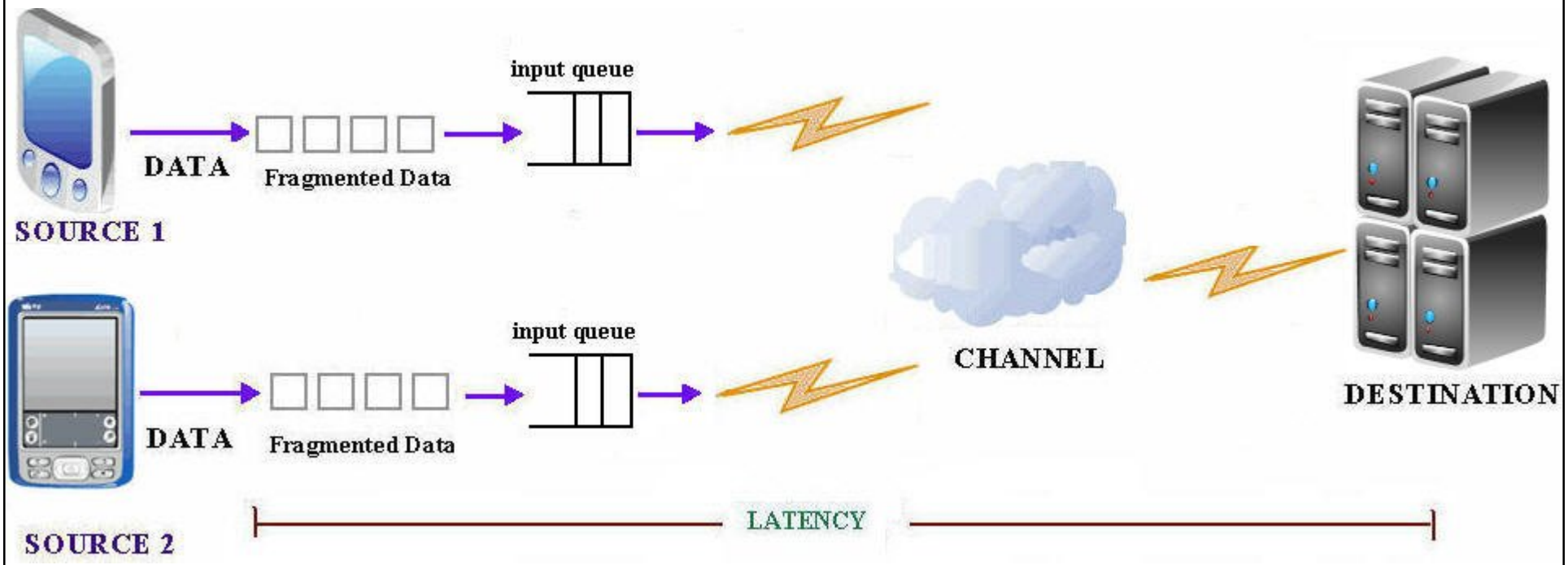
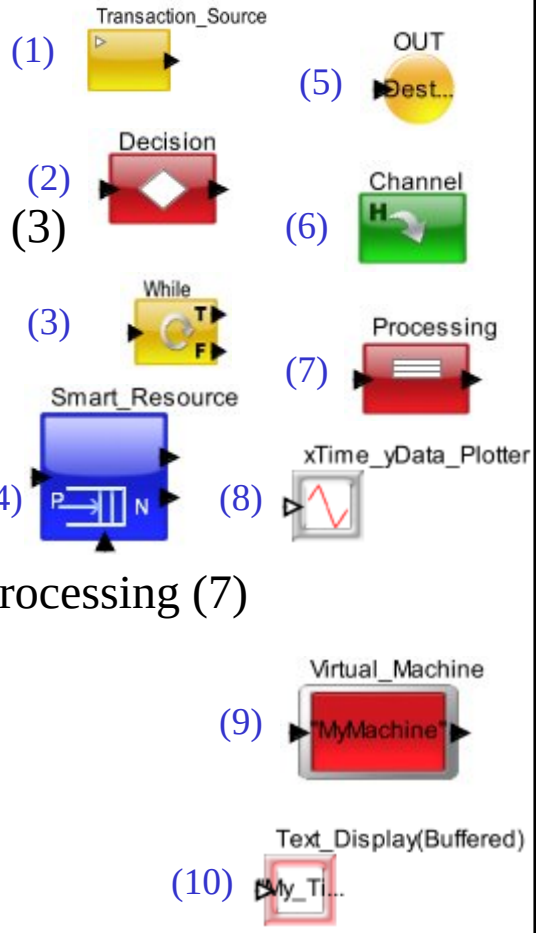
OPTIMIZING FLOW CONTROL ALGORITHM FOR MAXIMUM QoS



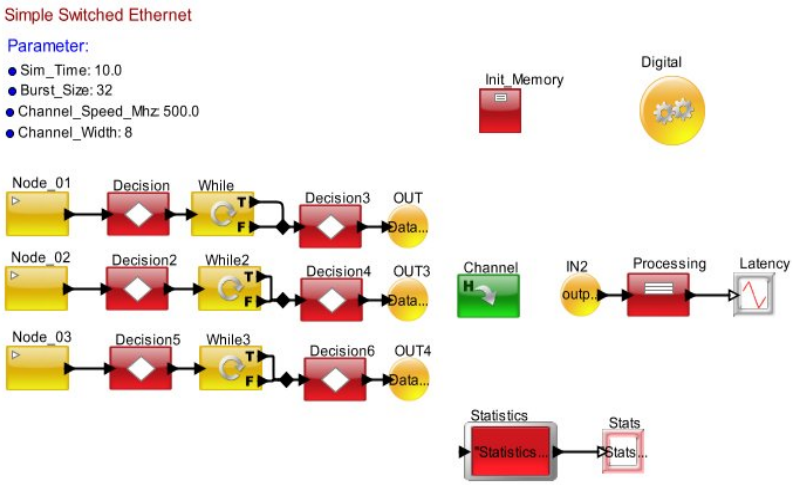
MAPPING BLOCK DIAGRAM TO VISUALSIM LIBRARY

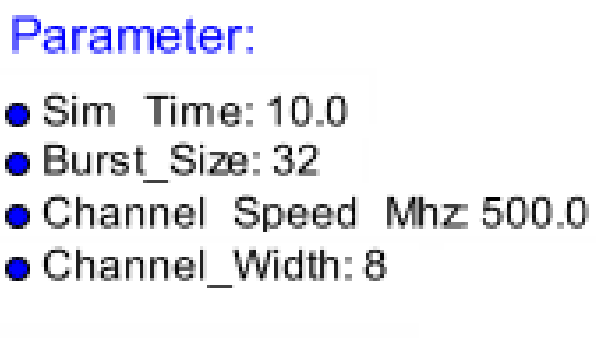
Below you will find the ideas and how does the idea reflect in the block diagram

- Source Traffic Generator – Transaction_Source (1)
- Setting Source Attributes – Decision (2)
- Fragmenting the Data to transfer across the network – While (3)
- Egress Queue - Smart_Resource (4)
- Check for the Channel Status– Decision
- Send the fragments virtually to a channel – Out (5)
- Transfer the fragments to destination – Channel (6)
- Calculate the channel capacity and latency in destination – Processing (7)
- View the result - xTime_yData_Plotter (8)
- Compute Channel Statistics – Virtual_Machine (9)
- Display statistics for channel – Text_Display (10)



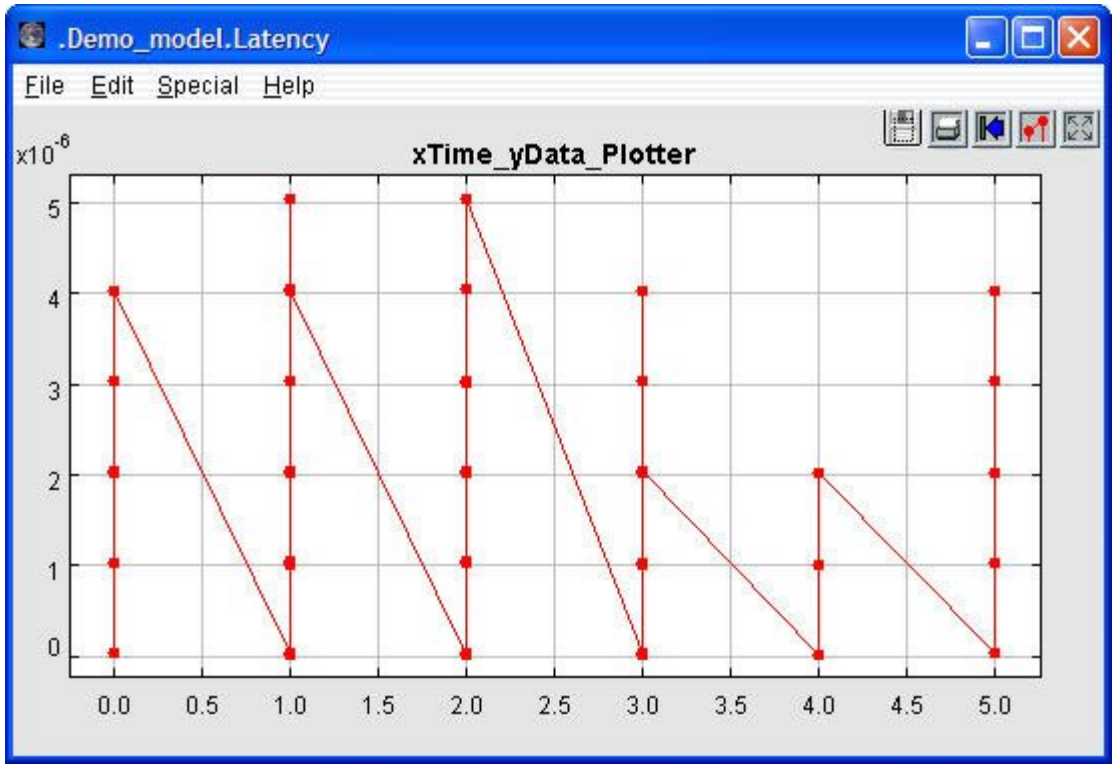
MODEL PARAMETERS





- **Sim Time** – The stop time for the Digital Simulator
- **Burst Size** – The burst size for While loop
- **Channel Speed** – The speed of the Channel
- **Channel Width** – The Channel Width

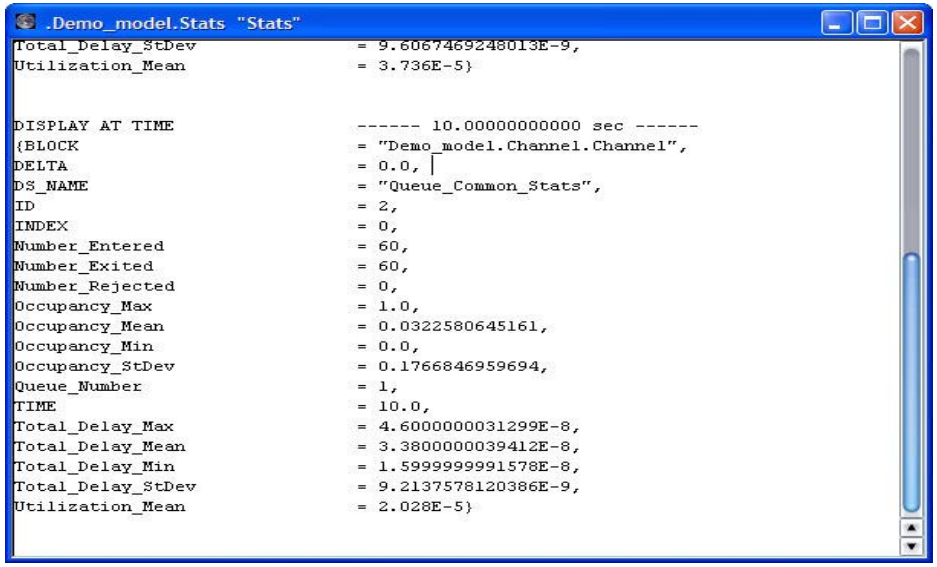
CHECKOUT THE RESULT



LATENCY

Latency - Current Time - Data Start time

STATISTICS



- **Number_Entered** - Number of transactions entering the queue.
- **Number_Exited** - Number of transactions that left the queue.
- **Number_Rejected** - Number of transactions rejected and output to reject port.
- **Occupancy_Max** - Maximum queue usage consumed during the simulation.
- **Occupancy_Mean** - Mean/ Average queue usage during the simulation.

STATISTICS

- **Queue_Number** - Queue Number. Queue number start at 1.
- **Total_Delay_Max** - In seconds. Maximum time through the queue+server among all transactions.
- **Total_Delay_Mean** - In seconds. Mean/Average time through the queue+server among all transactions.
- **Total_Delay_Min** - In seconds. Least time through the queue+server among all transactions.
- **Total_Delay_StDev** - In seconds. Standard Deviation from the Mean time through the queue+server among all transactions.
- **Utilization_Mean** - Mean/Average utilization of the server portion only. Queue utilization not considered.