

**CAR 2 CAR**  
COMMUNICATION CONSORTIUM

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**CAR 2 CAR Communication Consortium calls for deployment of cooperative ITS**

*by Søren Hess, General Manager, C2C-CC*

The CAR 2 CAR Communication Consortium is currently finalising the preparation for Day One deployment of cooperative Intelligent Transport Systems in Europe from 2015 on.

This is very much in line with the global activities where Day One deployment is a key issue. The European ITS Congress in Dublin had a lot of focus on deployment preparation and this will also be the case for the World Congress in Tokyo from 14 to 18 October and the International EU – JP - US workshop arranged by COMeSafety2 in Tokyo 19 October 2013.

The Day One services have been agreed and profiling of standards is in good progress with specifications based on ETSI ITS-G5 standards, triggering conditions, minimum performance requirements and system requirements. The profiling of standards and the system specification to ensure interoperability will be finalised during the next couple of months.

Compliance assessment and testing framework, lifecycle management and security framework are under development for the Day One deployment and expected to be finalised in 2013/beginning 2014. The C2C-CC has developed a pilot Public Key Infrastructure (PKI) that is now in operation within the consortium and will soon be made available also for infrastructure organisations including the European corridor projects and city deployments.

The automotive industry including both OEMs and also global suppliers have committed to the deployment plans and have signed the MoU. We are also inviting the infrastructure organisations to sign this document and to join the cooperation in developing the basis for Day One deployment. Day One services include both V2V and V2I communication and the detailed planning will be finalised in 2013.

Within the infrastructure organisations a number of national and regional corridor projects providing infrastructure services are planned. At 10 June the traffic ministers from Austria, Germany and Netherlands signed an agreement for early deployment of infrastructure services within a corridor from Vienna via Frankfurt to Rotterdam. This is a milestone in the deployment preparation and shows that the joint activities within the Am-



The CAR 2 CAR Communication Consortium's General Manager Søren Hess.



sterdam Group between the road authorities within CEDR, the motorway operators within ASECAP and the City authorities within POLIS is fruitful and paves the way for European deployment of C-ITS.

A roadmap for the joint deployment has been developed and the first open workshop for a wider consultation with all stakeholders is planned for 25 September 2013 in Brussels. This work is very encouraging and fruitful! Also the European Commission is strongly supporting our activities towards deployment of cooperative ITS. The GD MOVE activities on the ITS Directive and Action Plan and the GD CONNECT and GD ENTERPRISE activities towards finalisation of standards for Day One deployment are very encouraging.

The ETSI TC ITS standardisation for C-ITS is in good progress in accordance with Mandate M/453 with the EN's for the access networks (802.11 profile) being finalised in the voting procedure and the CAM and DENM standards being approved for EN approval process with public enquiry and voting. A number of other standards have been finalised or will be approved for publication within ETSI TC ITS very soon. This includes safety application standards, the network and transport standards and the security standards as the basis for the C2C-CC security framework. A consistent set of standards will soon be ready for Day One deployment and the profiling activities for the standards are already including the ETSI standards. ETSI TC ITS has also approved and published the Release 1 document with a list of standards for the Day One system. Standards needed for next step of deployment – Release 2 – are developed based on expected features and functionalities for Day Two, Three and Four. This draft document will be subject to wide public consultation with ITS stakeholders.

The infrastructure message-set standards for Day One deployment are now being developed within CEN with support from the C2C-CC and the infrastructure organisations within the Amsterdam Group. Roadmaps are be-

ing developed for the deployment of infrastructure services in close cooperation with the C2C-CC. We need of course the whole picture for the Day One deployment.

The C2C-CC is also part of the EU-US-JP task force towards global coordination and harmonisation of standards and deployment preparation. In particular common hardware and security framework are important issues and are under discussion between the C2C-CC and the CAMP/VIIC of the USA. Six sub groups have been established in close cooperation between EU and US to further develop the deployment preparation and ensure coordination of activities between the continents. Also Japan is part of this activity, which is expected to be finalised by end of 2013/ beginning 2014. Within the C2C-CC, new OEM members and new global suppliers are joining the consortium to influence and contribute to the preparatory work for deployment of C-ITS Day One system from 2015. Both Ford and Hyundai have now joined the C2C-CC together with a number of global suppliers. The Consortium is still one of the key global players towards development and deployment of cooperative ITS. With European deployment from 2015 we will further develop global cooperative ITS in close cooperation with stakeholders in other regions. Thus Day Two, Three and Four is in the preparation process.

Within the CAR 2 CAR Communication Consortium both OEMs, suppliers and development members have a strong strategic interest in deployment of cooperative ITS from 2015 – and we will do it...

Søren Hess

General Manager of the CAR 2 CAR Communication Consortium

## Save the date: Amsterdam Group Workshop

by Maarten Amelink, Amsterdam Group

The Amsterdam Group is a strategic alliance of committed key stakeholders with the objective to facilitate joint deployment of cooperative ITS in Europe. It includes the umbrella organisations CEDR – ASECAP – POLIS and the CAR 2 CAR Communication Consortium. The Amsterdam Group partners are working on a Road Map on initial deployment of cooperative ITS in Europe. In order to share and discuss the Road Map with other stakeholders and interested organisations the Amsterdam Group organises a full day workshop in Brussels on Wednesday September 25. More information on location and how to register will follow soon through [www.amsterdamgroup.eu](http://www.amsterdamgroup.eu) and other channels. The AG road map as background document for the preparation of the workshop will be provided to the registered persons.

### Cooperative ITS Corridor

One of the first results from the Amsterdam Group as strategic alliance is the Cooperative ITS Corridor Rotterdam – Frankfurt/M. – Vienna. It is planned that the roadside cooperative ITS infrastructure for the initial services in the cooperative ITS Corridor Rotterdam – Frankfurt/M. – Vienna will be installed from 2015 onwards. The EU Member States the Netherlands, Germany and Austria have signed a Memorandum of Understanding on June 10, 2013, to realise this new technology in close cooperation.

### Background

Cooperative ITS (C-ITS) will – by providing communication – enable the exchange of real-time information in a vehicle-infrastructure network to support road safety, traffic efficiency and sustainable travel beyond the



Get It In On The Road, Get It In the Vehicle.

scope of stand-alone systems. The implementation of cooperative systems will bring innovative services to road users and that will support road authorities and road operators in their roles as traffic managers and network operators.

For some years, several actions have been taken by automotive sector companies and by infrastructure operators aiming at the launching of cooperative Systems and Services in the market; for different reasons mainly the lack of coordination (the chicken and egg) have made impossible their take-up in practical terms. The aim of the Amsterdam Group is to encourage cooperation between both automotive sector companies and road operators/authorities and their relevant industrial partners and supporters in order to develop a joint strategy for deployment.

The commitment towards deployment of C-ITS of road operators/ road authorities/ car manufacturers and cities highly relies on the policy and costs/ benefits of C-ITS implementations in their respective (regional/ national) environment. Therefore the Amsterdam Group offers an element of



top-down support in order to complement the essential bottom-up coordination. In this respect, the AG road map intends to show the path and steps towards the initial deployment of C-ITS as it is seen by the umbrella organisations and its members (= commitment to the roadmap). A decision and a commitment to deploy can only be taken by the members of the umbrella organisations on a local / regional level.

The intention of the AG Road Map document is the identification and agreement

- on necessary steps regarding cooperative systems and services, in this way defining a Joint Deployment Strategy for those who are eager to go for C-ITS implementations.

- On common open issues/ necessary activities required to be solved for the initial deployment of cooperative systems and services in vehicles and at infrastructure side.

- On a timeline to accomplish the open issues / necessary activities.

The AG road map therefore aims at practical recommendations (not binding) for their members for the initial deployment of (Day One) cooperative services. Information exchange, discussion and creation of solutions between the involved stakeholders in the context of C-ITS are key for forming these recommendations.

## New CAR 2 CAR members

by Sonja Eickmann, C2C-CC



### **Ford-Werke GmbH**

Type of Member: Partner of the CAR 2 CAR-CC

Type of Business: German car manufacturer being subsidiary of Ford of Europe and Ford Motor Company, production of passenger cars, utility and commercial vehicles



### **CETECOM**

Type of Member: Associate Member

Type of Business: Company globally acting in consulting, qualified testing and approved certification in the telecommunications and information technology industries.



### **Marben**

Type of Member: Associate Member

Type of Business: global specialist for embedded software, delivers interoperable, robust and efficient solutions to help manufacturers accelerate their time to market



### **Security Innovation - The Software Security Company**

Type of Member: Associate Member

Type of Business: specialises in security and privacy concerns for software, delivers middleware, end-user software and expert consulting for privacy, communications security and software security



### **Siemens AG Austria**

Type of Member: Associate Member

Type of Business: one of the leading technology enterprises in Austria providing products, solutions and services for the Industrie, Infrastructure and Cities, Energy and the Healthcare sector



## New CAR 2 CAR members

by Sonja Eickmann, C2C-CC

**TNO** innovation  
for life

### Netherlands Organisation for Applied Scientific Research TNO

Type of member: Development Member

Type of Business: independent research organisation concerned with the application of knowledge to improve the competitiveness of companies and to assist governments with policy matters

## Pilot PKI for C2C Members starts Operation

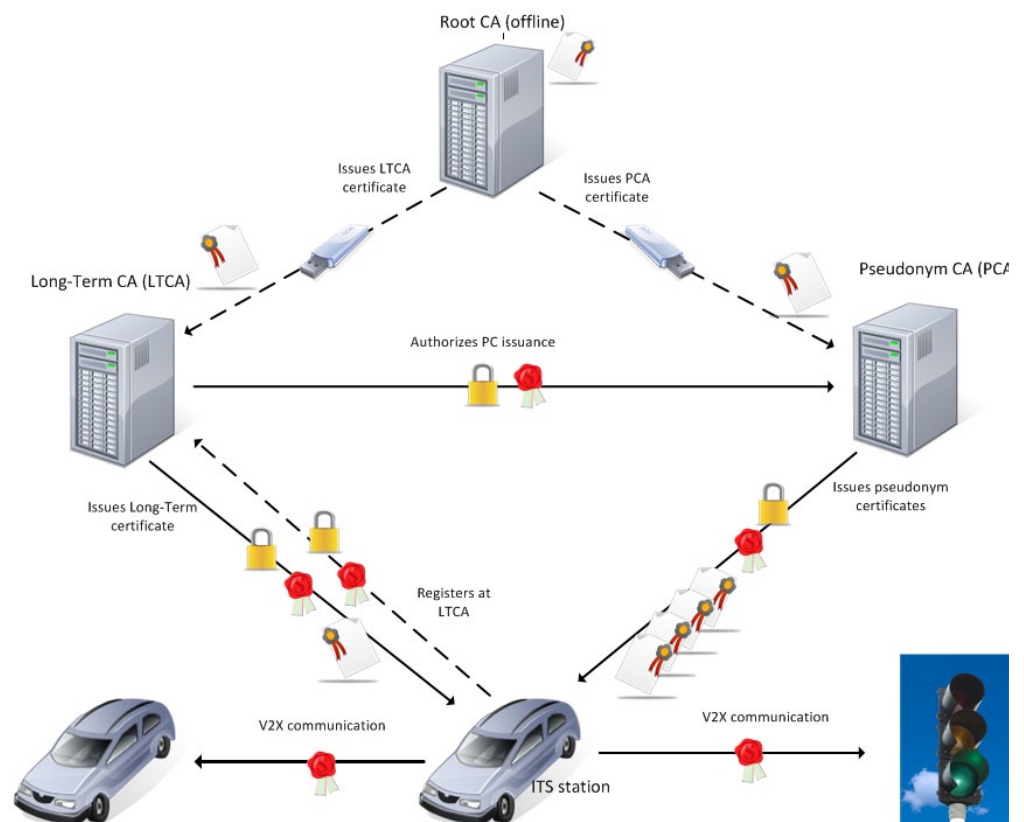
by Daniel Estor, ESCRYPT, on behalf of the WG Security

In June 2013, the CAR 2 CAR Communication Consortium took an important step towards the deployment of the Day One use cases by starting the operation of the so called "Pilot PKI". With this Pilot PKI, C2C-CC members receive a ready-to-use infrastructure that they can use during their development processes.

The Pilot PKI is the outcome of extensive discussions and considerations within the task force PKI of the C2C-Working Group Security (WG SEC). As it is commonly accepted in the Working Group Security, a Public Key Infrastructure (PKI) providing digital certificates for vehicles is a necessary component of the C2C communication system. However, the requirements to the PKI used for C2X communication are not restricted to guaranteeing the integrity of C2X messages. In fact, the PKI needs to protect the privacy of the vehicles and at the same time be as simple as possible due to restricted computation and memory resources of the vehicles' on board units. The concept that has finally been agreed on by the members of the working group security foresees three different kinds of Certificate Authorities (CA) as shown in the diagram below. The trust anchor of the system is one (or several) Root CA that issues certificates for Long-Term CAs (LTCA) and Pseudonym CAs (PCA). While an LTCA equips a vehicle with a certificate representing its real identity, a PCA issues a large number of pseudonym certificates to the vehicle. Only these pseudonym certificates are used to secure C2X communication and since they can be changed frequently, tracking of a certain vehicle is made difficult. The Pilot PKI, which is online now, comprises one instance of each of the three different CA types. Since the operation of a PKI - in particular when multiple organisations are involved - needs to follow detailed and common rules, the Pilot PKI is not a mere implementation of CA functionality, but also includes a first draft of a common Certificate Policy (CP). The experiences collected during the Pilot PKI operation will be used to extend and refine the CP. Furthermore, the development of the Pilot PKI comprises the specification of message formats to be used for the communication between a vehicle and a CA.

The Pilot PKI is operated jointly by ESCRYPT GmbH - Embedded Security (Pseudonym CA) and Fraunhofer SIT (Root CA and Long-Term CA). The joint operation makes it possible to test the intended separation of CA operators and to show the interoperability between two different implementations. In the first step, access to the Pilot PKI will be granted to OEMs that can use the PKI to have an easily accessible source for certificates compliant to ETSI TS 103 097. In further steps, other members of the CAR 2 CAR Communication Consortium and after that interested stakeholders will be allowed to use the Pilot PKI. All legitimate users of the Pilot PKI will receive a Pilot PKI Starter Kit. It contains a user guide introducing the Pilot PKI as well as a client-software developed by ESCRYPT. Furthermore, example source code demonstrating the usage of the PKI is part of this package. Taking all this into account, the Pilot PKI will make a substantial contribution to the usage of C2X communication.

For initial PKI usage registration and further information visit <http://www.car-to-car.org/index.php?id=8>.





## Suppliers associate with plans to deploy C-ITS from 2015 on

by Sonja Eickmann, C2C-CC

During the last month, the CAR 2 CAR Communication Consortium ascertained very contentedly that the initiative of the vehicle manufacturers to deploy C-ITS from 2015 on receives strong support from the industries' supplier and tier ones. By this time, a range of associate members of the consortium have co-signed the Memorandum of Understanding on synchronised deployment of cooperative systems.

They herewith associate with the vehicle manufacturers and warrant that the required hard- and software is available for implementation starting in 2015. Co-signers so far are the associate members Autotalks, Continental, Cohda Wireless, Delphi, escrypt, NXP, Security Innovation, Denso and NEC. "The Consortium partners appreciate this support by the suppliers very much. It is a determining factor for the successful deployment. It symbolises at the same time that different stakeholders are reaching a common understanding of the initial roll out", says Søren Hess, General Manager of

the CAR 2 CAR Communication Consortium. Besides the fact that the MoU has also attracted the awareness of partners in the Amsterdam Group and of the authorities of EU-members states (see article about ITS corridor on page 5 in this newsletter), this proves that the Consortium's engagement is headed in the right direction.

The MoU had been initiated and signed by the European vehicles manufacturers organised in the Consortium in October last year. Meanwhile they conceived the desire to encourage suppliers to follow suit and associate with the deployment plans. After now the first associated consortium members obliged and signed the statement, the Consortium figures even more prominently in the implementation of C-ITS in Europe.

The MoU is available for inspection on the website of the CAR 2 CAR Communication Consortium in the category documents.

## MoU approves trans-boundary ITS corridor from 2015 on

by Sonja Eickmann, C2C-CC

With their decision to jointly deploy cooperative ITS in vehicles from 2015 on, the CAR 2 CAR Communication Consortium's partner have laid a groundbreaking foundation for the implementation of cooperative systems and their operation just a few years ahead. The transport ministries of Germany, the Netherlands and Austria have now accounted for this evolution by approving the trans-boundary ITS corridor project parallel to the on-board implementation from 2015 on. In the framework of the EU transport minister council, the German Federal Minister of Transport, Building and Urban Development Peter Ramsauer, the Austrian Federal Ministry for Transport, Innovation and Technology Doris Bures and their Netherlandish counterpart Melanie Schultz van Haegen have signed a Memorandum of Understanding to invest in the deployment of cooperative systems on infrastructure side. Road works warning trailers shall be equipped with ITS stations and provide cooperative services along the cross-border corridor linking the cities Rotterdam (Netherlands), Frankfurt (Germany) and Vienna (Austria).

The corridor project is the second of three phases Peter Ramsauer envisages for the implementation of C-ITS in Germany: After the technology and served use cases will have been tested in R&D projects with results expected for 2014, the corridor shall gain first operational experiences by

at the same time declare the potential of cooperative systems for intelligent traffic management and control. For the corridor project starting in 2015, it is planned to equip road works warning trailers with ITS stations to let them communicate with passing vehicles. For the drivers of outfitted vehicles on the motorway corridor between Rotterdam, Frankfurt and Vienna, this means that they will be warned timely if road works are lying ahead, causing traffic jams, blocked lanes or diversions. If the implementation and operation in the corridor succeeds, a Germany-wide implementation is envisaged.

The trans-boundary project even takes a step forward with not only connecting vehicles with road works warning trailers to inform about dangerous traffic situation, but also forwarding the data received by the traffic infrastructure to traffic management centers. Providing them the Cooperative Awareness (CAM-)Messages of vehicles helps gaining e.g. the currently driven speed of vehicles, the traffic density and herewith facilitates detecting the traffic situation in the environment of road works. The opposite way around, intelligent traffic management and control can use the infrastructure units as provider of traffic information and advices to avoid dangerous situations, reduce the workload and the number of traffic jams and exhaust the capacities of the road network.

Estimations undertaken by the the eSafety2 Forum of the European Commission yield that C-ITS is a key technological innovation for intelligent, safer and more environmental-friendly traffic and transport. Cooperative systems would be able to reduce the number of road fatalities and severe accidents to the amount of 30 per cent, decrease the number of traffic jams to the amount of 15 per cent and enhance the traffic efficiency to the amount of 20 per cent.

The government of the cooperating countries makes allowance of this potential with a clear denomination to invest in the implementation of C-ITS in traffic infrastructure. Exclusively in Germany, roughly 300 Mio Euro will be invested in the implementation and operation of telematics services in traffic and transport. With the MoU approving the corridor project from 2015, the ministries signalise a close cooperation with partners from the automotive industry.



Road works warning trailers will be equipped with road side units exchanging data with passing vehicles.

Source: Marianne J./pixelio.de



## sim<sup>TD</sup> completed – benefits of car-to-x technology in field operational test verified

by Dieter Seeberger, Daimler

The project sim<sup>TD</sup> has been completed with a final demonstration and result presentations at the exhibition centre Frankfurt on 20<sup>th</sup> of June 2013. sim<sup>TD</sup> conducted the largest field operational test for car-to-x-communication so far. It was a joint project by leading German automotive manufacturers, component suppliers, telecommunication companies, research institutes and public authorities.

The project was funded and supported by the Federal Ministry of Economics and Technology, the Federal Ministry of Education and Research, and the Federal Ministry of Transport, Building and Urban Development. The CAR 2 CAR Communication Consortium supported this project together with the German Association of the Automotive Industry and the state of Hessen. Under real-life conditions the sim<sup>TD</sup> system was extensively tested on Hessian roads from July to December 2012. In order to make the findings meaningful for all German road scenarios, representative routes in the test area around Frankfurt am Main were selected. For 120 days test drivers were steering cars and motorcycles across motorways, rural and urban roads. They created specific traffic scenarios and thus enabled the project to carry out a detailed assessment of the sim<sup>TD</sup> use cases. During the field operational test, the first cooperative traffic control centre – the DRIVE Centre – was interconnected with the traffic control centres of the State of Hessen and the city of Frankfurt am Main. The DRIVE Centre communicated with the 120 test vehicles via more than 100 ITS Roadside Stations (IRS) as well as via mobile communication.

The technical tour de force can best be understood through some numbers: for a total of more than 41.000 testing hours 500 test drivers determined the capability and suitability of the sim<sup>TD</sup> system on over 1.650.000 kilometres of motorway, rural, and urban road drives. The collected test data exceeded more than 30 terabyte in volume – an extraordinary challenge. Apart from processing this huge amount of data, experts had to analyse and find correlations between multiple vehicles. This was necessary because actions and information of a single vehicle can have an impact on actions of other vehicles and thus on the overall traffic condition. The results clearly show that car-to-x technology leads to an improved knowledge of traffic conditions and to a faster detection of traffic-related events.

Beside the technical validation the user acceptance and the effects on the traffic were investigated. Test drivers reported that sim<sup>TD</sup> use cases such as Emergency Vehicle Warning, Broken Down Vehicle Warning, and Intersection and Cross Traffic Assistant improved their sense of safety. Test drivers also confirmed that sim<sup>TD</sup> use cases such as Green Wave, Advanced Route Guidance, Alternative Route Management, and Car Park Information increased the efficiency of their driving. The majority of the test drivers wishes to have car-to-x functions in their own vehicle.

The field test show that if all vehicles would be equipped with the sim<sup>TD</sup> Intersection and Cross Traffic Assistant more than 54 percent of accidents at intersections could be prevented. Experiments have shown that vehicles which are approaching an intersection

in urban areas with a speed of about 50 kilometres per hour will receive a message on time. Already from a distance of 97 meters to the intersection the sim<sup>TD</sup> system can warn the drivers appropriately which gives them seven seconds to react. Similarly positive is the effect of the sim<sup>TD</sup> function Road Works Information System on the overall traffic. Even drivers whose vehicles are not equipped with the sim<sup>TD</sup> technology benefit from this feature since the sim<sup>TD</sup> vehicles reduce their speed early and change lanes. The Road Works Information System has been tested on Hessian roads in different scenarios – with stationary construction sites, closed lanes on motorways, narrowed lanes on rural roads, mobile construction sites and slow moving construction vehicles on the right motorway lane. In general, test drivers receiving the sim<sup>TD</sup> warning slowed down earlier than drivers without such warnings. The risk of collisions was reduced significantly with sim<sup>TD</sup> warnings in all types of construction sites.

Car-to-x technology has proven its capabilities under real-life conditions and the results and experiences from the sim<sup>TD</sup> function Road Works Information System will be used for the planned realisation of the functions Road Works Warning and for the identification of the traffic situation in and around the respective construction zone in the Cooperative ITS corridor Rotterdam – Frankfurt/Main – Vienna. This is expected to increase the safety of drivers and construction site workers.

The conclusion of sim<sup>TD</sup> is: car-to-x technology is contributing to make driving safer, more economical and more efficient.



The demo vehicles at the starting point for the use case Emergency Breaking Notification. Source: sim<sup>TD</sup>



The sim<sup>TD</sup> Project Team.

Source: sim<sup>TD</sup>





## Compass4D deploys cooperative services in Europe

by Carla Coppola, on behalf of Compass4D

Compass4D is a CIP project that looks at real deployment of cooperative ITS services in seven European cities. Specifically, it will deploy the following three services:

- **Road Hazard Warning (RHW)** - This service will reduce road collisions by sending drivers warning messages which will raise their attention level, as well as inform drivers of what the most appropriate behaviour is in relation to the hazards they face.
- **Red Light Violation Warning (RLW)** - This service will increase drivers' alertness at intersections in order to reduce the number and severity of collisions.
- **Energy Efficient Intersection (EEI)** - This service will reduce energy use and vehicle emissions at intersections.

The unique aspect of the project is that it will fully deploy the three services in all the seven pilot sites (Bordeaux, Copenhagen, Eindhoven-Helmond, Newcastle, Thessaloniki, Verona, and Vigo) and will be piloted for at least one year in 334 vehicles for a total of 550 drivers. This large fleet includes not only private cars, but also buses, taxis, electric vehicles, trucks and emergency vehicles. All these vehicles will be equipped with interop-



Piloting Cooperative Services for Deployment

erable on-board units (OBU) that will share real-time information with the road side units (RSU) installed on specified roads.

COMPASS4D is coordinated by ERTICO - ITS Europe and is a lighthouse project of the ERTICO strategy to bridge the gap between R&D and deployment and to accelerate C-ITS implementation in Europe starting from cities. The project started in January 2013 and the consortium has already visited two of the seven pilot sites - Vigo (Spain) in January and Copenhagen (Denmark) in April.

The Spanish site has 40 vehicles at its disposal, including eight taxis and two emergency vehicles, and 17 equipped intersections. The route selected for piloting the Compass4D services crosses the entire city centre and connects two of the main entrances to the city.

The city of Copenhagen will deploy the services in at least 90 buses and 21 intersections, becoming the largest test site in Europe for C-ITS in public transport. The route chosen for the pilot site is a central bus connection running between Copenhagen Central Station, in the city centre, and the important East Gate Station (Østerport), hub for regional, commuter and S-trains and, from 2018, the underground.

Compass4D is also looking outside Europe, and cooperation with the USA and Japan is particularly important in assuring the interoperability of the services at global level. Last month, representatives of Compass4D consortium visited the vast test site of Ann Arbor, Michigan, and participated in the first Global Symposium on Connected Vehicle and Infrastructure. This represents only a first step towards what the Compass4D consortium believes to be an important cooperation.

With a total budget of 10 million Euros, Compass4D will last until 2015 when the final big event will be hosted in Bordeaux during the 21<sup>st</sup> ITS World Congress. More information is available at [www.compass4d.eu](http://www.compass4d.eu).

## Displace of attention from individual to comprehensive solutions for City needs

by Sonja Eickmann, C2C-CC

The practical and operational side of Intelligent Transport Systems and Services stood in the centre of attention of the ITS European Conference held from 4 to 7 June in Dublin. What are the real needs of cities and regions and which innovative solutions does ITS offer to them? These questions have been answered by an extensive conference programme with over 100 sessions and the accompanying exhibition. Eric Sampson, Senior Programme Advisor from the organiser ERTICO, offered a very positive summary of the congress with a very good attendance with more than 1700 delegates from 55 different countries and a fruitful educational progress. The conference's concept – to focus on the deployment of Intelligent Traffic and Transportation Systems and Services rather than on basic and advanced research – proved itself as an origin for step in an intensive discussion of implementation strategies suitable for cities. As one of the main results, it became obvious that more and more approaches for creating smart cities are initiated and that there has to be a displace of attention from individual to comprehensive solutions for them.

Involving cities in this discussion yielded the valuable result that from cities' perspective, the priorities in traffic concepts are quite different from those represented by research and development questions pursued: For cities, the most important mean of transportation to support is public transport, followed by bicyclists and pedestrians with individual vehicles having the merest priority. Additionally it became obvious that each city has its individual needs with small cities being disposed completely different than megapolis. Also the geographical location demands very tailored solutions. These diverging requirements have to be individually regarded when discussing smart travel options.



Under the umbrella of the four main congress topics 'Smarter Travel', 'Sustainable City Regions', 'Knowledge Sharing' and 'Competitiveness Through Innovation', not only city needs and solutions provided by ITS, but also so far unacknowledged questions have been identified. As the majority of greenhouse gas emissions is produced by cities, the most important activity for cities is supporting the modal shift for smarter travel. Options are meanwhile restricted by structural capacities with networks only being extended by using the underground or the top of the existing road and line system. A strong focus has to be laid on how do cities help individual users to travel smart. In which way knowledge sharing forms and widens the data basis supplying Intelligent Transport Services is less a technological question than rather a question of the disposition if and what people share with related regulation requirements.

The approach of open data has herewith been identified as one of the major topics to be revisited during the next ITS European Congress planned for 16 to 19 June 2014 in Helsinki, Finland. The congress topic will be 'ITS in the pocket – proven solutions driving user services', encompassing e.g. the supply of new soft source data, the impact by social media, the needs of aging drivers, cross-border roaming and a concept of mobility rather than single-mode transport.



## Technical Innovations helping European Cities to become smart

by Sonja Eickmann, C2C-CC

When prospecting sustainable future mobility concepts, the challenges European Cities are facing are quite obvious: Tomorrow's transportation systems have to serve very individualised mobility needs while at the same time they need to regard existing structural inner-city capacities. As the European Commission has targeted a reduction of greenhouse gas emissions until the year 2020 to the amount of 40 per cent compared to 1990, there is an urgent need of arranging more environmental-friendly traffic participation. These aspects summon European cities to find innovative technical solutions helping them to become smart and being suitable to solve the challenges for a sustainable future. For their support in finding innovative technologies and get an idea of implementation plans, the Smart Cities Stakeholder Platform has started its work during 2012. With support of the European Commission, the Platform invites international stakeholders from research, industry and public departments to get in contact with each other to discuss future concepts for smart cities. Experts are invited to submit suitable solution proposals in the areas of mobility and transport, energy efficiency and buildings as well as energy supply and networks to help cities reducing their greenhouse gas emissions. So far the platform counts 2000 members, 250 are either active or even highly active in working groups. The most promising solutions – overall 130 have been submitted during the last year – are converted into key innovations revealing their advantages for enhancing energy efficiency, technical details, business cases as well as a financial assessment for roll-out plans in intra-urban areas. After roughly one year of work, the Smart Cities Stakeholder Platform presented its work and especially the key innovations elaborated and submitted by experts from all over Europe to city representatives. All members of the platform's working groups, city administrators and planners, technology providers as well as policy makers and interested experts have been invited to the Smart Cities Stakeholder Platform Annual Conference which took place from 5 to 6 June in Budapest, Hungary. Over 100 participants visited the conference which aimed at reflecting technological solutions for the requirement of reducing greenhouse gas emissions from the city representatives' point of view.

The first meeting day has been set aside for networking sessions in which working group members presented key innovations in the sector mobility and transport, energy efficiency and buildings as well as energy supply and networks. As one of 13 key innovations, cooperative Intelligent Transport Systems and Services (C-ITS) have been introduced as approach for reducing traffic emissions by support of foresighted driving, consistent traffic flows, multimodal transport networks and adaptive traffic management and control in inner-city areas. The presentation given by Sonja Eickmann on behalf of COMeSafety2 and the CAR 2 CAR Communication Consortium declared the technical background of C-ITS and V2X communication in local wireless networks as well as use cases for traffic safety and efficiency especially of interest for smart cities. In sum C-ITS emerged as enabling technology for other key innovations in the sector mobility and transport like 'Enabling Seamless Multimodality for End Users' using the example of different mobility projects from Vienna, or 'Smart Organisation of Traffic Flows and Logistics'.

Following the voting of the conference delegates, the three most promising and attractive key innovations from the three thematic sectors have again been presented on the second meeting day, this time in the auditory for the whole smart cities community. Afterwards they have been



Marie Donnelly (Director of the European Commission DG Energy), Charlina Vitcheva (Director for Regional and Urban Policy in DG Regio of the European Commission), and Kia Andreasson (Deputy Mayor of Göteborg and Chair of the Göteborg Energy Board) discussed and commented the ten year Rolling Agenda.

discussed and reflected from Smart Cities representatives' point of view. As panellists, Ina Homeier from Vienna, Kees van der Lugt from Waternet Amsterdam and Alessandro Morelli from Trieste gave an insight into their opinion about the key innovation's potential for smart cities and which challenges cities are facing when planning the implementation.

For further informing cities about possibilities and requirements the implementation of a key innovation brings along, the Smart Cities Stakeholder Platform's Finance Group introduced some basic information concerning funds, innovative financial instruments and the urban planning. In an additional plenary session the ten year Rolling Agenda developed by the Smart Cities stakeholder platform has been commented and discussed by Marie Donnelly (Director of the European Commission DG Energy), Charlina Vitcheva (Director for Regional and Urban Policy in DG Regio of the European Commission), Kia Andreasson (Deputy Mayor of Göteborg and Chair of the Göteborg Energy Board), and Fred van Beuningen (Corporate Director of Innovation, Akzonobel and European Round Table of Industrialists). As overall conclusion, the work of the Platform is highly appreciated as the implementation of key innovations in Smart Cities is visionary unless and until all stakeholders from industry, authorities, public institutions as well as potential private partners work together on an implementation strategy. Meanwhile the end user has been identified as the most important stakeholder group to be convinced of the advantages of key innovations. The citizens have to stay in the centre of attention: Letting them engage in their own projects and gain their feedback using e.g. social media, Smart Cities are able to implement services for real needs.

All information about the conference, the key innovations and financial documents as well as the ten Year Rolling Agenda developed by the Platform can be found on the website [www.eu-smartcities.eu](http://www.eu-smartcities.eu).



**Smart Cities**  
and Communities





## Making C-ITS tempting for automotive fans

by Sonja Eickmann, C2C-CC

Divining the future lying only a few years ahead, cooperative systems will have at least partially entered traffic and transport in Europe. The initiators from the automotive industry, infrastructure manufacturers and the administration on European as well as on national level of the member states are eagerly waiting to gain operational experience with C-ITS. At the same time, as widest stakeholder group, the end-users become more and more aware of C-ITS being an essential part of tomorrow's vehicles' equipment: the press reports about the functionality of cooperative systems, and meanwhile prompts critical questions like the one of data protection, the vitreous driver and if C-ITS will keep the promises of enhancing traffic safety, efficiency and driving comfort in the advertised manner. Thus the end-user is a target group with very specific information needs seeing cooperative systems and their benefits from its own viewpoint. To collect their opinion about the future with and of C-ITS and to let them get answers to their questions from an expert perspective, COMeSafety2 has decided to present cooperative ITS in the framework of this year's International Automotive Show Cars in Frankfurt Main/Germany.

The automotive show takes place from 12 to 22 September 2013 and usually attracts roughly a Million visitors from over 100 countries. It is the most important automotive fair world-wide and the framework for world premieres and innovations. This year, a special focus lies on electric mobility and networked driving.

For the presentation of C-ITS, the supportive action COMeSafety2 and the European project DRIVE C2X cooperate with each other. Their joint booth will be located in Hall 3.1 on the exhibition space C31. The organisers choose a booth design showing the functionality and the benefits from C-ITS from the perspective of the end-users – the driver – in the most vivid and descriptive way. Therefore, a show case of the infrastructure-to-vehicle communication application GLOSA will be presented on the booth. GLOSA stands for the application green light optimised speed advisory and bases on the data exchange between cooperative traffic lights and vehicles. Transmitting SPaT (Signal Phase and Timing) messages to the vehicles and combining them with the current position and driven speed allows displaying the optimal speed to pass a traffic light in a green phase. Exhibition visitors can pursue this communication process in a real life traffic scenario with a Smart, a cooperative traffic light and an intersection scenario printed on the back wall. Members of COMeSafety2 and DRIVE C2X will operate the booth, explain the show case and answer questions. The international automotive show additionally forms the framework for a range of specialised congress events like for example the CarIT Congress on 18th September 2013.

All information about the agenda, exhibition, the venue and tickets are available in the website [www.iaa.de/en](http://www.iaa.de/en).

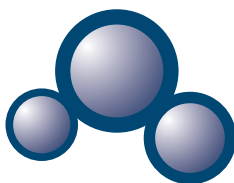
## Announcements

by Sonja Eickmann, C2C-CC

### 7<sup>th</sup> CAR 2 CAR Forum

This year's CAR 2 CAR Forum will take place on 19 and 20 November 2013 in Munich, Germany. The 7<sup>th</sup> circulation of this event for active and basic members of the CAR 2 CAR Communication Consortium is hosted by MAN in the Truck Forum. The list of recommended hotels together with booking forms is already available on the CAR 2 CAR Website after log-in. During the summer period, further information about the agenda as well as about the opportunity to take part in the accompanying exhibition will follow.

**7<sup>th</sup>  
CAR 2 CAR Forum**  
19 and 20 November 2013  
MAN Truck Forum, Munich



### 9<sup>th</sup> Vehicle Communications Workshop

The CAR 2 CAR Communication Consortium will again support the International Workshop on Vehicle Communications for Safety and Sustainability organised by COMeSafety2 and the international EU-US-Japanese programme committee. The workshop is as usual linked to the ITS World Congress and takes place on 19<sup>th</sup> October in Tokyo, Japan. Further information and the registration to be found on website [www.comesafety.org](http://www.comesafety.org).

 **9<sup>th</sup> International Workshop  
on Vehicle Communications**  
19 October 2013, Tokyo, Japan



## Imprint

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