

Vision Zero on traffic offences via the virtualization of traffic enforcement The silver bullet for exemplary driving

Exceeding speed limits, drink or distracted driving are the leading causes of death and serious injury amongst European road users¹. Ensuring 'Exemplary driving' of *all* traffic participants is therefore paramount for a rapid increase in cycling safety. The benefits go far beyond the current issues with those offences. In a Europe where exemplary driving is the norm, you can rapidly deploy large zone's of 30km/h without expensive, and for cyclists often dangerous, infrastructural measures. You can use existing small (country) roads in your cycling network, only allowing local traffic at limited speed. Now these roads are all too often no-go zone's for active road users.

The good news is that cheap and proven after-market in-car technology² now allow us to aim for a 'vision zero' on serious traffic law-violations in the very-short term. The bad news is that it has become very quiet since the European Parliament asked the Commission 'to support the implementation of in-car enforcement technologies' in 2013³.

The lack of mentioning of enforcement and the numerous 'opt-out' clauses in the C-ITS platform report are worrisome. When sticking to this 'carrot without a stick' policy, cowboy-drivers will continue to wreck havoc and effectively make traffic the last 'far-west' area of Europe. We need to get *everybody* on board of a 'Norwegian' driving culture, where a 'drive-safe' focus is central. That focus is currently not present, because human brain-wiring make most of us underestimate the dangers of driving, while clearly seeing the benefits of speeding, make a phone call,

C-ITS offers an incredible opportunity to implement such a holistic approach to traffic safety: make each driver in real-time aware of the responsibility he has while driving, and assist him in an exemplary driving style. By adding a service to C-ITS which allows a democratic control by justice on vehicle data (speed, acceleration, ..), you can replace the current physical, expensive and sometimes dangerous law enforcement technologies. Every member state can then fine-tune the traffic strategy it wants by setting parameters like zone-of-enforcement, degree of enforcement, driver-specific data-transfer options, on a dedicated webplatform. Public concerns about 'big brother' and privacy are to be taken serious, but are technically perfectly solvable. Traffic camera's are already omnipresent in some member states. With the introduction of a 'digital number plate', you're simply de-materialising enforcement policy and making it 1 to 100 times more effective, depending on the preference of the member state.

C-ITS can offer a 'virtual copilot', assisting the driver (visually via a Head-Up-Display, or via auditive signals) and warning him before enforcement starts kicking in, which is a very honest and transparent system. Now, people are sometimes unaware of speed limits or intersection priorities. This assistance system will be much more people-friendly, and allows for a more fluid and less stressing traffic.

The explicit identification of the driver, before he set's off in a potential lethal vehicle, reminds the driver of his civil responsibility and thus should also be included as a service which can be enabled by a member state. If you combine this with a demerit point system, just about everyone will grasp the seriousness of the driving job, resulting in the establishment of a fundamental 'safety culture'. Numerous reliable identification systems are already in place in car sharing systems.

If we want more cyclists, traffic safety is central. Is it ethical to encourage people to cycle more, when not taking the most obvious measures to increase safety? Now that the technology is there, should Europe wait for a condemnation by the European court of Human Rights for conscious neglect? Speeding is not a fundamental right, life is.

We therefore propose a massive, after market roll-out around 2020 of C-ITS in the form of a 'digital copilot' in combination with a 'digital number plate'. Public acceptance might not be there at the beginning (as was the case with the seat belt), but will follow without a doubt, when the large benefits for every traffic participant become apparent.

1 <http://etsc.eu/wp-content/uploads/ETSC-PIN-Report-2010.pdf> – Chapter 3, but new evidence suggest distracted driving is the cause for more then 50% of accidents – www.pnas.org/cgi/doi/10.1073/pnas.1513271113

2 In it's most basic form, this consist of a remotely controllable gps-tracker. See eg. the large scale roll-out of 'behaviour monitoring' boxes by car insurance companies, the growing use in professional car fleets. The presence of this device also has a huge effect on the drinking, distracting behaviour.

It can be extended with a forward/backward looking camera (€10), HUD etc.

<http://transitienu.blogspot.be/2015/12/een-smartphone-als-copiloot-naar-een.html>

3 European Parliament resolution of 3 July 2013 on Road safety 2011-2020

<http://eur-lex.europa.eu/legal-content/EN/TXT/HTML/?uri=CELEX:52013IP0314&from=EN>