QUAPOS IN S-101 AND MERGING OF *PA* AND *PD* ABBREVIATIONS

NCWG7-06.3A

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1) *Quality of Horizontal Measurement* in S-101 ENC

2) Merging of abbreviations *PA* and *PD*

Quality of Horizontal Measurement in S-101 ENCs

Paper S-101PT6-14 « *Quality of Horizontal Measurement* »

IHO **WHAT IS NEEDED / USEFUL TO THE MARINER?**

International Hydrographic Organization

- Allowable values for *quality of horizontal measurement* in the current DCEG:

  1: surveyed
  2: unsurveyed
  3: inadequately surveyed
  4: approximate
  5: position doubtful
  6: unreliable
  9: estimated
  10: precisely known
  11: calculated

- Values 1, 2 and 3 do not relate to the quality of the measurement but to the global quality of bathymetry in the area (note that "inadequately surveyed" is also value 10 of attribute *survey type*. It is proposed to remove these values.

- Value 6 has about the same meaning than 4 and 5. It is proposed to remove this value.

- Values 9, 10 and 11 bring no useful information or/and are subjective. It is proposed to remove these values.

Decision (S-101PT) :

Reduce the allowable values to
4 (approximate)
5 (position doubtful)

Action S-101PT6-18 : Raise the decisions made in relation to the restriction of the values of the attribute qualityOfHorizontalMeasurement to the NCWG for possible impacts on S-4 and INT1.

Quality of Horizontal Measurement in S-101 ENCs

No direct impact on S-4

Proposal :

Many HOs create paper charts from DB in S-57 => it seems important to add some guidance in S-4 :

Review S-4 (B-424), after: "*The abbreviations 'PA' and 'ED' may be applied to features other than dangers where necessary.*", to add the following guidance: "*On modern cartographic production systems, abbreviations 'PA' and 'ED' on paper charts can be derived from the qualitative attribution (i.e. QUAPOS) on the corresponding S-57 features. In order to support future ECDIS route planning and route monitoring functionalities, it is strongly recommended to also include quantitative information by populating all relevant S-57 attributes (e.g. POSACC).*"

Merging of abbreviations *PA* and *PD*

Definition of *PA* and *PD* in S-4 :

B-424.1   PA, meaning **Position approximate**, must be used to indicate that the position of a shoal, wreck, or other object, either has not been accurately determined or does not remain fixed.
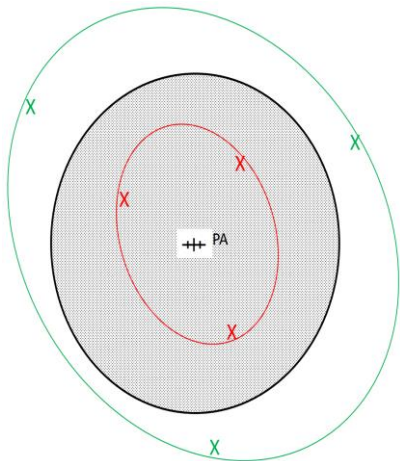
PA **B7**

B-424.2   PD, meaning **Position doubtful**, must be used to indicate a shoal, wreck, or other object has been reported in various positions and not confirmed in any of them.

PD **B8**

Mariner's understanding : the object may not be at its charted position => He has to move away

Merging of abbreviations *PA* and *PD*

In terms of uncertainty, is there a difference between both information ? :

In black: Wreck encoded with *PA* (the positional uncertainty is shown by the black circle);
In green: Wreck reported at three different positions (the wreck will be charted at one of these positions, with *PD* according to S-4);
In red: Wreck reported at three different positions (the wreck will be charted at one of these positions, with *PD* according to S-4).

It is impossible to evaluate any degrees of uncertainty from abbreviations *PA* and *PD.*

In PA or PD cases, when « avoiding » the object concerned, the mariner might well come to its true position

Merging of abbreviations *PA* and *PD*

Proposition :

1) Merge *PA* and *PD* in the same abbreviation *PA*.

2) Review S-4, mainly :

B-424.1: Review to read:
"*PA, meaning Position approximate, must be used to indicate that the position of a shoal, wreck or other object, either has not been accurately determined or does not remain fixed or has been reported in various positions and not confirmed in any of them.*

B-424.2 should be replaced by: "**PD**, *meaning* **Position doubtful**, *was formerly used to indicate a shoal, wreck, or other object has been reported in various positions and not confirmed in any of them*.

PD **B8**

It is no longer useful to chart PD, as it brings no additional value as compared to PA to the mariner in terms of navigation. See B-424.1.

3) Submit a paper to S-101PT to inform them and consider a replacement of attribute *Quality of Horizontal Measurement* in S-101 by a Boolean attribute *Position unreliable (True/False).*

Thank you !