Master Thesis – Study methods to implement packet data generation from large and complex traffic models

Background
Packet data generators are used in Ericsson labs to generate network payload in real-time. Current data generators have limited capability with regards to the size and complexity of the traffic models used. The desire is to push such limits forward with order of magnitudes, while also responding to the evolution towards continuously increasing data rates and higher number of concurrent users. Ongoing research has produced prototypes of large and complex traffic models, hence these are not part of the thesis job.

Thesis Description
Suggest and evaluate different implementation approaches for packet data generators that can be driven by large complex traffic models. The thesis worker is expected to base these suggestions on current academic research within applicable areas, and to demonstrate with one or more implemented prototypes that suggested approaches can scale towards the desired and evolving requirements.

Computer platform for prototyping will be X86 multi core with 10 Gb IP interface, and Linux OS.

Qualifications
Internet network stack, network programming, Linux, concurrent and distributed programming.

Extent
1 – 2 Master thesis of 30p each

Preferred starting date
As soon as possible

Keyword
scalable distributed packet data generator
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