



CMC Newsletter Issue 10 / June 2019

Antenna topics and communication

Communication in two ways

Communication is a vital part of C-ITS. Motorcycles need to be able to 'talk' to other vehicles digitally. And also verbal communication plays a role: during the development of C-ITS, it is the people who need to talk and to coordinate what issues motorcycles and other vehicles should communicate about.

Digital communication: Antenna is the key

For cars, antenna performance criteria have already been discussed and developed since a long time. For motorcycles however, this is not so easy: due to their particular vehicle dynamics, size and layout, the antenna development poses quite a challenge. The Connected Motorcycle Consortium started to conduct tests in special measurement chambers and is also verifying the test results in real riding conditions on the road.



Discussion on antenna placement

The ideal position of a motorcycle antenna is a location on the front of the motorcycle. Most critical situations occur along the direction of riding and this is when ITS communication is needed to warn other vehicles of a motorcycle in critical range. However, due to leaning angle of motorcycles while cornering, the antenna performance decreases with amount of lean angle. The corridor of antenna transmission becomes narrower. This results in a weaker transmission of signals to each side of the motorcycle. Accident scenarios based on studies carried out by academia and CMC will determine the threshold of such decreasing performance. The requirements currently worked out by CMC experts will be included in the CMC Basic System, which will describe CMC standards for motorcycle ITS systems. The tests luckily showed, that the body of the rider him/herself has less influence in shielding antenna transmission than expected. Nevertheless, transmission of signals backwards still pose a challenge. Equipment such as luggage or side cases will influence antenna performance. And CMC is making studies how to ensure the motorcycle to transmit messages to avoid rear end collisions.

Verbal communication: talking to people

To be able to network with influencers like legislators, politics and automotive industry, and to make them aware of the current work in CMC, verbal communication is still important. Therefore CMC participates to key congresses around the world.



CMC spokesman Hennes Fischer at ITF in Leipzig

The recently held International Transport Forum in Leipzig was a good opportunity

to address the world's leading decision makers, amongst them road and traffic administrations, NGO's, the WHO, politicians and user organizations, including FIA & FIM.

CMC spokesman Hennes Fischer participated in a round table discussion organized by IMMA, the global association of motorcycle manufacturers, to provide insights about the specific issues on powered two wheelers.

Next up is the 13th ITS European Congress in Eindhoven, the Netherlands, which will provide another possibility to explain challenges and opportunities of connected motorcycles to important stakeholders in the C-ITS world. On Wednesday 5th June, 13:00-14:00 hours, CMC will present a paper there: "CMC is paving the way for motorcycle connectivity". For more information see the organizer webpage:

<https://2019.itsineurope.com/>

This way, the C-ITS industry can take the peculiarities of motorcycles better into account when preparing for the future!

Together for Rider Safety