Master Thesis –
Flow Control Based on TCP Acks Only

Background
Mobile networks are used all over the world and are the cornerstone for the networked society, where everything shall be connected. To support the vast amount and diversity of data expected in future networks, Ericsson are developing products to drive and support the networked society. The subjects for Master Thesis are defined to investigate and develop algorithms, architecture, tools etc. to support huge increase of speech, data and massive IoT for Radio Access Networks.

Thesis Description
Radio throughput estimations are based on buffer status reports between units in an Ericsson radio network. These estimations are used for pacing of traffic between units. In an all Ericsson network buffer reports can be easily shared between units but in multi-vendor network these reports are not available.

An alternative to base the algorithms on buffer status reports would be to rely on the traffic flows itself and monitor the TCP acks received.

Task
- Investigate and evaluate how effective such a solution would be, for instance in throughput and responsiveness

The thesis will be concluded with a result presentation for the Ericsson team.

Qualifications
This project aims at students in electrical engineering, computer science, computer engineering or similar.

Extent
1-2 students, 30hp each

Location
Ericsson AB Mjärdevi, Linköping

Preferred Starting Date
Spring 2021

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