

Ship tracking based on AIS

Introduction to Fleet Cleaner

Fleet Cleaner develops and deploys robots for ship hull cleanings. We are an innovative technical company based in Delft. With our unique robot we offer the most complete solution for ship hull cleanings on the market, available in all Dutch seaports. The Fleet Cleaner robot removes fouling from a ship's hull, thereby increasing fuel efficiency dramatically and reducing fuel costs. The cleaning is performed during loading and unloading in port; resulting in no down-time for the vessel. The fouling that is removed from the vessel is captured and filtered by our state-of-the-art filtering system aboard our support vessel. This is the reason that Fleet Cleaner is one of only a few companies licensed to perform hull cleanings in Dutch ports.



Figure 1 The Fleet Cleaner robot cleaning a ship

Research objectives

All seagoing vessels are globally tracked by the Automatic Identification System (AIS). This system records a real time position, course and heading of a ship and broadcasts it on VHF. The combined data of many VHF base stations results in a map showing the position and destination of all commercial ships worldwide, many (commercial) websites host these maps and the corresponding raw data. Fleet Cleaner would like to use this data to measure the effect of cleanings on vessel speed and to identify potentially fouled ships. Therefore we are looking for interns who are interested in one or more of the following topics:

- Reducing a big data stream to useful information
- Setting up a system to record AIS data
- Deducing the level of fouling from vessel and weather data

We are looking for a talented and enthusiastic MSc, BSc or Applied Science (HBO) student, preferably with a background in software engineering, maritime engineering or related engineering fields. We offer the following:

- 3-12 months thesis assignment or internship at Fleet Cleaner (in Delft)
- Actual implementation and testing of your work in a real-world application
- Working in an innovative company
- Working together in a young, enthusiastic and multidisciplinary team
- An appropriate internship allowance