IoT based visualization service of AMSR2 and GPV in the Arctic Ocean during R/V Mirai cruise MR16-06

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Understanding of sea ice situation is the most important issue for vesseles in the sea ice area. In particular, overviewed inforamtion 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 satelite 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) has been developed the new integrated system for the ship to delivery and visualize data, which is called VENUS (VEssele Navigator by Unitized Systems). This system was implemented to R/V Mirai cruise MR16-06. In this research, we want to introduce technical performances and advantages of this system.

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