

ATM QoS Prediction Using Neural-Networks

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Summary

Future broadband integrated services digital networks (B-ISDN) will be based on asynchronous transfer mode (ATM) technology. ATM traffic management and congestion control is needed to guarantee the quality of service (QoS) parameters. Artificial neural networks (ANN) have several properties that are valuable when implementing ATM traffic control. A neural network based QoS estimation is presented to enhance the performance of ATM management so that service providers offer better services to their clients. A divide and conquer approach is proposed, which can be used for efficient classification. This architecture can be trained faster than conventional neural network architecture and it can classify the data more efficiently. Multilayer perceptron (MLP) and radial basis function networks (RBFN) are also trained for QoS estimation and their performances are compared. Results indicate that the proposed architecture outperforms MLP and RBF networks

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