QoS AND MOBILE TECHNOLOGIES

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CHAPTER 15

VANET APPLICATIONS

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15.1 INTRODUCTION

Information technology (IT) changed many industrial sectors starting from education, health care to the government level. Currently, IT is in early stages of transforming transportation system. IT has changed the thinking of the people on the notion of improving country transportation where the minds of the people concentrate on building new roads or repairing the old ones only. Thus it must be known that the improvement of transport infrastructure will not only depend on concrete and steel but also by making possible for the transportation system infrastructure such as vehicles, traffic light, message sign to become intelligent by embedding them with microchips and sensors and empowering them to communicate with each other through wireless technologies [1].

The research community and automotive industry currently focus on deploying network among vehicles. This network makes possible for the vehicles to communicate with each other or with roadside unit. These communications can be classified in two different technologies. These include Inter vehicle communication (IVC) which is communication between vehicle to vehicle also known as (V2V) and the other one is Road vehicle communication (RVC) which focuses on enabling a vehicle to communicate to the roadside unit (RSU). Fig. 15.1 shows difference scenarios of vehicle to infrastructure communication (V2I) which is responsible for connecting vehicles to the outside word (Internet) and vehicle to vehicle communication which is used for exchange information between the vehicles [2].

It is an acceptable fact that VANET is a new emerging field of research where many industries and academies spent significant amounts of time and resources to invest study, deploy, and test the technology. There are several ongoing research activities, projects and consortia that are currently working on deploying the said technology. Concerning with, VANET network most of the projects and researches are conducted in USA, Japan, and Europe. Table 15.1 shows different projects that take place in a specific country.