



ITN-5VC

Integrated Telematics for Next Generation 5G Vehicular Communications

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Dissemination and outreach plan

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Authors:	Andreas Kwoczek, Jose F. Monserrat, Andrés Alayón Glazunov
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¹ CO = Confidential, only members of the consortium (including the Commission Services)

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Executive summary

This document describes the dissemination and outreach plan for the ITN-5VC project, covering all four years (2020-10-01 until 2024-09-30).

This document is split in two sections: the first one the dissemination of the research results, which includes public outreach via publications, exhibitions, social media etcetera.

The second section focuses more on commercial valorisation and exploitation.

Disclaimer: This work has been performed in the framework of the H2020 project ITN-5VC cofunded by the EU. This information reflects the consortium's view, but the consortium is not liable for any use that may be made of any of the information contained therein. This deliverable has been submitted to the EU commission, but it has not been reviewed and it has not been accepted by the EU commission yet.

List of acronyms and abbreviations

CA	Consortium Agreement
ESR	Early Stage Researcher
EuCAP	European Conference on Antennas and Propagation
EuCNC	European Conference on Networks and Communications
IEEE	Institute of Electrical and Electronics Engineers
IPR	Intellectual Property Rights
MIMO	Multiple Input Multiple Output
mmW	millimeter Wave
MSCA	Marie Skłodowska-Curie Actions
NGMN	Next Generation Mobile Networks
SAE	Society of Automotive Engineers
V2I	Vehicle to Infrastructure
V2X	Vehicle to Everything
VTC	Vehicular Technology Conference

1 Dissemination of the research results

Project website and social networks

In November 2020, the <u>https://itn5vc.eu</u> website was created containing the following information:

- Brief summary of the technical and research challenges
- Summary of the research objectives
- Impact on society
- List of the involved partners
- News and dissemination of public material
- ESR relevant information
- Access to the intranet

Next to the website, a twitter account (<u>(1) ITN-5VC (@5vcltn) / Twitter</u>) has been registered to spread job offers, achievements and other news to the wider public.

A YouTube channel is to be created as well. This channel will be used to post:

- An introduction movie to the project
- Testimonials of the ESRs
- Recordings of the demonstrations given at public and non-public events

The consortium will encourage the ESRs to actively use and share the ITN-5VC twitter and YouTube account, as well as using their own social networks for maximum outreach.

Workshops and special issues

For 2022, the intention is to have a workshop at one of these international conferences:

- EuCNC (European Conference on Networks and Communications)
- IEEE VTC (Vehicular Technology Conference)
- EuCAP (European Conference on Antennas and Propagation)

For 2023 and 2024, the intention is to have two workshops/tutorials as well. Identified conferences are:

- URSI GA
- EuCAP
- ISAP
- ICC
- PIMRC
- GlobeCom
- WCNC
- VTC

In 2023, the plan is to also guest edit 2 special issues of IEEE Transactions, Radio Science and Elsevier journals.

In 2024, we plan to guest 1 special issue of Frontiers in Communications and Networks - System and Test-Bed Design journal.

Publications and white papers

Dissemination of the individual activities of the ESRs will be carried out by the participation of the ITN-5VC ESRs and the senior researchers in international conferences and events as well as by giving keynote speeches and talks. In particular, ESRs will be expected to attend at least one international conference per year starting on their second year of PhD programme, where they should present their work in the form of a talk or a poster presentation. It is envisaged that each ESR will attend at least 2 conferences throughout the training programme, e.g., VTC, ICC, GLOBECOM, EuCAP, ISAP, PIMRC, ICTD (International Conference on Transportation and Development).

Moreover, the consortium will submit the research results for publication in high impact scientific journals, such as IEEE Trans. on Wireless Comm./Comm./Antenna and Propagation, JSAC, and conferences, e.g., ICC, GLOBECOM, EuCAP, PIMRCand workshops organised within the ITN-5VC project. Each ESR will have two peer review journal papers published/accepted and 2-3 conference publications.

From 2022 onwards, the plan is to publish every year at least one white paper per work package.

Exhibitions and demonstrations

Throughout the action it is planned that the industrial partners, involving both the ESRs and their respective supervisors, will attend relevant industrial events in order to present demonstrations or exhibitions presenting their work throughout this MSCA, e.g. Mobile World Congress, Automechanika or Paris Motor Show. Attending these events will be a way to present the research and applications to an industrial audience and promote the business creation that will arise from the action. All industrial partners are expected to attend at least 2 industrial events linked to their business areas, where ESRs will be exposed to a large industrial networking.

Standardisation

The ITN-5VC partners will contribute to the standardisation activities of 3GPP, NGMN and Automotive Association either directly (e.g., through VW, Bosch or Daimler) or indirectly through the external industrial experts in the Project Supervisory Board. TUIL will contribute the results of the work to the ITU-R to modify/update relevant recommendations. UPV is a member of the ATSC standard body and contributes as rapporteur in 5G-PPP.

ESRs will register, as students, either (or all) in the Institute of Electrical and Electronics Engineers (IEEE), the European Association on Antennas and Propagation (EuRAAP), and in the Society of Automotive Engineers (SAE). Participation in the regional activities is expected.

2 Exploitation of results and intellectual property

The exploitation strategy of the ITN-5VC results remains an important focus of all the beneficiaries. Through the monitoring of the ESRs' projects planned in this EID, the supervisors will be able to follow the progress of the innovations and identify relevant opportunities for filing patents, or exploitation opportunities either by part of the industrial or academic partners. Hightech spin-offs are also expected. The specific project actions which are expected to produce exploitable results include, among others, innovative solutions in protocols for 5G V2X communications (CASA-SYSTEMS and UPV), significant IPR in 5G technologies for autonomous vehicle communications (RRM for autonomous vehicle communication and V2I solutions by TUIL, VW AG and BOSCH), solutions for sensors integration in the communication protocol stack (FIVECOMM, TUIL), advances in antenna design and OTA characterization for autonomous driving and V2I communication (GAPWAVES, UT), etc. The generated IPR will belong to the institution where it is created and jointly when more than one. All partners, especially industrial, have a fundamental interest of involvement in the project in the generation of new IPR based on their existing background, this includes protection via patents. Provided with the extensive entrepreneurship skills of the academic partners and the important link to academia, it can also be expected the creation of new spin-off companies may arise with a joint propriety shared among the partners and ESRs.

Patents

The partners have agreed the principles of IPR ownership and responsibility for its management and protection. In short, the generated IPR will belong to the institution where it is created and jointly when more than one participates. Same applies to licensing. This will be regulated by the Commission's formal guidance on IP Management in Horizon 2020. Some areas in which new IPRs are expected are:

- mmW MIMO phased array antenna design and testing technology developed in WP1, likely owned by UT and GAPWAVES;
- V2X simulation models developed in WP2 likely owned by TUIL, UPV, VW and BOSCH;
- The new telematics unit with integrated radar and communication functions likely owned by TUIL, UPV, CASA and FIVECOMM;
- The optimal configuration for V2X operation likely owned by VW, BOSCH and UPV.

Prof Monserrat, as Project Coordinator, has overall responsibility for protection and management of the project results. He is well suited to this role through similar experience in former national and international projects. IP protection and patent applications will be conducted by agreement, after advice from UPV's IP attorney (BALDER IP), before any and all industrial and/or commercial use. The consortium will advise the Commission about IP developments. Third party infringement searches will be done within the IP management to avoid wasted effort, risks of legal action and help focus exploitation and commercialisation efforts. Exploitation will be led by Dr. Hofmann, who has a strong track record of commercialising research. These agreements will be reviewed in the project and strengthened regarding: continued evolution of IPR ownership, access rights and royalty/licensing agreements for use by the consortium.