Abstract

TCP is a reliable transport protocol designed for heterogenous networks. To provide a reliable service over possibly unreliable networks, retransmission of lost or damaged data is performed. These retransmissions incur a delay and increases the total transmission time. However, certain applications can make use of damaged data, while taking advantage of the decreased delay created by fewer retransmissions. Currently there is no way to allow the applications to access this data.

This thesis proposes a modification to TCP which would allow applications to decide when damaged data can be accepted and not. The idea has been implemented in the Linux operating system. As errors often occur over wireless links, the implementation has been tested with a number of emulated wireless links. The experiments showed that there are gains to be made by letting errors through.