CCIT Report No. 364

Analysis of Resequencing during Downloads

Yoav Nebat and Moshe Sidi

ABSTRACT

Recent studies indicate that out-of-order arrival of data packets during downloads of resources is not pathological network behaviour. Though this situation is most intuitive when packets of the same resource arrive in parallel from several sources, it turns out that this phenomenon may also occur in the single source scenario. Knowledge regarding the expected reordering needed is important both for being able to decide on the size of the resequencing buffer needed, and to estimate the burstiness in arrival of data to the application. In this study we present a method to calculate the resequencing buffer occupancy probabilities for the single source scenario, and a study of the resequencing buffer occupancy for the two source scenario, where arrival from each of the sources is in order.