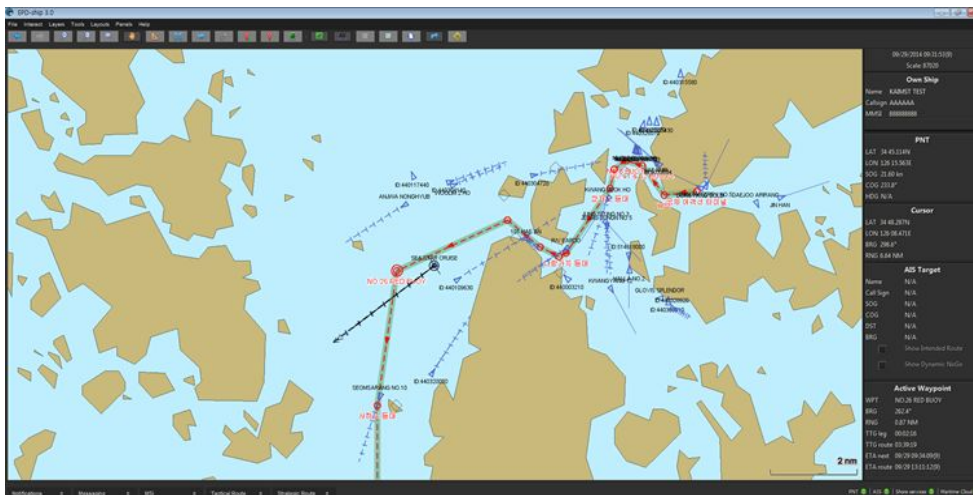# 2nd Sea Test of Korean e-Navigation Test bed

(1) Overview
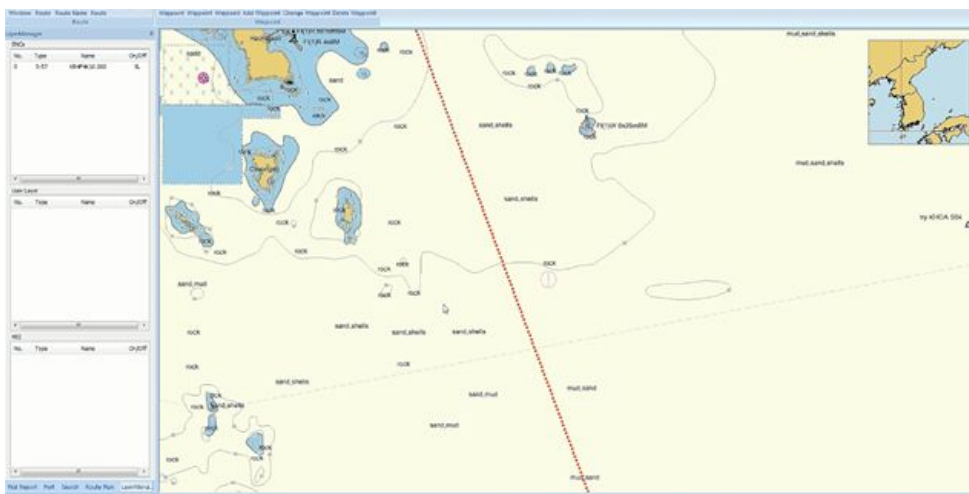
- Date / Used Ship: 29th (Mon.) Sep. 2014, 09:00 ~ 22:30 / Car Ferry (SeaStarCruize)

- Test Route: from Mokpo to Jeju, from Jeju to Mokpo (2 times, each took about 4 hours)

- Weather: Cloudy, Visibility 5 NM, Wind 7 m/s

- Joining organization on sea test: Ministry of Oceans and Fisheries, KRISO, Korea Maritime Univ., Mokpo Maritime Univ., Korean Register, ETRI, KST, KIMFT

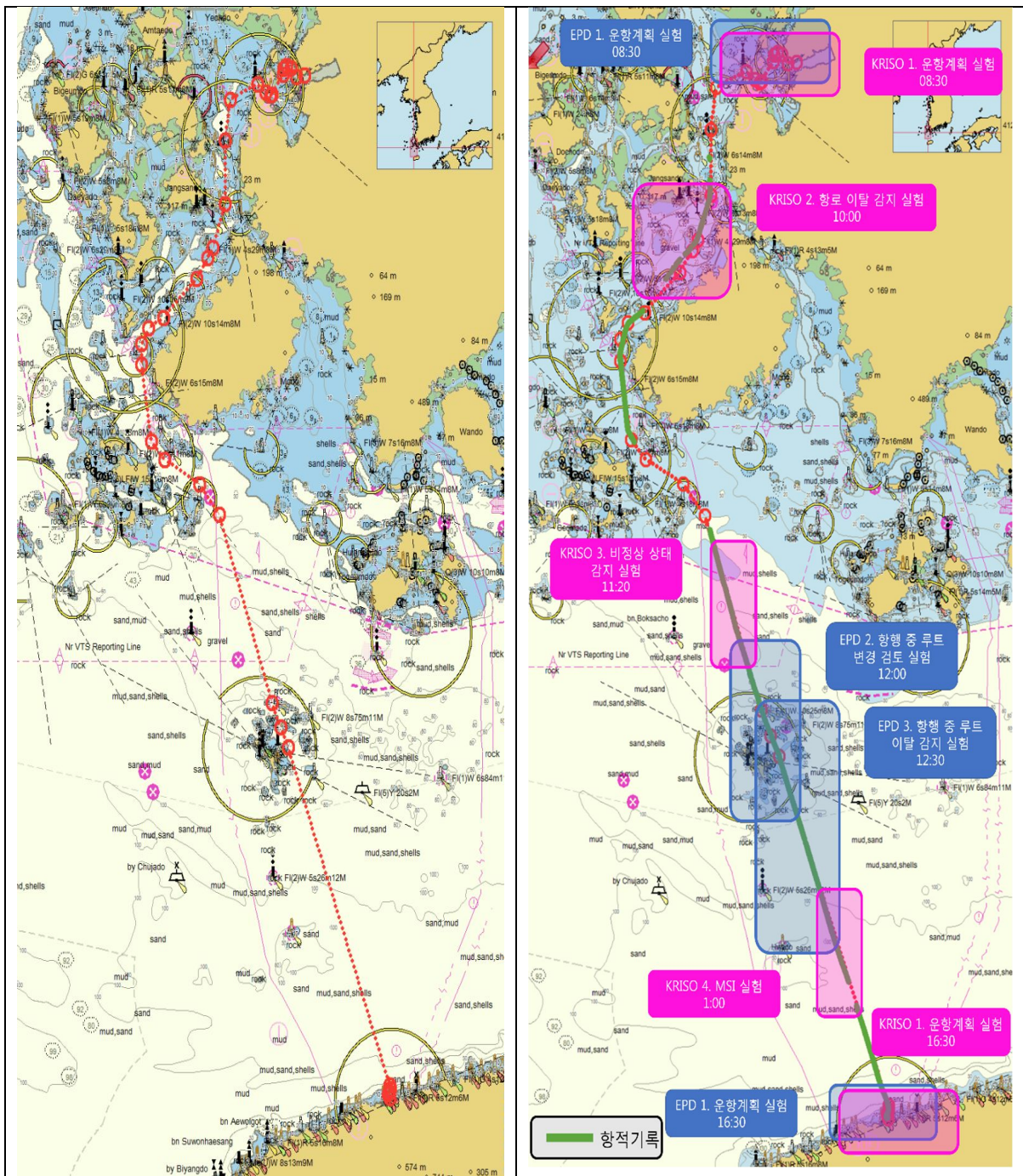(2) Test System

- DMA EPD / Maritime Cloud
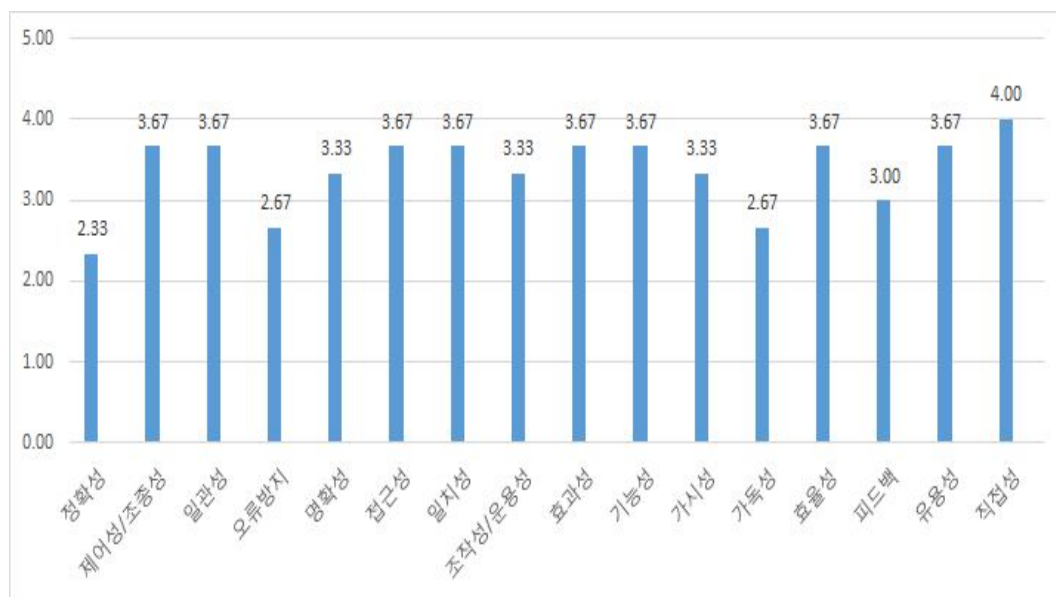

- KRISO ENC/MSI Viewer

(3) Test Scenario

- Route Plan: design a route plan using each system, exchange route information for negotiation.

- Ship information: forward ship emergency information, request for rescue

- MSI: receive MSI datasets from shore station, modify the planed route considering the MSI, Shore station monitor the ship's route, Shore station identify whether the ship go off course or not.

- Planned Route / Major event according the scenario

(4) Test Results

- Shore prepare the sample MSI datasets adjacent to the pre-planned route, the MSI sample datasets were developed by the KRISO/JEPPESEN data model.

- Marine Communication method: Satellite communication (IRIDIUM)

- Shore provide MSI datasets to Ship. Ship receive and load the MSI dataset

- Mariner recognize the Navigation warning on MSI and consider those in navigation

- to assess the usability on MSI service, the research team did a questionnaire investigation for test subject group(2 Mariners of Car ferry and 2 mariner candidate students of Mokpo Maritime university)

- Usability assessment factor: Correctness, Controllability, Consistency, Error prevention, Clarity, Accessibility, Conformity, Operability, Effectiveness, Functionality, Feasibility, Readability, Efficiency, Feedback, Usability, Immediacy

- General review on 2nd sea test: The test scenario was not enough to assess the MSI service in navigation environment. The status of marine network (Satellite) was not good. The functional aspects of MSI service were tested without any problems. The MSI relevant process in Ship and Shore need to be considered carefully and widely in the next test. Regarding to the usability assessment, clear analysis results was not drawn due to the small test group. It's needed to expand the test group in the next test.

- Group photo of Sea Test attendances