Abstract

Wireless communication plays a significant role in our life as it provides mobility and flexibility as well as scalability. Handoff delays make a serious problem. A lot of research has been done in last few years to reduce the handoff delays occur in the different levels of wireless communication. Due to the mobility of devices handoff is an important aspect in WLAN and cellular communications and in WLAN this aspect is much more important due to limited range
of APs, WLAN also provides sufficient bandwidth for real time streaming services. In the literature a number of handoff schemes have been proposed to reduce the handoff latency and support fast handoff in IEEE 802.11 wireless networks. In this article, we review these fast handoff schemes and analyze their advantages and disadvantages qualitatively. Our aim is to make available groundwork for future research on reducing the handoff latency for intelligent transport systems (ITS) in vehicular scenarios and give emphasis on requirement of fast handover for seamless connectivity. We comprise here various techniques to reduce handoff delays. Some future research ideas are also suggested here.

References

- Y. Liao, L. Cao, “Practical schemes for smooth MAC layer handoff in 802.11 wireless networks,” IEEE International Symposium on World of Wireless, Mobile and
Multimedia Networks, 2006
- Bien Van Quang, R. Venkatesha Prasad, Ignas Niemegeers, and A Survey on Handoffs - Lessons for 60 GHz based Wireless Systems; Communications surveys & Tutorials, IEEE Volume: 14, Issue: 1 Publication Year: 2012, Page(s): 64 - 86
- A Fast MAC Layer Handoff Protocol for WiFi Based Wireless Networks; Thavisak MANODHAM, Mitsuo HAYASAKA and Tetsuya MIKI, “A Novel Handover Scheme for Improving the Performance of WLANs based on IEEE802.11 APCC &apos;06. Asia-Pacific Conference 2006, Page(s): 1 – 5
- Venkata M. Chintala and Qing-An Zeng, “Novel MAC Layer Handoff Schemes for IEEE 802.11 Wireless LANs; Wireless Communications and Networking Conference,
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