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Title:
AIS-Receiver

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Contruction of devices / systems.

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E5-507

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Abstract:
This project documents the design and development of a system that uses special radiosignals, emitted by ships, for collision detection.
From the year 2003 it becomes statutory for large ships to send out radiosignals regularly, that indicate the position, speed and several static and voyage related informations. This information is picked up by the system using a VHF radio. Furthermore the system obtains information about the position of own ship from a GPS receiver. All this informaiton is processed in order to determine if there is any risk of collisions. The static and voyage related information is stored, and on request they are displayed on a connected PC.
The system consists of a 8051based microcontroller, that manages the communication between GPS, VHF and PC, through interfaces. The programme for the microcontroller is written in the programming language “C”. The programme that has been written for PC, makes the calculations necessary to determine any risk of collisions. A graphical user interface has been implemented to present the information about the ships. The PC programme is written in the programming language JAVA.