

Enhanced dynamic bandwidth allocation proportional to queue length with threshold value for VBR traffic

ABSTRACT

In Asynchronous Transfer Mode (ATM) network, Variable Bit Rate (VBR) service category has been defined to support any application for which the end-system can benefit from statistical multiplexing, by sending information at a variable rate, and can tolerate or recover from a potentially small random loss ratio. Due to its burst characteristic, bandwidth allocation strategy is necessary in order to share the network resources with other traffics fairly. The implementation of proposed approaches; heuristic, Unused Buffer Reallocation (UnBR) and Higher-priority Queue Sharing (HQS), in bandwidth strategy perform better improvement if compare to the proposed strategy. In addition, we observed that a bandwidth strategy did not always perform well, hence, suitable strategies should be chosen depending on the different conditions in order to fulfill its network demand.

Keyword: Bandwidth allocation; VBR; Heuristic approach