We have considered three types of relationships including direct friends, indirect friends (friends-of-friends), and non-friends. The vehicles are used by humans and their behaviours are based on social network. In direct friendship, the vehicles may establish relations using personal judgement in daily life experiences. As illustrated in Figure 3, the nodes can start establish mutual relation in office and can be later direct friends using Facebook, Twitter, Google+, LinkedIn, etc. The nodes can also establish their relations on some other places such as residential area, playground, shopping mall, etc. On the other hand, indirect friendship is based on the good reputation of other vehicles. There are some advantages of these types of friendship in terms of security, packet delivery ratio, and average delay. Most of existing security solutions are associated with the authentication mechanisms, which usually require expensive cryptography and an assumption of a central authority. In addition, almost all of the existing works lack one important feature, which is no collaborative effort among nodes to create a trusted vehicular community. The creation of a trusted vehicular network is important to ensure an efficient Intelligent Transportation System (ITS).

Furthermore, in trusted vehicular networks, the data packets can be forwarded to friends and friends-of-friends without any detailed security check for high packet delivery ratio and lower average delay. However, the average delay may increase if there are less number of direct or indirect friends on the road. Although, the non-friends vehicles can not directly be added in the list of friends and friends-of-friends. The new node can join the network after establishing the mutual trust with friends or friends-of-friends. There are two possible methods to create a new set of friend nodes including real world experience and reputation of new node. Initial trust based on a real

![Figure 3: Social relation establishment between vehicles based on personal experiences](image-url)