With C-ITS towards safer roads in Europe

The C-Roads Platform has worked on the harmonisation of C-ITS technologies since 2016 and now presents the current status of C-ITS as reliable service on the roads and in our cars all over Europe.

Brno, 4.6.2021. Cooperative Intelligent Transport Systems (C-ITS) have a beneficial impact on road safety. To guarantee a harmonised European solution, 18 states and 7 associated partners of the EU funded C-Roads Platform defined concrete standards for C-ITS services, developed recommendations for deployment and started testing these services in national pilots. Today C-Roads has proven that these C-ITS services can be sent and interpreted via different technologies and across borders. With C-ITS safety related traffic information will be transmitted from the infrastructure operator into the vehicle in real time and location based. "By enabling vehicles to interact with each other, as well as the surrounding infrastructure and other transport users, C-ITS can drastically reduce human error, one of the greatest sources of accidents in transport, while also improving traffic efficiency and comfort. I am proud that the EU and the Member States have been at the forefront of this technology", states Adina Vălean, European Commissioner for Transport.

Safety is the main driver for road operators to invest in C-ITS service provision. Dirk Beckers, Director of CINEA (European Climate, Infrastructure and Environment Executive Agency) explains: "European funding programmes have already provided over € 500 million of EU funding to ITS projects, matching investments of more than € 1.3 billion. More than 30 % of this CEF funding goes to the development of Cooperative ITS (C-ITS). The progress in this field is the result of the combination of European funding with the financial commitment from Member States, road operators and other stakeholders, all cooperating towards a unified approach for a harmonised and interoperable deployment of C-ITS services across our continent." Cooperative intelligent transport services require also intelligent roads. This includes the intelligent placement of roadside devices and sensors along crucial road sections. The technologies comprise of a mix of dedicated short-range frequencies (ITS-G5 standard) and cellular network-based communication to cover longer distances. Together with connected vehicles, these roadside units build the basis for individual services to improve the safety of road users. "The benefit is simple: As a road user, you frequently encounter potentially dangerous situations. Through the enhanced intelligence of roads, vehicles and traffic management, C-ITS services mitigate these dangers. Already today, these services show you the right information at the right time, no matter whether you cross a border. This was made possible because we succeeded in getting the road infrastructure ready and cooperated with OEMs on broad scale", says Christel Fiorina, Chair of the C-Roads Platform.

A common strategy for C-ITS in Europe
Since 2016, roads all across Europe have been equipped with intelligent infrastructure to support European travellers. Starting with hot spots along motorways and cities, a total of 20,000 km of road sections were equipped with ITS-G5 units while 100,000 km overall are now covered with cellular/long-range communication technologies. At the same time, more than 3,000 hours were invested in comprehensive testing of cars and services all over Europe, closely coordinated with key OEM representatives. "The harmonised C-ITS deployment activities of the past five years gave us the opportunity to work with the messages our vehicles are receiving from the roadside infrastructure. In this way, each stakeholder could contribute its share and get ready for the service provision that is possible today", states Niels Peter Skov Andersen, General Manager of the CAR 2 CAR Communication Consortium. The common denominator for all testing and implementation activities between infrastructure operators and the vehicle industry is the harmonised communication profile of the C-Roads Platform. It was commonly elaborated and is available for free. With every new release, all previous recipients are notified automatically. By today, the harmonised communication profile was distributed to more than 480 persons and institutions from 50 countries all over the world.

With both infrastructure and OEMs being ready, the upcoming years will be focused on the improvement of coverage and service quality. The focus will be extended to increasingly cover urban areas and multimodal use cases. As of 2021, 35 cities are already working on their C-ITS implementation activities with more than 50 to be expected by 2023. "I am proud and happy that Brno has the opportunity to prove its front running position in C-ITS deployment. In Czech Republic, we have shown not only the potential for road-related use-cases but also the massive potential for multimodal C-ITS use cases. This includes increased efficiency in urban public transport, improvement of the passage of emergency vehicles on urban intersections and improved safety in railway level crossings", explains Karel Havlíček, Deputy Prime Minister, Minister of Industry and Trade, Minister of Transport of the Czech Republic.

The #SafeRoadsTODAY event is the preliminary culmination of the efforts made during the past five years since the start of the C-Roads Platform. Critical road section across Europe have been equipped with the necessary technologies and all European stakeholders are ready to show the performance of C-ITS services today and give an outlook for tomorrow. C-ITS holds additional potential for contributing to increases in safety, efficiency and sustainability of the European transport system, as C-ITS technologies and processes are also a crucial basis for connected automated driving in Europe.

About the C-Roads Platform
The C-Roads Platform is a joint initiative of European Member States and road operators for testing and implementing C-ITS services in light of cross-border harmonisation and interoperability. It started its activities in 2016. Through the C-Roads Platform, authorities and road operators join together to harmonise the deployment activities of cooperative intelligent transport systems (C-ITS) across Europe. Co-financed by the EU's Connecting Europe Facility for Transport Programme, the goal is to achieve the deployment of interoperable cross-border C-ITS services for road users.

About the CAR 2 CAR Communication Consortium
Enhancing road safety and traffic efficiency by means of C-ITS is the dedicated goal of the CAR 2 CAR Communication Consortium. The industry driven, non-commercial association was founded in 2002 by vehicle manufacturers affiliated with the idea of cooperative road traffic based on Vehicle-to-Vehicle Communications (V2V) and supported by Vehicle-to-Infrastructure Communications (V2I). The Consortium members represent worldwide major vehicle manufactures, equipment suppliers and research organisations. Over the years, the CAR 2 CAR Communication Consortium has evolved to one of the key players in preparing the initial deployment of C-ITS in Europe and the subsequent innovation phases.

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