

**6th CSPCWG MEETING  
IHB, Monaco, 1-3 December 2009**

**Paper for Consideration by CSPCWG**

**Chart graticule degree figures**

<b>Submitted by:</b>	UK
<b>Executive Summary:</b>	UKHO has decided to include a degree figure in the chart border for every meridian and parallel chosen for a chart's graticule.
<b>Related Documents:</b>	S-4 B-212.6; INT2
<b>Related Projects:</b>	None

**Introduction / Background**

UKHO has decided to include a degree figure in the chart border for every meridian and parallel chosen for a chart's graticule, principally to support the plotting of NMs and reduce the potential for error in quoting positions.

**Analysis / Discussion**

**S-4 B-212.6** Graduation numbering states:

- a. Degrees: At scales larger than 1:500 000, degree values should be quoted in the form 51°00' rather than 51°, for example. Additional degree values should be inserted (preferably at a meridian or parallel) to satisfy the following requirements:
- The degree value should appear in each half of a folded chart
  - Where there is only one whole degree value falling within the limits, one appropriate graduation tick should be additionally numbered with the next lower degree value, as well as the minutes value
  - Where the one whole degree value on a side not requiring folding occurs close to a corner, the degree value should be shown again at one of the numbered minutes.

By applying the above guidance, a degree figure will be inserted at least in every half of a folded chart. However, UKHO has experienced several cases internally of careless plotting (resulting in, for example, a Notice to Mariners being plotted a degree out of position) or errors in quoted positions. It is assumed that the same problem may occur more widely where less experienced plotters are updating charts. It is believed that including the degree figure in the border at every meridian and parallel will reduce the likelihood of such errors. It may also be useful when a chart is folded additionally to a centre fold, or when displayed as a raster chart on a screen where only part of the chart is visible.

UKHO has decided to implement this change on all future NCs and NEs. This policy does not contradict the minimum requirements currently stated in S-4 above.

**Conclusions**

This minor change to chart border detail will enhance safe plotting.

**Recommendations**

Other HO's may wish to consider UKHO's change of policy. If considered useful, then S-4 B-212.6 could be amended, eg as follows:

Add:

'The above is the minimum requirement for degree figures in the chart border. Additional

degree figures, eg at each meridian and parallel, may reduce the risk of plotting errors.’

If this or similar wording is adopted for S-4, it may be necessary to slightly adjust the wording at B-212.8 (Supplementary internal graduation) and B-293.4 (Graduation of Source Diagrams) so that it is not required to increase the number of degree figures in these contexts.

### **Justification and Impacts**

Justification: enhance safe plotting.

Impacts: minor changes to S-4  
Some additional work on borders at chart NE and NC  
Possible changes to chart border software  
Possible changes required to INT2

### **Action required of CSPCWG**

The CSPCWG is invited to:

- a. note UKHO’s change of policy
- b. consider whether this should be recommended to the IHO community
- c. consider whether any changes are required to S-4 and INT2.