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| <b>EfficienSea – Efficient, Safe and Sustainable Traffic at Sea</b> |
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To: IALA-AISM  
20 ter Rue Schnapper  
78100 St. Germain-en-laye  
France

Att: Gary Prosser  
IALA General Secretary

**RE: IALA as the custodian of reference implementations for maritime open source software?**

Dear Sir.

The [EfficienSea project](#) is in the process of developing a software package, which is intended to support Good Practice in AIS VDL Management, to be used by National or Regional Maritime or Telecommunication Authorities, AIS network operators, and other interested parties. This Software package will be made available to all European Union Member States, as part of the deliverables of the EfficienSea project.

This activity (activity 3, work package 5 of the EfficienSea project) is supported by several AIS experts from within the IALA membership.

It is the intention of the Danish Maritime Safety Administration, as the leader of this activity, to make the software available to all IALA members as well, as we hope it will be useful to other interested parties outside Europe, in recognition that AIS VDL Management is a global issue.

Developing a software application is one thing – ensuring support and maintenance of the application for a rather specialized purpose in a small market is quite a different issue, which the budget of the EfficienSea project cannot ensure.

Instead of a costly contract for support and maintenance with an industrial partner providing a proprietary application, it is our intention develop this software application as an ‘open source’ reference implementation, making it available not only for free use by IALA members (and others), but also for modification and inclusion into other software applications, for all interested parties in the maritime domain to benefit and possibly contribute to the future maintenance and improvement of this package.

A specific planned output of the project, will be the list of features, which the project team may identify as desirable, but unable to implement within the scope and budget of this particular project.

It is our hope that other projects or interested parties will find it worthwhile to use and to contribute to the future improvement of such an open source software application. Hopefully, Industrial Members of IALA may find it relevant to integrate into their AIS network management software.

This will require the publication of the availability of such a reference implementation, within the relevant maritime domain, and a forum where suggestions and contributions can be held in custody. It is the suggestion by our activity group, that IALA might be such a forum.

An important issue in this respect is how software is licensed. There exists a multitude of possible licensing terms; however a rough differentiation between common approaches is attempted here:

- 1) Copyright protected proprietary software. Applications may be used by a licensee on commercial terms or, by permission of the copyright holder, be freely available for *redistribution* and/or *use* by the public or a more or less restricted group or purpose as shareware or freeware.
- 2) Open source licensed software can be *used, examined, modified* and *copied or redistributed* – typically on non-commercial terms - by the public or a more or less restricted group or purpose.

Open Source software licenses may in some instances contain what's referred to as a 'copyleft' clause (as opposed to *copyright*), requiring that the exact same license conditions are carried on by anyone modifying, redistributing or integrating the software into other applications. Such 'copyleft' clauses should be avoided in this respect, as they will effectively prevent Industrial Members from integrating software into proprietary solutions that they can use commercially. This would reduce the likely benefits of IALA reference implementations, and most likely prevent Industrial Members from contributing to the process. However, with appropriately selected open source licensing terms (a 'IALA license' perhaps), it is anticipated that IALA members – National as well as Industrial - could benefit from IALA taking a set of software reference implementations under its custody.

### **Action requested**

The General Secretary is invited to comment on the potential for a future role of IALA as a custodian of open source software reference implementations for the benefit of the maritime domain.

The General Secretary is further invited to indicate whether IALA will be willing to be the custodian of an open source, freely distributable software application to support AIS VDL Management.

Best regards

Jens K. Jensen  
Innovation Engineer,  
Danish Maritime Safety Administration