



Pre-requirements for the scenario of intruding vehicles (road users)-

- 1) External environment and everything else is safe for platooning and any other anomaly is detected by system or maybe even driver.
- 2) All of the vehicles are in steady platooning state and continuously exchanging data through V2V.
- 3) This scenario takes place when the vehicles detect an intruding vehicle within the platoon. This scenario assumes that the intrusion occurs between leading truck and the first following truck.
- 4) Another assumption is that the intruder car drives at a constant velocity ~ close to the speed of the leading truck
- 5) Standby platoon mode- where the changes are made using only the local sensors but still connected through V2V.
- 6) Safety time gap-
between following vehicle and intruder vehicle- $t_1 - t_0 > 800 \text{ ms}$
- 7) After the intruder car leaves, standby platoon mode is deactivated and automatically prepares to engage in steady platoon mode.
- 8) The drive can manually be assisted using ACCS to help decrease the time in reaching the steady state platooning conditions.
- 9) Another scenario- EBS

Points to discuss-

- Should the platoon be splitted when the intruder vehicle stays too long ?
- Should the platoon be splitted when the distance between the leading vehicle and the following vehicle ?
- Connection quality ?
- What happens when it is splitted and the intruder vehicle leaves ? Which one becomes leading vehicle and so on.

