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Abstract
The transportation works in Taiwan has continually opened for operation in recent years. While the hardware is getting finished, the software (such as ITS), which goes with it has become the future trend. Because of the rapidly progressing of wireless network and digital image technology, Taiwanese people can now enjoy more convenient environment. However, in the age where information explodes, the current trend is the integration of information application. Most highways and parking lots in Taiwan nowadays use tradition way of charging. The electronic toll collection we have now has to be installed inside of the car; the expensive equipment and the recharge e card not only increase the prime cost but also bring the drivers great inconvenience. This dissertation combines Mobil IP, AAA system and Car License Recognition System to frame a system which is applicable for safe, fair and convenient electronic toll collection on highways. The whole electronic toll collection process can record the trading information clearly. The cost can be combined into the cell phone bill; drivers do not need to spend extra time to buy ticket books or install expensive equipment. From the mobile communication, the location of cars can be monitored. Furthermore, to achieve the fair charging principle, cars on highway will be charged by their distance and others in the parking lot will be charged by the exact length. The trading agreement we bring up not only can monitor and compute reasonably, but also speed up cars that go through the toll gate and lower the labor cast. As for parking lots, this system can improve the inconvenience of traditional way of charging such as the drivers need to get off the car or have trouble looking for the parking sign. Using this electronic toll collecting system can avoid the disturbance immediately; in addition, we could also be informed by the information service of the available parking spaces.
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