



VDE-SAT OBA – progress report

Facilitation of ship to shore reporting pilot project – 9th meeting

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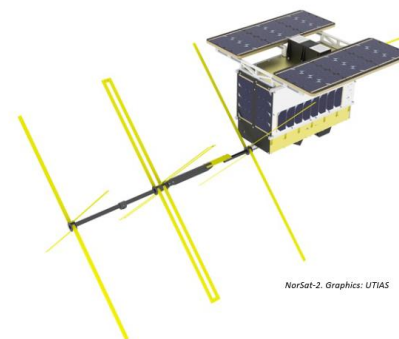
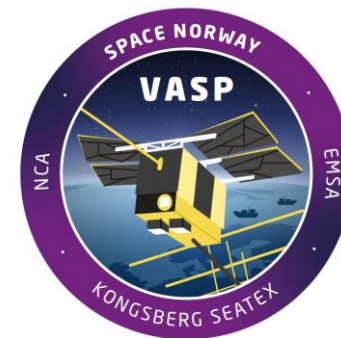


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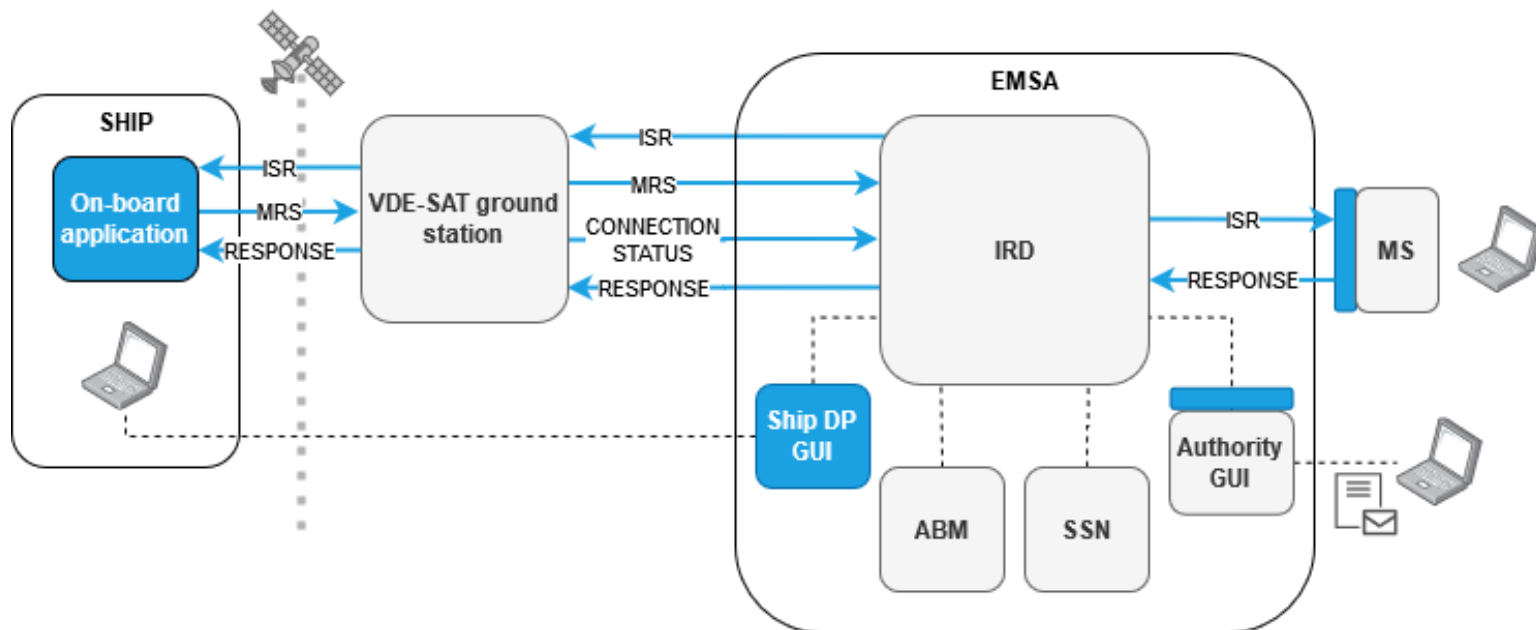


Background

- VDE-C pilot project:
 - Purpose: to test VDE-SAT technology for ship-shore communication
- VDE-SAT Application and Services Platform (VASP): demonstration project run with European Space Agency (ESA), Space Norway (SPN), Norwegian Coastal Administration (NCA), Kongsberg Seatex AS (KSX) and EMSA.
 - Project uses one NorSat-2 LEO satellite
- VASP testing area: Norwegian waters, Svalbard (BAREP reporting system) and Trondheim area
- VASP services to be tested:
 - Ice chart distribution
 - Search and rescue (SAR) coordination
 - *Mandatory Reporting System (MRS)*

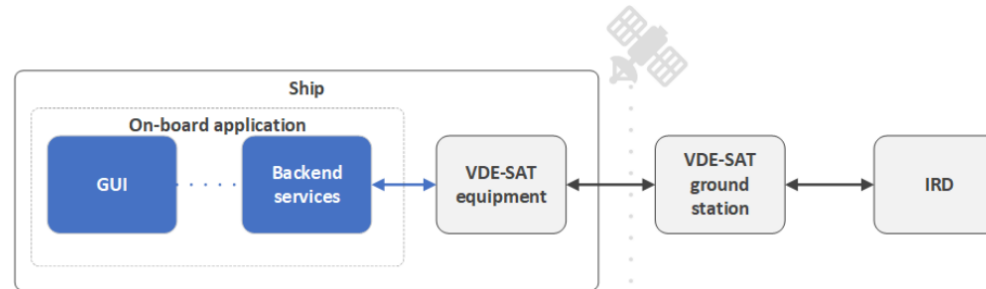


VDE-C context



- Use-case: VTS/MRS reporting:
 - By using on-board application and transmission via VDE-SAT
 - By using EMSA GUI via Internet

VDE-SAT OBA – current status



- Main functionalities:
 - GUI – to submit MRS/VTs reports and consult responses from authorities
 - Backend services – to organise message exchange
- Contract signed in May 2021 with Kongsberg Seatex AS (KSX). Development of OBA completed by September 2021. SAT completed in April 2022.
- Functional design of GUI has been aligned with IRD v.3
- Specific hardware: KSX VDES-300 terminal, VHF and GNSS antennas, laptop with 4G modem
- Equipment installed on three vessels: MS Polarsysse, Advent Supplier, Ocean Space Lab
 - One set of VASP service demonstration equipment has been allocated for installation at EMSA premises in Lisbon. EMSA has received clearance from ANACOM until end of 2022.

VDE-SAT OBA – test results



- Data exchange by using full communication chain has been successfully tested.
 - *SAT completed by December 2021 (conditionally via Internet)*
 - *VDE-SAT component tested late-April 2022*
- SAT testing: one solid communication window per day
 - One two-way data exchange between OBA and IRD per one satellite pass in Trondheim
 - Request for ISR and ISR push completed during same satellite pass
 - *Communication will improve when more satellites are operating*
- Technical challenges:
 - Technical issues with satellite attitude control – fixed in summer 2021
 - Unexpected packet loss with uplink communication – resulted in message repetition during the pilot project
 - Interference of spectrum has been observed by SPN and KSX from March 2022. Issue is being investigated

Project Roadmap



April 2022	SAT2: application is tested by using satellite communication
May 2022	End of Interoperability pilot project
<i>May – October 2022</i>	<i>Operational testing of VASP services / demonstration phase</i>
<i>November 2022</i>	<i>End of VASP pilot project</i>

Actions required



Member States are invited to:

- note information provided;
- provide feedback.