Liaison Note to the International Hydrographic Organisation (IHO)

What is a major light?

# Introduction

The United Kingdom Hydrographic Office (UKHO) submitted a request by e-mail to the 18th meeting of the Aids to Navigation Management (ANM) Committee (23-27 April 2012) regarding concerns by ECDIS users that ‘major’ lights on the display are far less prominent than sectored lights with lesser ranges. The UKHO request is shown in 2.1 below.

# Background

## UKHO input:

*“I would like to ask your advice on a matter, arising from a meeting in December. We discussed the charting of ‘major’ lights. Traditionally, a major light has been assumed to be one with a range of 15 nautical miles (15M) or more. Such lights are emboldened in the ‘List of Lights’. However, so far as I and colleagues have discovered, there is no actual definition, either in IHO or IALA publications (or anywhere else that we have found).*

*Users of ECDIS have expressed concern that major lights on the display are far less prominent than sectored lights with lesser ranges. In studying how to overcome this problem, the IHO WG dealing with the matter has opted to take 10M as a range to drive a more prominent depiction. Of course, ENC need a rules-based driver, which is not necessarily required for paper charts. One of the reasons for choosing 10M rather than the more traditional 15M is a perception that light ranges are generally being reduced.*

*With the increasing use of coloured sectors on paper charts, it is also becoming true that major lights are sometimes much less prominent than comparatively minor lights, so our WG has also been considering this question. We will be recommending the use of a surrounding coloured circle, instead of the small flare, on major lights. But the question that arises is how those lights should be selected or defined. Our thinking at present is that a major light is not defined by range, but by the importance of the light in the context of the chart; a matter of cartographic judgement. So, an 8M light, for example, may be a ‘major’ light on a large scale chart, but a minor light on a smaller scale chart covering the same area. It is even conceivable that a 20M light is a major light on a coastal passage chart, but once a vessel is close to harbour, it becomes almost an irrelevance while a much lower powered light could become more important.*

*It is also debatable whether the correct term is ‘major’, ‘important’ or ‘significant’ or whether these terms are simply interchangeable.*

*It would be very helpful to have your views on this subject, including whether there is any official IALA line.”*

## Discussion

The International Hydrographic Organization (IHO) defines major lights as “...lights intended for use at sea, usually with a range of 15 miles or more, and in outer approaches to harbours.” – IHO Document S-4, Edition 4.2.0, August 2011. The standard of 15 miles is consistent with IHO standard for depicting major lights in Lists of Lights “...in bold type if equal to or greater than15 M, in normal type if less.” – IHO Document S-12, June 2004.

## IALA response

IALA agrees that no definition of the current 15 nautical mile (nm) threshold exists in its guidance documentation. However, the historical difference between major and minor lights does not have as much relevance in today’s navigational environment as the importance of individual lights to the mariner’s situational awareness.

From an IALA perspective, it is the categorisation of an aid to navigation as determined by its availability targets irrespective of light range, that defines if the aid is of primary navigational significance (Cat 1), navigational significance (Cat 2) or less navigational significance (Cat 3). However, this does not reflect criteria for their portrayal on a navigational chart.

IALA understands that the IHO’s S-100 standard will offer the opportunity to flexibly portray AtoN in electronic navigation systems and potentially paper charts.

IALA recognises that IALA’s AtoN category information will not be available to charting authorities until the AtoN Information Product Specification is developed for inclusion in the IHO Registry.

IALA therefore accepts that, pending the development of the S-100 AtoN Information Product Specification, charting authorities should retain the current approach to portrayal of major and minor lights on charts.

The introduction of S-100 offers the opportunity to introduce a new approach to how AtoN portrayal is controlled. IALA would welcome the opportunity to work closely with the IHO in exploring the issues involved.