

AtoN Simulator

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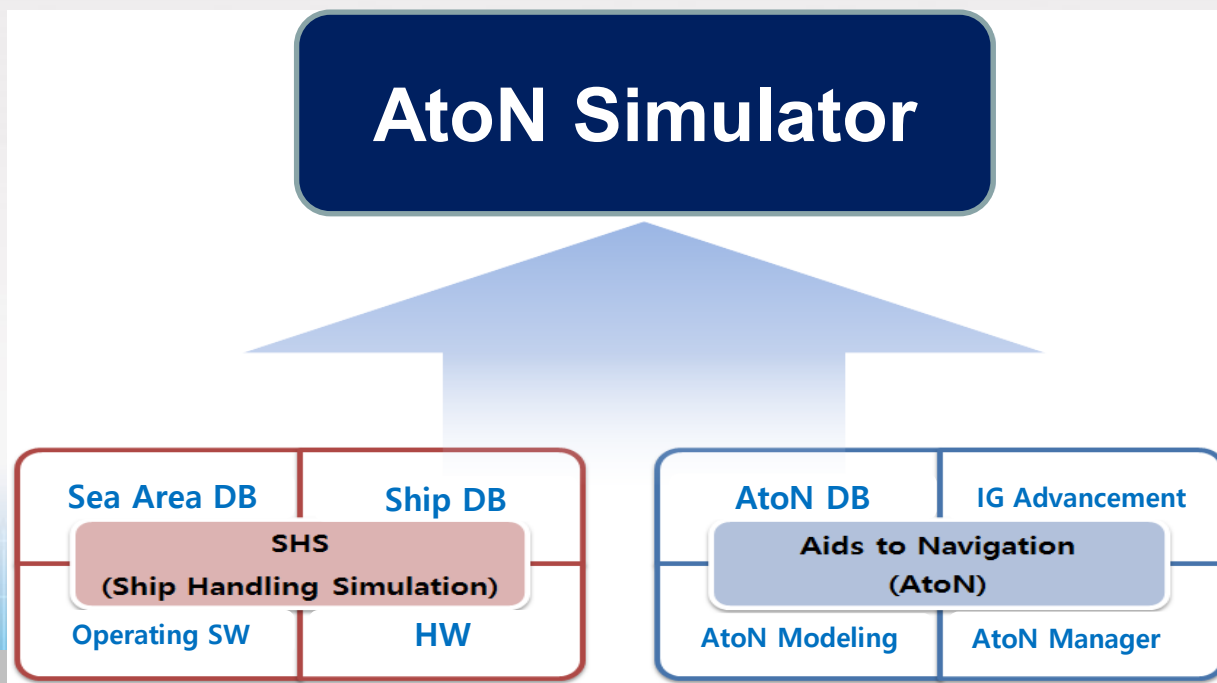
Korea Association of Aids to Navigation

Introduction of AtoN Simulator

Development Purpose of AtoN Simulator

- ◆ To assist the decision making for AtoN design and AtoN placement plan in consideration of the effects of topographical, environmental and maritime traffic characteristic of target navigation area

Configuration of AtoN Simulator



Configuration of AtoN Simulator

Simulator Room



Operation Room



- ◆ Support function of add/delete/move/edit/search for AtoN
 - Available to simply add for copy function
- ◆ Placement and Management for AtoN
 - Display the state of AtoN such as existing, relocation using the symbol
 - Management of level such as project > scenario > layer
- ◆ Control properties of AtoN
 - Control of 19 kinds of AtoN properties based history card
 - Control of characteristics such as visibility distance
- ◆ Support virtual navigation
 - Setting the waypoint and linear movement
- ◆ Provide printing and report for scenarios

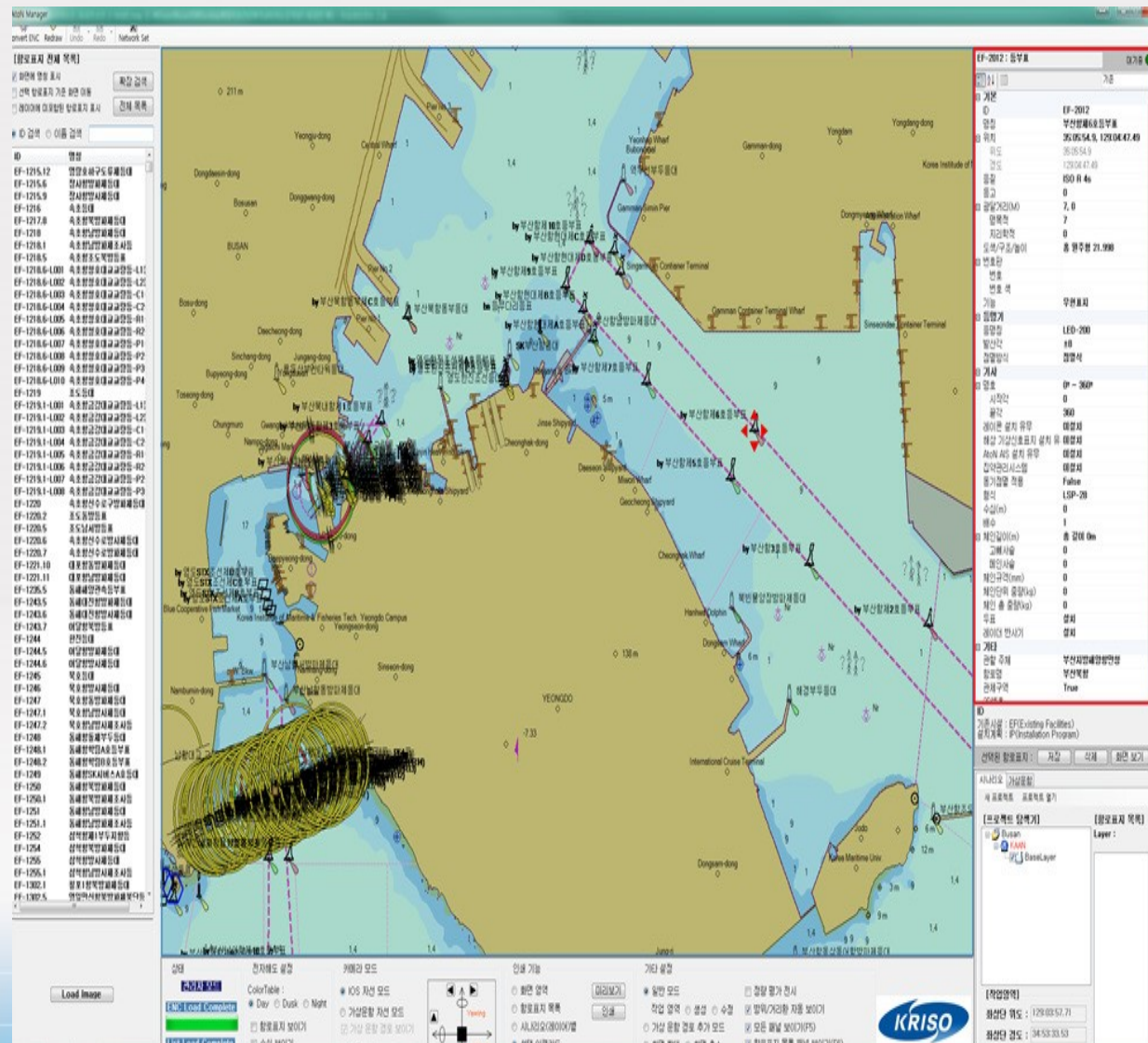
- ◆ Differentiation Design and built to Ship handling simulator
- ◆ Support to various kind of AtoN
 - Support 19 kinds of AtoN
- ◆ Precision Improvement for shape Database of AtoN
 - Visualization Properties Modelling for various components(top mark, lantern)
 - Support 3D Shape Database for a variety of AtoN
- ◆ Introduction Database of systematic AtoN Properties and Placement
 - Formulation systematic structure for the AtoN properties and placement for easy management
 - Construct AtoN Motion Characteristics and Quantify table

- ◆ Improvement accuracy of Sea Shape Modelling
 - Modelling and Control of the Current for Sea Area
- ◆ Support Software for AtoN Placement
 - Writing and Management of Unique History Card for Type of AtoN
 - Placement and Management of AtoN based on ENC
 - Real-time Control of AtoN Properties
 - Display and Management for AtoN Status(Existing, Expansion, Relocation, Revocation, Virtual)
- ◆ Application AtoN Placing Quantification Algorithm
 - Feedback Placement Quantified Score for Location-based on Placement scenarios
- ◆ Improvement Accuracy of Reproduction for AtoN Motion

Current Status of Development of AtoN Simulator

- ◆ Introduced the technology trend of AtoN simulation system
- ◆ No international certification Standard for the AtoN simulation system
- ◆ Necessary to develop the manual for the AtoN simulation system and the recommendation on international certification Standards and revise of the Guidelines of the AtoN simulation system

- ◆ We proposed optimal placement with AtoN simulation and evaluation of placement quantification of 5 waterways of Busan Port in 2016.
- ◆ Reflected in the relocation plan of AtoN and improved the efficiency of AtoN operation of Busan Port



- ◆ The AtoN simulation system was acquired as S class(Special Task) of the ship simulation system according to the international certification Standards of the ship simulation system from KR(Korean Register of Shipping) on April 21, 2017.

Statement of Compliance



STATEMENT OF COMPLIANCE

Certificate No. : SEL20987-BS001 **Initial Approval** : 21st April, 2017.
Product : Ship Handling Simulator
Manufacturer : Korea Association of Aids to Navigation
 137, Gasan digital 1-ro, Geumcheon-gu, Seoul, Republic of Korea

Product Description : Bridge Operation Simulator for Aids to Navigation

- Type : AtoN Simulator
- Category : S (Special task)

" See Appendix 1 & 2 "

Approval Condition : " See Appendix 2 "

THIS IS TO CERTIFY THAT the above-mentioned product is found to comply with the relevant requirements of this Society's Rule and/or of the recognized standards as follows.

KR Guideline for the approval of Bridge Operation Simulator, Circular No. 2015-9-E
 STCW Convention, Regulation 1/12 & STCW Code Part A-II/1, 2, 3, 5

This Certificate is valid until 20th April, 2022.
 Issued at Busan, Korea on 21st April, 2017.


KOREAN REGISTER OF SHIPPING
 General Manager of
 Marine and Ocean Equipment Team

*Note : 1 : The Certificate will be automatically suspended and the Certificate become invalid from the expiry date of the Certificate in the event that the extension has not been granted or the renewal of the Certificate is not underway.
 2 : The manufacturer should notify this Society of any modification or changes that may affect the validity of this Certificate.*

Product Certificate



PRODUCT CERTIFICATE

Certificate No. : SEL20987-BS002 **Initial Approval** : 21st April, 2017.
Product : Ship Handling Simulator
Manufacturer : Korea Association of Aids to Navigation
 137, Gasan digital 1-ro, Geumcheon-gu, Seoul, Republic of Korea

Simulation at : Korea Association of Aids to Navigation (Yeosu City)
 1436-29, Hwayang-ro, Hwayang-myeon, Yeosu-si, Jeollanam-do Republic of Korea

Product Description : Bridge Operation Simulator for Aids to Navigation

- Type : AtoN Simulator
- Category : S (Special task)

" See Appendix 1 "

Approval Condition : " See Appendix 1 "

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Thank you very much
for your attention!

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