

Implementation of the vessel navigation support system for sea ice area

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Understanding of sea ice situation is the most important issue for vessels in the sea ice area. In particular, overviewed information of 1000 km scale is a good indication to determine a safe route. The remote sensing data of sea ice concentration by Earth observation satellites is required. However, limited satellite telecommunication line on the vessel makes on-demand data delivery difficult. And more, if the compressed data would be sent via this line, a professional staff for decoding and visualizing the data must always be needed on the ship. In order to reduce these anxiety and burden, automatical system integrating these processes (delivery, decoding, and visualizing data) is needed. ADS (Arctic Data archive System) is providing a quasi-real-time visualization service for satellite data at Polar region, and this service is called VISHOP (Visualization Service of Horizontal scale Observations at Polar region). In this research, we develop new automatical visualization system for the vessel by reconstructing VISHOP to a small board server. We want to introduce practicality and advantages of this new system.

Keywords: sea ice area, satellite data, automation, visualization, web server

