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Title: **On Channel Estimation for 802.11p in Highly Time-Varying Vehicular Channels**
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Abstract: Vehicular wireless channels are highly time-varying and the pilot pattern in the 802.11p orthogonal frequency-division multiplexing frame has been shown to be ill suited for long data packets. The high frame error rate in off-the-shelf chipsets with noniterative receiver configurations is mostly due to the use of outdated channel estimates for equalization.

This paper deals with improving the channel estimation in 802.11p systems using a cross layered approach, where known data bits are inserted in the higher layers and a modified receiver makes use of these bits as training data for improved channel estimation. We also describe a noniterative receiver configuration for utilizing the additional training bits and show through simulations that frame error rates close to the case with perfect channel knowledge can be achieved.

Bio: Keerthi Kumar Nagalapur completed his master's degree in Communication Engineering at Chalmers University of Technology, Sweden in September 2012. He joined the Communication Systems Group at Chalmers University of Technology as a PhD student in October 2012 under the supervision of Erik Ström and Fredrik Brännström and is working on channel estimation and MIMO signal processing aspects of vehicular communications in the Chase V2X project.