

ESF News

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Intelligent Transport Systems (ITS)

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About saving lives

There is wide consensus on the major goal (beyond others) of Cooperative ITS (C-ITS), i.e. to **reduce the number of fatalities**. This argument is used e.g. in a publication of 5GAA “An assessment of LTE-V2X (PC5) and 802.11p direct communications technologies for improved road safety in the EU” referenced in an article publicly accessible at <https://www.linkedin.com/pulse/war-commercial-supremacy-causes-actual-human-victims-fausto-caneschi/>. This article on LinkedIn brings it to the point, that — strictly speaking — those who jeopardize the timely deployment of C-ITS services based on the specifications of the draft C-ITS Delegated Act by requesting “neutrality of technologies” (not possible for C-ITS broadcast services), and by promoting their “superior” technology could be considered one of the human-made causes of fatalities since 2015, when deployment of C-ITS should have started.

Looking on the details of this promoted “superior” technology compared with the ITS-G5 / ITS-M5 / US-DSRC IEEE 802.11p technology (in the following just rereferred to as ITS-M5), from a pure technical point of view, the following findings are also based on wide consensus amongst the engineers:

- ITS-M5 is well suited for provisioning of the intended safety services.

- ITS-M5 and respective road-safety C-ITS services are already standardized and intensively tested and validated.
- Major test sites already successfully implemented ITS-M5 and the road-safety C-ITS applications, and run these installations in a quasi-operational mode.
- The competing technology known as LTE-V2X exists in some test sites that first needed to complement the ambiguous set of related standards (from 3GPP). Thus, different LTE-V2X test implementations not necessarily are interoperable.
- Operational issues related to details of cellular networks are not yet solved.
- Technical features necessary for LTE-V2X are not implemented in all operational networks.
- LTE-V2X is far away from being validated for C-ITS.
- Tunneling ETSI GeoNetworking messages (designed for broadcast with ITS-M5) over LTE-V2X links would present a waste of channel-capacity.
- Band-sharing at 5,9 GHz between ITS-M5 and LTE-V2X

simply is impossible.

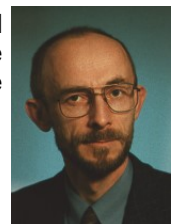
- Cellular networks cannot be superior to ITS-M5, except they use more bandwidth for channel management. Nobody can by-pass the Shannon limit and other physical constraints.
- Co-existence of LTE-V2X with CEN-DSRC for road tolling and the European Digital Tachograph still needs to be investigated, and possible mitigation techniques need being validated and standardized.

I will not start to present technical or scientific proofs of my claims above, as already a sufficient number of such documents was published. I even will not reference them once again.

I will just say: “It is already 5 past 12, and we should stop ignoring fatalities on the road by blocking C-ITS ITS-M5 deployment. Human lives should be more important than money and global control of markets and citizens.

This “war against ITS-M5” already killed more people that the Corona virus has done so far.

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