**Emerging Digital Technologies Working Group (WG 3)**

**Draft Terms of Reference**

**Introduction**

The development of digital technologies continues to be rapid and it impacts on almost all aspects of the maritime industry, including maritime communications, aids to navigation and VTS.

Digital technologies deal with the creation and practical use of digital or computerised information using devices, methods or systems. (Source http://www.dictionary.com)

Therefore, it is important to evaluate emerging digital technologies applicable to, for example, Maritime Autonomous Surface Ships (MASS), port management systems, maritime single windows and communications architecture. The evaluation will be a preliminary, high level, desktop study. It will identify the key features and capabilities advantages/disadvantages, limitations and application to aids to navigation, VTS and e-navigation services and systems.

For this purpose, a new working group, named ‘Emerging Digital Technologies’ has been established for the 2018-22 period.

The vision and philosophy of the working group review is to encourage IALA to adopt the use of new technologies. A simplified set of assessment criteria has been established to provide a consistent review approach. However, it is recognised that innovation and new technologies cannot always be easily measured by extant processes. Accordingly, the review process will promote a positive and assumption based appraisal which will allow new technology related ideas, emerging, and mature technologies to be more simply and practically assessed on merit rather than feasibility.

**Terms of reference**

Taking into account rapporteur reports, papers submitted to the Committee and presentations, comments, discussions and decisions of plenary, the Working Group will:

1. scan the technological environment to identify possible technologies to be evaluated, for example Artificial Intelligence (AI), Big Data Analytics, distributed ledger technology (DLT), communications and domain awareness technologies;
2. invite representatives of candidate technologies to provide information to the working group;
3. evaluate emerging digital technologies at a high level and identify their advantages, limitations and applicability to port management systems, single window, MASS, aids to navigation, VTS and e-navigation;
4. develop internal advice on emerging digital technologies and inform other working groups and IALA Committees on matters of relevance to their work;
5. liaise with other external bodies, as required;
6. organise workshops, seminars or other events on digital technologies, as necessary; and
7. submit a written report at the end of each Committee session.