

## Privacy protection in intelligent transport systems

Frank Kargl – University of Ulm

### Info

Date : 31 March 2014

Time: 12h10 – 13h30

Place: C31 – As part of the course LW5091 Human Rights and Digital Technology

### Abstract

In this talk we use the example of intelligent and communicating vehicles to illustrate various technical approaches to privacy protection. No matter if vehicles report their positions and speed to GPS providers like TomTom in order to enhance traffic models or charge at electric charging stations, naïve implementations will inevitably affect drivers' privacy as others learn the positions of vehicles and may be tempted to record detailed location profiles. As vehicles are, on average, driven by a very small number of drivers, this needs to be considered personal data and should be protected.

Various proposals on protection privacy in such intelligent transport systems (ITS) have been made in the past and we consider it an excellent use-case to introduce various privacy-enhancing technologies that have been developed in the past. Introducing the concepts of blind signatures, pseudonyms, and anonymous credentials, we will explore the vast technical arsenal that allows us today to build systems where privacy protection does not come at the detriment of functionality. Instead, the goal must be to achieve privacy-by-design without losing functionality or comfort.

### Speaker's bio

Frank Kargl is Professor and Director of the Institute of Distributed Systems at Ulm University. His research explores the security and privacy protection of mobile and dynamic networks with a special focus on automotive systems and inter-vehicle networks. He is involved in a variety of past and on-going research projects in this domain, including SeVeCom, PRECIOSA, and PRESERVE. Frank received his doctorate degree and habilitation from Ulm University where he worked until 2009. He is regularly involved in organization of conferences like ACM WiSec, IEEE WIVEC, or IEEE VNC and is a member of ACM, IEEE, and the German GI.