

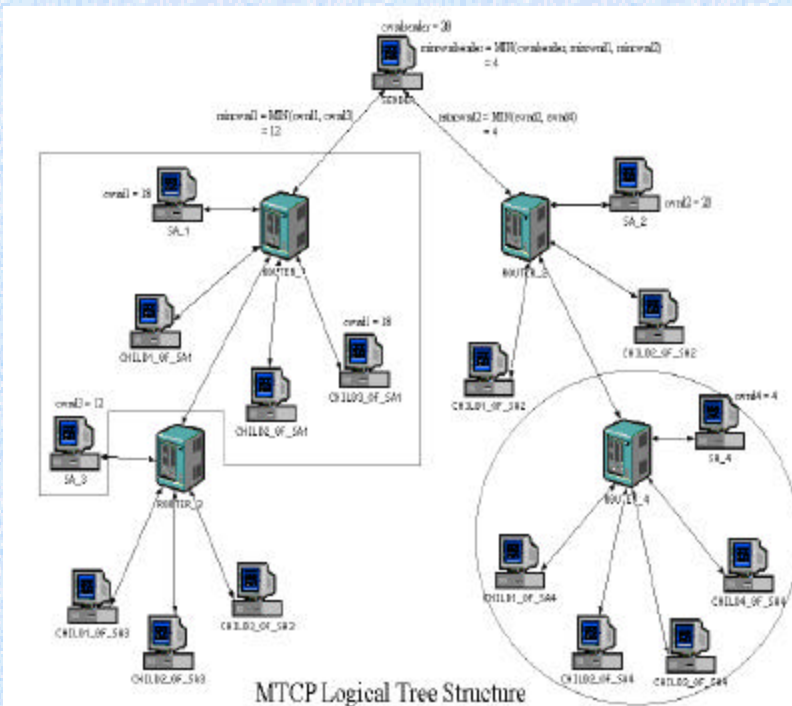


LPR Loss Indication Filter for Multicast-TCP (MTCP)

Objective Of The Project

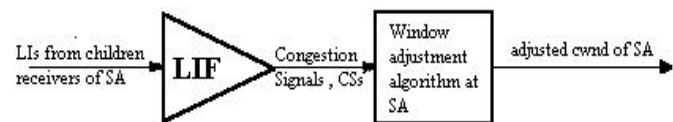
This project analyses the loss path multiplicity problem faced by the Reliable Multicast Congestion Control Protocol (MTCP).

For a large multicast receiver group, the probability of a transmitted packet experiencing independent loss down the multicast tree is high. This will result in at least one or more loss feedback received at the sender per transmitted packet. These loss indications might cause the sender to reduce its congestion window too aggressively and hence degrade the overall throughput of the system.



MTCP Logical Tree Structure

A window-based Linear Proportional Response (LPR) loss indication filter (LIF) is proposed for MTCP to filter some of the loss indications (LIs) at sender (SAs) so as to solve the loss path multiplicity (LPM) problem.



A Linear Proportional Response (LPR) LIF is one which allows a LI from receiver i to pass through with probability α_i when it receives the LI.

$$\alpha_i = \frac{X_i}{\sum_{j=1}^N X_j}$$

, where X_i is the number of LIs experienced by receiver i and N is number of receivers.