



## FEEDBACK EQUALIZER FOR VEHICULAR CHANNEL

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*Abstract- In this fast moving world, the number of fatal accidents is increasing day by day and this leads to the requirement of the availability of the traffic condition and road conditions related data to the users. Therefore, to support Vehicle-to-vehicle (V2V) communication in high speed mobility condition, it is required to have reliable and secure of communication. Here, the performance of multiple input and multiple output (MIMO) system as a combination of nonlinear decision feedback receiver (DFE) have been investigated in V2V channel. In this paper, through the simulation, the results are presented to show the effect of the channel correlation coefficient and Doppler shift ( $F_d$ ) (because of the relative velocity of the vehicle) over the performance of the MIMO system. As a counter measure of those problems non-linear receivers have been formulated and analyzed.*

**Index terms:** DFE, Doppler Shift, MIMO, SCM, VANET.