

LIAISON NOTE TO CIRM

Enhanced Radar Positioning System

1 INTRODUCTION

IALA thanks CIRM for their liaison note IALA ENG 13 Input Paper ENG13-3.1.0.19 Enhanced Radar Positioning Systems (ERPS). IALA welcomes CIRM involvement in ERPS standardization.

2 DISCUSSION

CIRM raised four discussion points, which are addressed below:

2.1 Scope of equipment

CIRM raised the following comment:

“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?”

ERPS makes no demands on the radar transmitter. Radar receiver requirements will be identified during standardization.

2.2 Bearing accuracy of radar scanners

CIRM raised the following comment:

“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 ($3 \times 1852 \times \sin(0.5^\circ) = 48$). As bearing accuracy depends on the scanner length, longer scanners would be required to increase the accuracy of the position.”

Noted. Bearing accuracy is one of several error terms that need better study and definition.

2.3 Detection of position signals within radar echoes

CIRM raised the following comment:

“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.”

Noted.

2.4 Coverage area of a modified eRacon

CIRM raised the following comment:

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

Noted.

3 ACTION REQUESTED

The CIRM is requested to consider the above responses from IALA to the CIRM discussion points.

