Simulation of underwater acoustic communication networks

Underwater acoustic communication networks face specific challenges compared to radio networks, in particular related to the long propagation delay (sound speed is 1500 m/s) and low link data rates (on the order of 1000 b/s). FFI is investigating network protocols suitable for this setting.

The task is to develop and simulate the performance of different underwater acoustic network protocols (MAC and routing). The network will consist mostly of stationary nodes but also of a few moving nodes. A suitable event-based simulation framework will be made available to the student, as a starting point.

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