Thesis B.Sc.

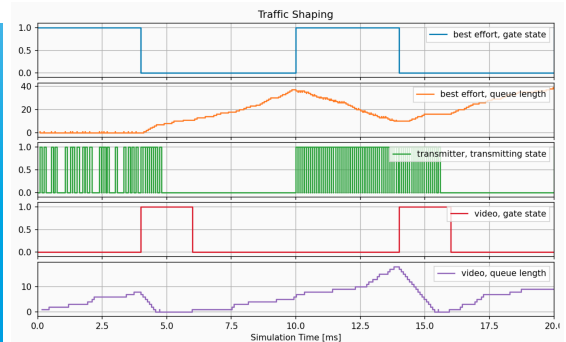**Thesis M.Sc.**

IDP

Comparison of Time Sensitive Networking Standards

Motivation

Time Sensitive Networking (TSN) is a set of standards introduced to add determinism to Ethernet-based communication networks [1]. It is mainly deployed in audio-video- and industrial use cases. Each of the standards (e.g., TAS, ATS, CBS, CQF) has different advantages and disadvantages w.r.t. deployability, latency guarantees, and other factors. Deciding on a standard for a specific usecase is not definitively solved.

Your task will be to compare the behavior of differnet TSN standards by employing the discrete event simulator OMNeT++ [2] and its extension, the INET framework [3].

[1] https://en.wikipedia.org/wiki/Time-Sensitive_Networking
[2] https://omnetpp.org/
[3] https://inet.omnetpp.org/

Your Task

- Familiarize yourself with TSN
- Implement a pipeline to obtain results from OMNeT++ and INET for different TSN standards
- Evaluate the behavior of the different standards

Requirements

- User experience with Linux
- Ability to work with tools like ssh, git
- Experience with C++, Python
- Self motivated work approach

Topic with the current scope is for a B.Sc. or IDP.
Extension of the topic to a M.Sc. is possible.

Contact

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