

# “Network Coding for Header Compression”

## Project Topic in OS Kommunikationssysteme WS 2019/20

**Summary:** Header Compression, as its name suggests, is a compression method which reduces the sizes of protocol headers in packet switched networks. Unfortunately, these schemes are very susceptible to error on unreliable networks, such as the IEEE 802.11. Network coding has been recently used to compensate for lost context establishing packets during compression. The concept of Reliable Base Proposal overcomes this issue via the spreading of network coded context information over many compressed packets. The student should implement a simple simulation environment with actual network coding and potentially header compression in Python using the kodo and o2sc libraries..

**Components to learn:** Network coding, Header compression, Correlated losses on erasure channels

**Requirements:** Basic knowledge of Python, Wireshark

### Steps of the project to go through:

Learn about header compression and network coding

Explore the Python binding of kodo

Network code compressed packets efficiently with kodo and the o2sc library

**Keywords:** Header compression, Network coding, Python

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