Master Thesis – Radio Resource Optimization by Blocking Misbehaving Data Streams

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
A radio network is constrained by the radio resources and therefore it is important to make sure that the sent packets are valid packages. In a radio network data streams can suddenly misbehave and take resource at the expense of other streams.

Task
The task for this thesis is to evaluate methods of memory resource blocking for misbehaving Data Radio Bearers (DRB’s) at GTPU/PDCP level in order to preserve resources for the rest of the users in the system.

Evaluate different methods of dynamically reducing allowed memory footprint (rbQLimit).

Detection method can for instance be if the oldest unsent packet is > maxAgeThreshold if rbQUELimit is reached.

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

Contact Persons
Johan Wibeck
+46 730 436522
johan.wibeck@ericsson.com

Christer Lindell
+46 730 435533
christer.lindell@ericsson.com