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Agenda item 6.1

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Proposal to Establish an Operational MCP Instance under IALA Custodianship

# Summary

This paper proposes that IALA consider establishing and operating its own instance of the Maritime Connectivity Platform (MCP) to support the delivery and discoverability of real-time maritime services, particularly those outside the traditional hydrographic domain. This would complement the potential IHO initiative (which is currently under discussion) while supporting IALA’s broader remit, especially with respect to services developed under the VTS and AtoN domains and other emerging digital maritime services.

## Purpose of the document

The purpose of this document is to recommend that the DTEC committee initiate the drafting of a paper on establishing an operational MCP instance under its own custodianship and forward this to the PAP or Council as appropriate. This MCP instance would support the provision of services developed within the domain of IALA, particularly those unlikely to be addressed by the potential IHO MCP instance alone.

## Related documents

HSSC17-04.4D Business Case: IHO Operated Intergovernmental MCP

HSSC17-04.4E IHO infrastructure needs for secure data distribution

IALA G1183: Provision of MCP identities

IALA G1191: Maritime Service Registry (MSR) Technical Specification

IALA G1164: Management of Maritime Resource Name Organization Identifiers

# Background

The concept of the MCP as the necessary backend infrastructure for SECOM-based real-time maritime services has been detailed in documents submitted to the IHO (HSSC17-04.4D and 04.4E). IHO’s focus is primarily on supporting governmental hydrographic services and the eventual SECOM integration into ECDIS.

However, IALA’s scope and stakeholder base extend well beyond the hydrographic domain. Technical services such as S-201 (AtoN Information), S-212 (Traffic Management), S-421 (Route Exchange) and other emerging digital services, fall under the purview of IALA committees, particularly the ARM and VTS Committees, and are not exclusively or necessarily delivered via ECDIS. As such, these services require a supporting infrastructure that accommodates broader service delivery platforms and more diverse data provider profiles.

Furthermore, the recent shutdown of the Navelink consortium has left the maritime sector without a stable, operational MCP instance. Without action from trusted international organisations like IALA, there’s a significant risk of fragmentation, vendor lock-in, and lack of trust in emerging proprietary infrastructures.

# Discussion

## Rationale for an IALA-Operated MCP Instance

The following points outline the key reasons why IALA is well positioned to establish and operate its own MCP instance:

* IALA encompasses a diverse range of members including VTS authorities, AtoN providers, and industry partners who are not typically represented within IHO. Some of these stakeholders will not interface directly with ECDIS but will still require secure, discoverable, and interoperable real-time services.
* Several services relevant to IALA members (e.g. Traffic clearance services using S-212) will not be supported within ECDIS platforms in the foreseeable future. An IALA MCP would ensure these services have an appropriate delivery and discovery mechanism aligned with the SECOM protocol, as it is unclear whether such services would be supported by the governance model of an IHO-operated MCP.
* The establishment of an additional MCP instance by IALA would contribute to a globally distributed and federated MCP infrastructure. This would avoid a single point of failure and increase the resilience of digital maritime services.
* Unlike IHO, which is expected to prioritise governmental services initially, IALA, given its close relationship with industry stakeholders, could explore operational concepts that also include trusted non-governmental services from the outset, potentially accelerating service adoption.
* For many VTS authorities and AtoN service providers, IALA is the first point of reference at the international level. An MCP instance operated by IALA would lower the barrier for these organisations to onboard SECOM-compatible services.
* IALA already operates a well-governed Maritime Resource Name (MRN) registry and follows established registration procedures (as described in Guideline 1164). These governance mechanisms could be extended or adapted to administer the Maritime Identity Registry (MIR) and Maritime Service Registry (MSR) components of the MCP.
* Supporting the concept of “few trusted MCP instances” rather than a single global node aligns with international responsibilities and governance principles. An IALA-operated instance could interoperate with the IHO instance, enabling cross-domain service discovery while maintaining independence and autonomy.
* IALA is the recognised owner and maintainer of the technical specifications for the MIR and MSR through its established guidelines. This positions IALA uniquely to not only operate an MCP instance but also ensure its alignment with evolving technical standards and operational requirements.

## Complementarity to IHO MCP

While IHO’s MCP initiative initially targets S-124 and potentially S-129 and integration into ECDIS ecosystems, the IALA instance would cover a complementary set of services and stakeholders, focussing on AtoN and VTS related services and forming part of a federated global MCP network. The combined effect would be a robust, open, and interoperable SECOM infrastructure covering a wider range of maritime services.

The only service currently mandated to be supported by ECDIS (route exchange) falls within the IALA domain, as route exchange between vessel and shore is primarily defined to happen between VTS and the vessel. Consequently, most operators of such services are IALA members.

## Additional Considerations

**Operational Aspects**

There are open-source reference implementations of MCP available (developed and maintained by members of the MCP consortium; maritimeconnectivity.net), reducing development costs and facilitating quick deployment. Further details on the business case and cost implications are outlined in the documents HSSC17-04.4D and HSSC17-04.4E as submitted to IHO HSSC17 and available via the IHO Portal[[1]](#footnote-1).

IALA could leverage partnerships with other organisations for global distribution and failover support.

The financial burden of operating a reliable MCP instance (particularly one meeting stringent uptime and security requirements) may present a challenge to IALA. To address this, a paid subscription model could be considered, potentially applying even to IALA member states. This might not have been a common practice in the past, however, it may offer a sustainable way to fund the operational costs associated with delivering a core maritime service component.

If IALA members are concerned about liability in this context, it could also be considered to establish an independent legal entity under IALA’s governance, which could operate the MCP - and thus shield IALA and its members from any liability.

**Impact on the IALA MCP test instance**

The primary purpose of the [IALA MCP test instance](https://www.iala.int/technical/mcp-test-instance/) is to support IALA members in the development, testing and validation of digital maritime services in the context of e-Navigation. As highlighted on the IALA website, the test instance is strictly non-operational, with no guarantees regarding availability or liability. In contrast, an operational instance would be expected to meet defined service levels and provide appropriate assurances. Therefore, its establishment would in no way affect the IALA test instance currently provided by KRISO and GRAD.

**Revision of G1191**

Expanding the current MSR specification to support the endorsement of services could simplify the process of identifying reliable and authoritative services for end-users. If IHO and IALA MSRs were to list services within their domains that they formally endorse (such as route exchange services provided by verified VTSs) and make this information visible in search results, it would enhance user trust and confidence. Incorporating such details into G1191 would require only a minor amendment.

# Action requested of the Committee

The Committee is invited to:

1. **Consider the strategic and technical benefits of IALA operating an MCP instance**to support SECOM-based real-time maritime services, especially those not addressed by IHO.
2. **Draft** a liaison note or position paper on the concept, including operational, technical, and governance models aligned with existing IALA structures.
3. **Forward the paper to the PAP or Council, as appropriate,** for consideration and further action.
4. Consider the proposal to revise IALA G1191, as appropriate.

1. See <https://portal.iho.int/page/meetings/858> [↑](#footnote-ref-1)