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Technical Domain / Task Number 2 …………………………………

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The Status of Distribution for the AtoN Integrated Management System in Korea

# Summary

For efficient management of AtoN and improvement of information utilization, an integrated AtoN management system has been developed in Korea and is being distributed to each Regional Offices of Oceans and Fisheries. In the past, each Regional Offices individually developed and operated the AtoN management system, and had problems such as overlapping budget investment, lack of compatibility, and increased maintenance cost.

## Purpose of the document

This proposal introduces the status of distribution for standardized AtoN management system in Korea.

## Related documents

Nil.

# Background

The Republic of Korea is surrounded by the sea on three sides and consists of many islands and a complex coastline. Accordingly, a large number of manned lighthouses and unmanned AtoN are installed to induce safe ship navigation. For efficient monitoring and management of unmanned AtoN, each the Regional Offices of Oceans and Fisheries in Korea developed and operated an AtoN management system.

AtoN management system refers to a system that can monitor and control AtoN status information in real time. The remote terminal unit installed in the AtoN transmits the status information of the AtoN to the AtoN management system using wired/wireless communication. The AtoN state information includes information on lighting and turning off a lantern, voltage values and current values of various equipment.

However, as each Regional Offices developed and operated the AtoN management system individually, there were problems such as information integration, lack of compatibility, and difficulty in maintenance. To solve this problem, an integrated AtoN management system has been developed in Korea and is being distributed to each the Regional Offices.

# Discussion

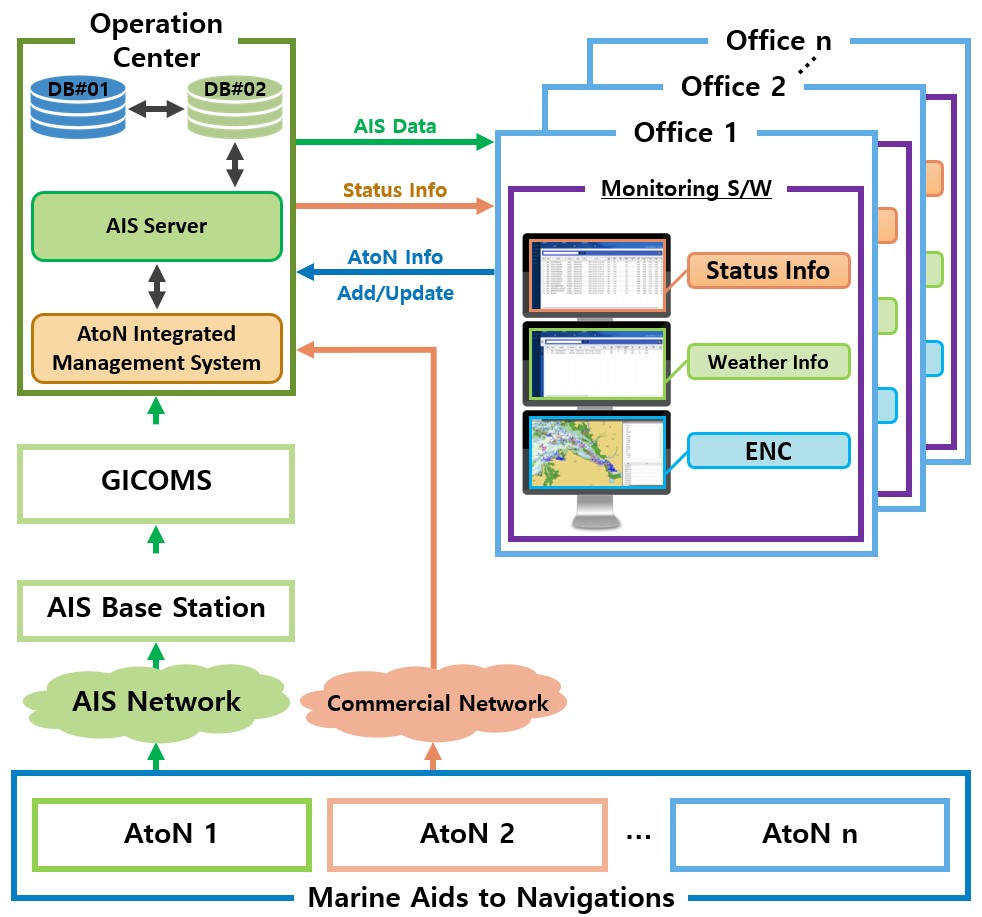
## Software Development

The AToN integrated management system consists of software for operation center for integrating AToN status information nationwide and software for AToN monitoring and control under the jurisdiction of Regional Offices of Oceans and Fisheries. An example of a user interface for the software is shown in Figure 1. In addition, the data transfer diagram of the AtoN integrated management system is shown in Figure 2.





1. User Interface of the AtoN Integrated Management System



1. Data transfer Diagram of the AtoN Integrated Management System

## Distribution Status and Future Works

Currently, it has been distributed to four Reginal Offices. It is planning to install additional three Regional Offices and collect user feedback by 2022.

In 2023, the AtoN integrated management system will be distributed to the remaining 6 Regional Offices. In addition, the software will be improved by reflecting user feedback, and the system will be operated stably through server expansion and redundancy.

The construction of the Korea Wide-area services of the AtoN integrated management system is planned to be completed in 2023. Table 1 shows the distribution status of the AtoN integrated management system.

1. Distribution Status of the AtoN Integrated Management System

|  |  |  |
| --- | --- | --- |
| **#** | **Name of the Regional Office** | **Distribution Status (Completion Year)** |
| 1 | Daesan | Complete (2021) |
| 2 | Busan | Complete (2021) |
| 3 | Gunsan | Complete (2021) |
| 4 | Mokpo | Complete (2022) |
| 5 | Jindo | Ongoing (2022) |
| 6 | Pyeongtaek | Ongoing (2022) |
| 7 | Incheon | Ongoing (2022) |
| 8 | Yeosu | To be Installed (2023) |
| 9 | Donghae | To be Installed (2023) |
| 10 | Jeju | To be Installed (2023) |
| 11 | Masan | To be Installed (2023) |
| 12 | Ulsan | To be Installed (2023) |
| 13 | Pohang | To be Installed (2023) |

# References

IALA G1008 - Remote Control and Monitoring of Marine Aids to Navigation

# Action requested of the Committee

The Committee is requested to:

1. Please take into consideration this paper and take action as appropriate.

1. Input document number, to be assigned by the Committee Secretary [↑](#footnote-ref-1)
2. Leave open if uncertain [↑](#footnote-ref-2)