SWITCHING NETWORK PERFORMANCE ANALYSIS USING MODELLING AND SIMULATION METHOD

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SA'DIAH BT. HAJI A. RAHIM
Department of Electrical Engineering
MARA INSTITUTE OF TECHNOLOGY
40450 Shah Alam, Malaysia
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ABSTRACT

Simulation plays an important role in computer-aided modeling, analysis and design of communication network. Performance evaluation and trade-off analysis are the central issues in the design, analysis and management of communication networks.

The function of a model is considered to be those of prediction and comparison. A variety of software and hardware analyzers are currently available for monitoring the performance of existing networks but these tools lack the capabilities to predict changes in network performance due to changes in the load.

Hence in this project, modelling and simulation of a communication network was done using the Block Oriented Network Simulator (BONeS). The system network model was designed based on Central MTX network. Simulations were run on the model to evaluate the performance of existing network and also to predict changes in network performance due to changes in network parameters.

In designing the simulation model, the following criteria were considered :-

1. Simple to understand by user

2. Goal or purpose directed

3. Robust, in that it does not give absurd answers

4. Easy for user to control and manipulate, i.e. , it should be easy to communicate with

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