

With newly available satellite-based AIS receivers, the complete global ocean shipping fleet can be tracked.



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Global maritime surveillance

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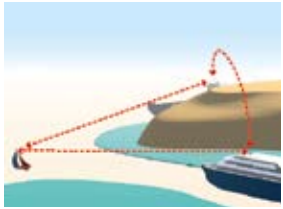
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> AIS system as collision avoidance



> Vessel tracking center

Why maritime surveillance?

“Maritime surveillance is of the highest importance in ensuring the safe use of the sea and in securing Europe’s maritime borders. The improvement and optimisation of maritime surveillance activities, and interoperability at the European level, are important for Europe to meet the challenges and threats relating to safety of navigation, marine pollution, law enforcement, and overall security.” (EC Blue Book Integrated Maritime policy).

The international maritime policy and European regulatory frameworks mandate surveillance systems, such as the Automatic Identification System (AIS) which is now legally required by IMO legislation for all ships larger than 300 gross tonnes. However, the existing network of land based AIS stations is only suitable for exchange of information near the coastline and do not cover ships at sea. In Bremen, several activities are underway to implement satellite based systems and demonstrate global services for enhancing maritime shipping safety and coastal environmental protection.



> ORBCOMM on launcher



> Rubin 8 first messages

Satellite-based surveillance of vessel traffic

The OHB-lead R&D project KOSAS defines an architectural concept for an infrastructure to process and integrate in-situ measurements (for instance ship emissions) taken on board a ship and co-located AIS data transmitted by satellite communication to the CEON Data Centre located in Bremen. The new ORBCOMM generation of communication satellites built in Bremen, is the key technology for the first phase of simulation, testing and demonstration. Each satellite contains an AIS receiver that provides global coverage. In this way, the complete global ocean shipping fleet, of about 98,000 ships, can be reached. The safe processing and distribution of satellite based AIS messages to authorised users by a public traffic monitoring centre will significantly enhance maritime safety and security.

First systems already in orbit!

RUBIN-8: The first European example of satellite based AIS data received globally is the successful launch of RUBIN-8 demonstrating the feasibility of satellite based AIS data reception.

ORBCOMM: A series of 6 satellites with AIS receivers was launched in June 2008 and is able to deliver operational global AIS coverage.