

CORPORATE

SECURITY

TEAMWORK

EVENTS



04
Issue

e-Navigation News

DBDD Project
Updates

Spar Buoy
update

e-Navigation at
the IMO



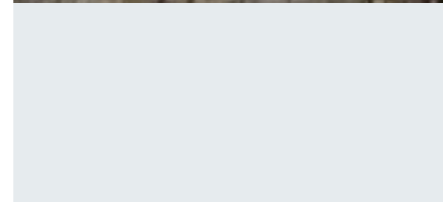
Commissioners of
Irish Lights

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Welcome to Issue 4 of CIL e-Nav News. This issue

will update our readers on progress in the Dublin Bay Digital Diamond e-Navigation demonstrator, the Spar Buoy trial, e-Navigation at the IMO and highlight outputs from the international e-Navigation Underway Conference 2015. Your feedback is essential to ensure the on-going development of e-Navigation is user focused. We welcome any feedback that you may have: navigation@cil.ie



CONTENTS

E-NAVIGATION NEWS



A DBDD PROJECT UPDATES

The Dublin Bay Digital Diamond (DBDD) is an e-Navigation demonstrator project for the Dublin Bay area, the purpose of which is to provide an opportunity for users across the maritime sector to explore the potential of e-Navigation services.

B SPAR BUOY UPDATE

On the 16th of February the Granuaile deployed trial Spar Buoys 300 metres East of the West Blackwater Buoy and 300 metres to the North of the Bennet Bank Buoy as part of a Buoy conspicuity trial.

C e-NAVIGATION AT THE IMO

You may remember from the last issue of e-Nav news that the International Maritime Organisation's Maritime Safety Committee (MSC) 94 approved the e-Navigation Strategy Implementation Plan (SIP) including 5 solutions and 18 tasks.

D INTERNATIONAL e-NAVIGATION-UNDERWAY CONFERENCE 2015

The global e-Navigation community met again for the fifth time on the Pearl Seaways Ferry on passage from Copenhagen to Oslo and back to Copenhagen



A clear and compelling need to equip the

master of a vessel and those ashore responsible for the safety of shipping with modern, proven tools to make maritime navigation and communications more reliable and user friendly and thereby reducing errors



DBDD PROJECT

UPDATES



Technical Advisory Committee

The Dublin Bay Digital Diamond Technical Advisory Committee (TAC) met during February and noted progress on the projects being developed in the DBDD. The TAC received a detailed technical report on Wi-Fi performance in the bay as well as reports on the delivery of the services described in this news letter. Planet Ocean Ltd. provided a presentation on equipment that they will provide to the project and the Nautical Institute Director of Projects reported on e-Navigation developments at the IMO.

AIS text an agent

The AIS text an agent facility continues

on test with Burkes Shipping. The system monitors AIS message Types 1,2 and 3 (position reports) to determine if a vessel has entered/ exited a pre-defined area in Dublin Bay, an SMS message is then forwarded to the relevant ships agent to give real time notice of arrival of a vessel.

Resilient Positioning

The Stereoscopic positioning system is where 2 photos of the same object/ view are taken a few meters apart, compared with real-time on-board camera images and processed for a match at a particular bearing. The images taken have been sent to Maynooth University (NUIM) for processing and initial results have

indicated that the images would need to be of higher resolution and taken at enhanced angles.

e-Loran

R&RNav installed a Differential e-Loran reference station in CIL Dun Laoghaire in October. Additional Secondary Factor (ASF) Coverage Tests to establish the delay as a signal travels across different terrains were completed in January and we are currently awaiting the full analysis and results of these tests.

ASF tests were carried out onboard the RV Keary. The Keary belongs to the INtegrated Mapping FOr the Sustainable Development of Ireland's MARine Resource (INFOMAR) programme and concentrates on creating a range of integrated mapping products of the physical, chemical and biological features of the seabed in the near-shore area. INFOMAR are members of the DBDD TAC.



AIS Traffic Recorder

The AIS Port traffic counter for light dues can record all traffic passing the North Bull and Poolbeg inbound to Dublin. An ARCGIS software upgrade is required in order to extract usable data for our finance Department, this upgrade is in our Technology and Data Service (TDS) Department

work plan.

Planet Ocean Ltd.

CIL have teamed up with Terry Sloane of Planet Ocean Ltd. to test equipment as part of the DBDD Demonstrator Project.

The Buoy tracker III is a system for remotely checking the precise location of a Buoy, it uses GPS together with a Globalstar satellite system. The Buoytracker sends a heartbeat message every 24 hours confirming correct operation. CIL have already received delivery of the tracker and are currently testing the tracker.

Acoustibuoy, is a Passive Acoustic Monitoring Buoy (PAM) designed to utilise the special features of ic-Listen, Smart Hydrophones to monitor, record and display acoustic data in real time. It is used for ship noise measurements, marine mammal monitoring, underwater noise studies or general acoustic studies.

C-Enduro is a long endurance autonomous surface vehicle used to safely and cost effectively collect data at sea. Built to operate in all marine environments, C-Enduro uses energy harvesting technology combined with an efficient self-righting hull to deliver unprecedented payload capacity and power. It is planned to test the Acoustibuoy and C-Enduro as part of the DBDD Demonstrator in the Summer. More information on Planet Ocean is available at:

<http://planet-ocean.co.uk/wp/>

Wi-Fi-Trial

Wi-Fi coverage tests have indicated that there was plenty of signal strength but that there is too much interference from other Wi-Fi nodes in the Dublin Bay area. The TAC discussed these findings and it was agreed to investigate further.

Kish Camera

The camera located on Kish Lighthouse continues with its live streaming available at

<http://www.cil.ie/technology-data-services/digital-diamond.aspx> The camera is located inside the lighthouse (on the floor below the Optic) and is pointing Northwards. Ferries sailing between Dublin and Holyhead / Liverpool can be seen passing throughout the day and on a clear day, Lambay Island can be made out in the distance.

Dublin Bay Buoy and sonde

The Dublin Bay Buoy @ DublinBayBuoy continues to tweet Met/ Hydro Data including, Wind Direction, Wave Height, Wave Period and Water Temperature approximately every 20 minutes, users can also view the data at the following link on the Commissioners of Irish Lights website <http://cilpublic.cil.ie/MetOcean/MetOcean.aspx>

Following communication issues with the DCU Water quality sonde it has been decided to bring the water quality data back via AIS. Our TDS department are currently working on this.

SPAR BUOY UPDATE

SHORT ARTICLE



On the 16th of February the Granuaile deployed trial Spar Buoys 300 metres East of the West Blackwater Buoy and 300 metres to the North of the Bennet Bank Buoy as part of a Buoy conspicuity trial. The spar Buoy has the same light and daymark display as the existing buoys.

be obtained from the CIL website and e-mailed to navigation@cil.ie

From an e-Nav context the constant tension moorings can prevent the buoy from spinning with implications for the use of different sensors.

While the slim profile is particularly well suited to ice conditions they can suffer from conspicuity problems when compared with conventional buoys. CIL are seeking feedback from those of you that operate in the area. Observational Reports can



E-NAV AT THE IMO

FEATURE

You may remember from the last issue of e-Nav news that the International Maritime Organisation's Maritime Safety Committee (MSC) 94 approved the e-Navigation Strategy Implementation Plan (SIP) including 5 solutions and 18 tasks.



The time is right now, to move to practical e-Navigation
- Director General Danish Maritime Authority



International e-Navigation Underway Conference 2015:

The global e-Navigation community met again for the fifth time on the Pearl Seaways Ferry on passage from Copenhagen to Oslo and back to Copenhagen. The conference theme this year was "e-Navigation, the implementation Phase?"

The conference concluded that:

1. e-Navigation must have clear benefits which have to be better communicated.
2. The focus of e-Navigation in the near future has to be on getting accurate, useful and timely information to the navigating mariner.
3. There is a need for a functional relationship between industry provision and the regulatory framework to reap the benefits of e-Navigation.
4. The Maritime Cloud is moving from conceptual to development phase in various regions through demonstration projects.
5. The conference recognised the five main solutions from the SIP and agreed that the future development of e-Navigation must be specific, measurable, achievable, realistic, time-based and clear to all stakeholders.
6. e-Navigation should reduce the workload of the mariner by automating routine tasks, allowing the mariner to focus on situational awareness and the main task of navigating.
7. The risk of cyber security issues should be considered in the implementation of e-Navigation.
8. Successful national-level training awareness models should be replicated and should include basic computer literacy.

Norway and a number of other co-sponsors will submit a work programme at MSC 95 due to take place in the first week of June. The co-sponsors have reviewed each of the tasks listed in the SIP with a view to reducing the number of outputs. 6 outputs have been identified and prioritised based on the original 18 tasks, the work programme describes these outputs in SMART terms. The following outputs are being put forward for approval:

1. Guidelines on standardized modes of operation (S-mode)
2. An update, by adding new modules, to the revised performance standards for Integrated Navigation Systems (INS) (resolution MSC.252(83)) relating to the harmonization of bridge design and display of information
3. A revision of the Guidelines and criteria for ship reporting systems (resolution MSC.43(64), as amended) relating to standardised and harmonized electronic ship reporting and automated collection of on-board data for reporting.
4. Amendments to the General requirements for shipborne radio equipment forming part of the global maritime distress and safety system (GMDSS) and for electronic navigational aids (resolution A.694(17)) relating to Built In Integrity Testing (BIT) for navigation equipment.
5. Guidelines on harmonized display of navigation information received via communications equipment.
6. Consideration of reports on development and implementation of e-navigation (e.g. Maritime Service Portfolios (MSPs) by Member States and other international organizations.



The full conference report can be downloaded at <http://www.e-navigation.net/uploads/e-Navigation%20Underway/e-Navigation%20Underway%202015%20Report%2020150202.pdf>