginática, 2009**

# Other dissemination activities



- TV reportage “Futuro” (Future), program “7 días” (7 days) of TELEMADRID, 12 April 2008.
- TV reportage "Coches Futuros" (Future cars), program Tres14 of TVE. 25 January 2009.
- Carlos J. Bernardos, “Comunicación entre vehículos: tecnología con nuevos servicios y mejoras en la seguridad vial” (Vehicular Communications: technology with new services and safety improvements), press article published in the section “Lección de Ciencias”, EL MUNDO, 9 April 2008.
- “Coches comunic@ntes” (Communicating cars), press article from Marta Villalba in ABC, 15 April 2008.
- Radio interviews in RNE (“En Días Como Hoy” program) and Ondavoz radio, 27 and 28 March 2008.
- Wilfried Lohmann, "ETSI standardization process for vehicle-to-vehicle communication and European research project GeoNet", invited talk at LiteOn Automotive internal meeting bringing together Japanese and Taiwanese OEMs and automotive suppliers, Taipei, November 2008.
- Organized a one-day workshop to discuss ways to harmonise GeoNet architecture and specification to ISO CALM with participants Dr. Edelmayer, Mr. Simon (Ramsys/CVIS), Dr. Fischer, ISO TC204 WG16 (ESF GmbH,), and Dr. Lohmann (lesswire/GeoNet), Ramsys, H-1051 Budapest, Hercegprímás u. 13, January 19, 2010
- GeoNet and lesswire contribution to the project is official part of lesswire company presentation;
- Presenting the GeoNet poster and discussion with trade fair visitors by lesswire at following industrial fairs:
  - Hanover Industrial Fair, Hanover, 21-25 April 2008
  - C2C-CC Forum 2008, Test Track Adam Opel AG, Dudenhofen, 22-23 October 2008;
  - SPS/IPC/DRIVES 2008, Nuremberg, 25-27 November, 2008
  - Hanover Industrial Fair 2009, Hanover, 20-24 April 2009,
  - Embedded World 2009, Nuremberg, 03-05 March 2009
  - C2C-CC Forum 2009, Mobile Life Campus, Wolfsburg, 3-4 November 2009
  - SPS/IPC/DRIVES 2009, Nuremberg, 24-26 November 2009

[www.geonet-project.eu](http://www.geonet-project.eu)

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GeoNet Project

### Overview

To increase the road safety in Europe while traffic and driver's concentration demand also rises, the EC and the automotive industry have committed to halve the life loss by 2010. The GeoNet project will significantly contribute to this goal by implementing a reference specification of a geographic addressing and routing protocol with support for IPv6 to be used to deliver safety messages between cars but also between cars and the roadside infrastructure within a designated destination area.

While the CAR 2 CAR Communication Consortium has invested significant effort into the specification of a car-to-car communications mechanism suitable for safety applications, its mandate does not extend beyond defining a specification. At the same time, ongoing projects like SafeSpot would need an actual implementation to rely on whereas other such as CVIS are developing a communication architecture relying on the maintenance of a constant access to the Internet over IPv6.





The diagram shows GeoNet at the center, connected to various partners and organizations. At the top are ISO TC 204 WG 16 and IETF WG NEMO. To the left are ETSI TC ITS and Intersafe-2. To the right are PREDRIVE C2X, Cybercars-2, and HAVE-IT. Below GeoNet are COMeSafety and SeVeCOM. At the bottom is the Advisory Board, which includes CVIS, Safespot, CAR 2 CAR Communication Consortium, COOPERS, and ITETRIS. Field Operational Tests is also connected to the left side.

### Partners only

- Advisory Site
- Internal Collaboration Site

### News categories

- GeoNet
- GeoNet Workshop
- Working Packages

- GeoNet partners have been very active in the ITS community, which was a key role in the good dissemination of GeoNet.
- GeoNet output is important for industrials, especially those in GeoNet. It contributes to standardisation which is needed for system deployment, thus products commercialisation.
- GeoNet specification have been adopted in several research projects and pushed into standardisation bodies.
- GeoNet has been well known through several publications in different conferences.
- A GeoNet 1<sup>st</sup> workshop with a demo has been successfully organised.
- **For more information, please visit [www.geonet-project.eu](http://www.geonet-project.eu)**

# Thank you for your attention



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