

# Master's Thesis Project Description

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## Introduction

The Maritime Connectivity Platform [1] (MCP) is, as the name suggests a platform that connects maritime services. A particular way of utilizing this is that a user of the MCP is able to develop his or her own software, and distribute it across the world. Such digital maritime components, however needs to be thoroughly tested, which often is not adequately done through simple unit testing.

## Description of Project

I want to test maritime software using QuickCheck. The idea behind this is to create models which describe the properties that the tests need to reflect. This means that in stead of testing that a certain value combined with a certain function yields a certain output over and over again, the model should reflect what needs to happen with an arbitrary input- and function-combination.

## Learning Goals

- Utilizing QuickCheck
- Parsing specifications in order to generate relevant tests

## References

- [1] Maritime Connectivity Platform, <https://maritimeconnectivity.net/>
- [2] Testing AUTOSAR software with QuickCheck Thomas Arts, John Hughes, Ulf Norell, and Hans Svensson, <https://ieeexplore.ieee.org/abstract/document/7107466>, April 2019.