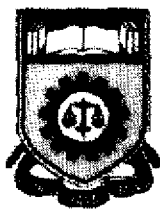# HANDOVER PROTOCOL IN WIRELESS ATM

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MOHD LOTFI BIN HAJI NOOR
**Faculty of Electrical Engineering
INSTITUT TEKNOLOGI MARA**
40450 Shah Alam
Selangor Darul Ehsan

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ABSRACT

The Asynchronous Transfer Mode (ATM) is a networking technology for the transport of different types of information, all in fixed sized, small units called cells, and allows this to be done with a predetermined, guaranteed Quality of Service. This paper presents an introduction to the application of Asynchronous Transfer Mode (ATM) in wireless network. The mobility of portable communication devices such as Wireless ATM will affect the signal strength received from the base station. The handover strategies is used to ensure devices transfer to the new base station can maintain the connectivity to the ATM network backbone. The handover protocol is simulated and network performance is evaluated by using a commercial software design tool.

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CHAPTER 1

ASYNCHRONOUS TRANSFER MODE

1.1   Introduction to Asynchronous Transfer Mode

Communication networks tend to grow over time, both in number of users and in required bandwidth per user. For this reason networks have to provide an increasing amount of total bandwidth. Also new types of applications are being developed and come into use, requiring the network to provide different types of service than before. Multi media type applications are an example of this. These applications need to transport streams of audio and video over the network, with particular real-time and loss requirements. Current computer networks were originally not designed to cope with these kinds of requirements.

In an effort to create a network technology providing not only the traditional type of service but also the multi media types of service, and at the same time supporting very high bandwidths, the Asynchronous Transfer Mode (ATM) was designed. ATM networks will be able to carry traffic like audio and video together with conventional network traffic over a single network. It is clear that in order to meet these different and partly conflicting requirements some compromises had to be made in the design of ATM. Nevertheless a lot of effort has already been put into the design of ATM, by numerous different parties, and ATM will no doubt play an important role in the years to come.[1].

The design of ATM has been compared to the design of the human nose. The human nose turns out to be designed rather poorly, and yet nobody seems to consider redesigning the human nose. Everybody just has to live with it. In some respects this also seems to apply to ATM.

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