

# ADMISSION CONTROL AND RESOURCE MANAGEMENT FOR ATM NETWORK

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## ABSTRACT

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This final project is on Admission Control and Resource Management for ATM Network including traffic contract, congestion control, congestion avoidance and also its simulation using a software named COMNET III Release 1.1i. At first, the introduction of ATM such as ATM Protocol, structure and its basic operation will be discussed. Then it will continue with traffic contract, congestion control technique, traffic management, performance and congestion avoidance.

For the simulation, a Model of ATM Network will be designed to present the real ATM Network.

From the simulation , we can analyse the report that been produced by the software and give the comments.

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# CHAPTER

# 1

## INTRODUCTION TO ASYNCHRONOUS TRANSFER MODE (ATM)

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Nowadays, telecom users are demanding greater, and more cost effective bandwidth from the telecommunications network. This increased demand is driving a revolutionary breakthrough in technology, resulting in the emergence of the Broadband-ISDN (B-ISDN) network. Before describing the B-ISDN network, it is worth examining present day technology and its limitations. Prior to digitalization in the 1980s, voice and data could not be integrated. Modems were used to transform data into analog and typically only permitted transfer rates up to 9600 baud.

Often the public network would become congested and calls could not be guaranteed. Large corporations, depending on good communications to remain competitive, consequently had to lease dedicated lines to ensure availability and security of their communication channels. These are charge on capacity, not usage. Hence they are expensive. X.25 provides a packet switched data service where lines can be shared between users. It provides channels up to 64kbps and can operate either as a public or private network. The public X.25 networks are charged on usage. The advent of Narrowband-ISDN has seen the integration of some telecommunications services. Now one network can transport both voice and data. 64kbps channels are available, with