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Network support for time-constrained applications in mobile multi-hop ad-hoc networks

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Erklärung

Ich versichere, die vorliegende Arbeit selbstständig und nur unter Benutzung der angegebenen Hilfsmittel angefertigt zu haben.

Braunschweig, den 6. September 2002

Abstract

Kurzfassung

Contents

1 Background and Problem definition

1.1 Wie klassifiziert man Netzwerktraffic?

Basic network characteristics: - Bandwidth - Bandwidth Jitter - Latency - Latency Jitter - Packet loss

The distributions of these network characteristics can also have a direct impact on the application. E.g. for video streaming applications the delay or loss of a packet belonging to an I-frame I-Frame can have a large impact on the perceived video qualtiy by the user. This is because the frame in question cannot be rendered to the user and following p- and b-frames by have used this I-frame as reference so they are also in trouble **TODO: REFRENCE, Verlust von I-Frames in streaming video,** Also, the loss of a TCP segment (ACK?) can have different influence on the throughput of an application.

* Show the difference between wireless networks and wired networks

Network characteristic	Wired network	Wireless network
Bandwidth	High	Medium–Low
Bwdth jitter	Low	High
Latency	Low	Low
Latency jitter	Low (1/5)	Low (1/2–1)
Packet loss	Low	Low–High

1.2 Problems of interactive, real-time applications

1.3 Problems of wireless networks

1.4 Problems of mobile ad-hoc networks

- Wegfindung in mobilen Ad-hoc Netzen * Es gibt einen Routing Overhead * Übersicht über die Protokolle, Klassifizierung * AODV ist ein gutes Protokoll, Warum?, Related work!

1.5 Related work - QoS

* Give a short introduction to QoS in wired networks * QoS in wireless networks (if any) * QoS in MANETs (if any) Tabelle mit Vergleich (CEDAR, etc.)

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