siNafa: Safety Navigation for Shipping

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SUMMARY

The research project siNafa “sichere Navigation für die Schifffahrt” (engl. safety navigation for shipping), is funding from the German Minister of transportation and the budget is over 2 Mio. US$. The leader is navXperience and the other project partners Raytheon Anschuetz, a German company for modern bridge technology, especially high performance compass, the DLR, the German Aerospace Center and last not least the Technical University of Berlin. This consortium brings his development together for Safety shipment.

Project description

The first part of the project is to measure all movements of the vessel and to capture the six degrees of freedom. NavXperience will develop a new receiver architecture. We are using three receivers and synchronizing all with the same clock on one PCB. We have a higher accuracy for the moving baselines and the TU (Technical University) takes the coordinates to calculate the six dots of freedom and acceleration at every place of the vessel. The DLR will develope a Jamming and Spoofing detection system. The task is not only the detection, if they have a registration of interfering signals, they try to find out the distance and the direction, the next step is to publish it in the network and help the other sensors. Raytheon Anschuetz will integrate it in the network of the vessel and will use the application for modern navigation. Subsequent a few pictures of the Installation on the container vessel Basle Express from Hapag Lloyd and the surveying and research ship Dneb from the BSH (German Administration for Sand Hydrology).