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Technical Domain / Task Number 2 Visual and Physical AtoN

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Need for harmonizing requirements to leading line dayboard dimensions in IALA documentation (Guideline 1023)

# Summary

A small discrepancy in the current IALA recommendations regarding dayboard size for leading line daymarks between Guidelines 1023 and the newer 1094 has been noted.

## Purpose of the document

This paper sets out the noted discrepancy in the recommendation on daymarks and proposes a discussion.

# Background

The latest source on leading mark dayboard dimensions is the IALA Guideline 1094 On Daymarks for Aids to Navigation (2012) that recommends the Width/Length ratio of 1/2: W=L/2 (pages 34 and 35). The white vertical stripe inbetween red side area elements must be dimensioned as W/4. Paragraph 8.2.4 refers to Guideline 1023 in a way that is not completely unambiguous:

# Discussion

"The daymarks of leading lines are described in IALA Guideline 1023 [5]. As leading lines are used in a small horizontal sector only, the daymark should be flat. The Guideline proposes a dayboard with white and red vertical stripes (W = L/2)."

The older Guideline 1023 on Design of Leading lines (2005) does refer to historic US practices of dayboards with 1/2 ratio (Table E6-1) while noting "...This table expresses dayboard size in terms of height in meters and range in kilometers based on the presumption that the dayboard height will be 1.5 times the width, a common international practice. ... U.S. dayboards are constructed with a 2:1 ratio of height to width (largely due to the North American standard plywood size of 4 feet by 8 feet), ..." (page 38). The calculation spreadsheet that comes with it and is still in daily use calculates the dayboard width as "length / 1.5".

IALA Recommendation E-112 On Leading Lights (2005) says nothing about dayboards.

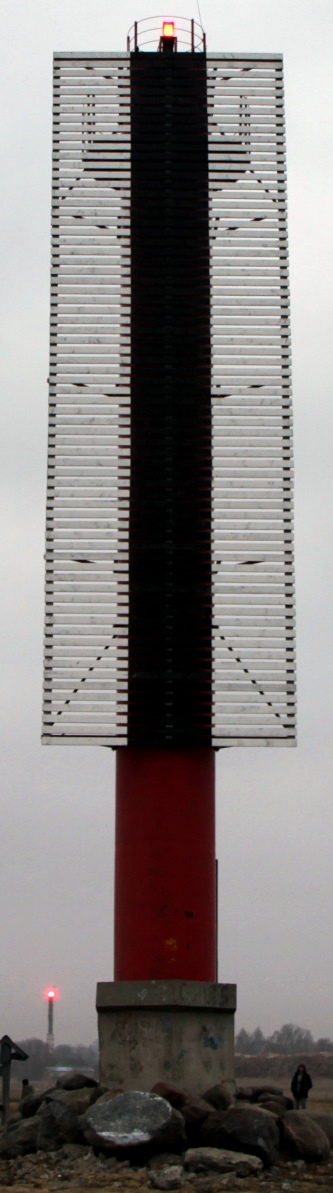
Considering that "the vertical size of the object is seen as the limiting factor for the range of the daymark" (1094, 5.5), it is obviously reasonable to keep the horizontal dimensions of a dayboard as

small as possible to minimize the wind load, thus 1/2 should be preferred to 2/3?

There are many different daymark solutions used on leading lines that are not covered by IALA documents. These could be collected from IALA members and give guidance for these as well. The following are some pictures of daymarks used for leading lights in Germany and Estonia.



Leading light daymark pictures from Germany kindly provided by Mr Frank Hermann



Leading light daymark pictures from Estonia kindly provided by Mr Aivar Usk

# Action requested of the Committee

The Committee is requested to consider updating either Guideline 1023 and the calculation spreadsheet, or the Guideline 1094 to harmonize the recommendations on leading light daymark dimensions where contradictions currently exist.

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