AN ENHANCED AVAILABLE BANDWIDTH ESTIMATION TECHNIQUE FOR AN END-TO-END NETWORK PATH

OBJECTIVE:

The main objective of the system a unique probing scheme, a rate adjustment algorithm, and a modified excursion detection algorithm (EDA) for estimating the available bandwidth (ABW) of an end-to-end network path more accurately and less intrusively

ABSTRACT:

This paper presents a unique probing scheme, a rate adjustment algorithm, and a modified excursion detection algorithm (EDA) for estimating the available bandwidth (ABW) of an end-to-end network path more accurately and less intrusively. The proposed algorithm is based on the well known concept of self-induced congestion and it features a unique probing train structure in which there is a region where packets are sampled more frequently than in other regions. This high-density region enables our algorithm to find the turning point more accurately. When the dynamic ABW is outside of this region, we readjust the lower rate and upper rate of the packet stream to fit the dynamic ABW into that region. We appropriately adjust the range between the lower rate and the upper rate using spread factors, which enables us to keep the number of packets low and we are thus able to measure the ABW less intrusively

INTRODUCTION:

Available bandwidth (ABW) estimation is crucial for traffic engineering, quality-of-service (QoS) management, multimedia streaming, server selection in application services, congestion management, and network capacity provisioning in wireless mobile networks. ABW measurement can be considered essential to ensure that wireless mobile operators can achieve the QoS standard guaranteed by them while providing desired data rates to users. This can also be considered

when comparing the performance index of various Telecom operators in a specific region.

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