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Input paper for the following Committee(s): check as appropriate Purpose of paper:

**□** ARM **X** ENG **□** PAP **X** Input

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Agenda item [[2]](#footnote-2) n.n

Technical Domain / Task Number 2 C72-13.1.2

Author(s) / Submitter(s) …………………………………

Enhanced Radar Positioning System

# Summary

CIRM thanks IALA for the liaison note of 11 December 2020 introducing IALA’s work on the Enhanced Radar Positioning System (ERPS); CIRM would like to be involved with this work towards standardisation of the technology.

# Discussion

## Scope of equipment

The attached paper “Enhanced Radar Positioning Systems for Resilient Positioning” talks about modulating the racon transmissions; does this mean that ERPS assumes a “solid state” radar?

## Bearing accuracy of Radar scanners

IEC 62388 requires the radar bearing accuracy to be within 1 degree. For an eRacon located 3 nautical miles from the vessel, this would give a position accuracy of ±48 metres (3\*1852\* sin (0.5o) = 48). As bearing accuracy depends on the scanner length, longer scanners would be required to increase the accuracy of the position.

## Detection of position signals within radar echoes.

When in a harbour, many targets may be displayed on the radar screen, this may be a challenging environment for radar to detect position signals from radar echoes.

## Coverage area of a modified eRacon

The coverage area of the eRacon is likely to be limited due to the relatively weak power of solid-state radars.

# Action requested of the Committee

The Committee is requested to:

1. Note CIRM’s interest in IALA’s work on ERPS, continue to liaise with CIRM, and
2. Consider the issues raised in section 2.

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