



CHART STANDARDIZATION & PAPER CHART WORKING GROUP (CSPCWG)

[A Working Group of the Hydrographic Services and Standards Committee (HSSC)]

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CSPCWG Letter: 12/2012

UKHO ref: HA317/010/031-09

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To CSPCWG Members

Date 23 August 2012

Dear Colleagues,

Subject: Action 34 arising from 8th CSPCWG meeting – follow-up to Letter 07/2012

Thank you to 22 Working Group members who responded to Letter 07/2012 on the Data Quality Working Group's (DQWG) questionnaire to chart users. It is clear that some of the original questions in the survey were flawed and, therefore, some answers were difficult to interpret with confidence. Nevertheless, the questions posed to us as a Working Group have caused us to look carefully at some of our long-serving symbols and cartographic devices for presenting data quality on paper charts. It is obvious that they generated considerable interest and thought, resulting in some very useful insights and ideas.

As usual, we have consolidated your responses and comments at Annex A, together with our brief responses. While the answers to some of the questions were unanimous (or nearly so) and require no further work, I believe others would benefit from an 'around-the-table' discussion.

Andrew and I will prepare a paper outlining the various suggestions, including some of our own, which we will issue shortly as an explanatory note (EN) for CSPCWG9. I am sure this will generate a fascinating discussion and perhaps together we will create some better methods of presentation for the benefit of the chart user.

Yours sincerely,

Peter G.B. Jones,
Chairman

Annex A Consolidated responses to CSPCWG Letter 07/2012

CSPCWG8 ACTION 34

CONSOLIDATED RESPONSE FORM

Annex A Table 2.3.2 item	Question	Yes	No
1	It is recommended that no action is required by CSPCWG regarding the broken depth contour symbol: do you agree? Chairman: No further action required.	AU, BR, CA, CL, DE, DK, ES, FI, FR, GR, IN, JP, LV, NL, NO, NZ, SE, TR, UA, UK, US(NOAA), ZA	
3	It is recommended that no action is required by CSPCWG regarding the dotted danger line symbol: do you agree? Chairman: No further action required.	AU, BR, CA, CL, DE, DK, ES, FI, FR, GR, IN, JP, LV, NL, NO, NZ, SE, TR, UA, UK, US(NOAA), ZA	
4	Should a legend be inserted in the 'discontinuity between surveys gap'(S-4 B-416.1), eg 'Surveys do not match'? Chairman: Further discussion required.	AU, ES, FR, GR, UK, US(NOAA), ZA	BR, CA, CL, DE, DK, FI, IN, JP, LV, NL, NO, NZ, SE, TR, UA,
11	It is recommended that the term for 'Rep' in INT1 (I3.1) be enhanced by adding '(may indicate other shoal depths in vicinity)': do you agree? Chairman: Agreed, INT subWG to note.	AU, BR, CL, DE, DK, ES, FI, FR, GR, IN, JP, LV, NL, NO, NZ, SE, TR, UA, UK, US(NOAA), ZA	CA
12	Does your HO use upright soundings to indicate unreliability?	AU, BR, CA, CL, DE, DK, ES, FR, GR, IN, JP, LV, NL, NZ, TR, UK, ZA	CA, FI, NO, SE, UA, US(NOAA)
	Can you suggest any options for a clearer method of warning about unreliability of soundings? (If yes, please explain below) Chairman: Further discussion required.	AU, DE, ES, LV, NO, UK, US(NOAA), ZA	BR, CA, CL, DK, FI, FR, GR, IN, JP, NL, NZ, SE, TR, UA,
	Can the description in INT1 be improved, eg to 'Unreliable sounding (because of age, scale or quality of source data)'? Chairman: Agreed, INT subWG to note.	AU, BR, DE, DK, ES, FI, FR, GR, IN, JP, LV, NL, NO, NZ, SE, TR, UK, US(NOAA), ZA	CA, CL
17	Can anything be done to enhance the chart user's understanding of a bar over an obstruction or wreck (K3/30)? (If Yes, please explain below) Chairman: Further discussion required.	AU, NZ, UK	BR, CA, CL, DE, DK, ES, FI, FR, GR, IN, JP, LV, NL, NO, SE, TR, UA, US(NOAA), ZA
Annex A paragraph 4.2	Having read the paper at Annex A, and considered the analysis of the results in Table 2.3.2, do you consider that any of the individual data quality symbols, notes, abbreviations and legends used on paper charts are unnecessary in terms of how the mariner uses them? (If Yes, please explain below) Chairman: Further discussion required.	AU, CA, NZ, UK	BR, CL, DE, DK, ES, FI, FR, GR, IN, JP, LV, NL, NO, SE, TR, UA, US(NOAA), ZA

COMMENTS

AUSTRALIA

General comment: While previous Australian comments have focussed on the inadequacy of training, and there remains a strong belief that the results of this survey should be advised to the IMO, responses to these specific CSPCWG questions have been approached from the perspective that mariner knowledge is unlikely to improve in the short to medium term, and is actually at risk of declining.

Chairman: This would be for DQWG to decide, but we would advise it would be unwise, given the flawed nature of some of the questions (and the difficulty in drawing valid conclusions therefore). I agree that mariner knowledge may be in decline.

As cartographers representing quality indicators on nautical charts, a better way to frame the questions may have been “Have you seen [or noticed or Are you aware of] this symbol on a paper chart [or ENC]?”. If the majority answer is yes then the symbol is working in terms of being seen on charts. As quality indicators, it is difficult to come up with symbols that are intuitive to the mariner, and any criteria for coming up with new symbols would need to include this requirement, otherwise we may be simply replacing one symbol considered to be inadequate with another inadequate symbol. The other considerations in terms of understanding the symbols are the guidance documents (such as INT1) describing the symbols and their meaning, and training in the use of these documents and the related nautical charts such that the mariner knows what the symbols mean in context.

Chairman: agree the questions were flawed, but it is easy to judge with hindsight!

For example, an observation from the survey in regards to the questions on upright soundings related to some respondents thinking that upright soundings were in different units (imperial or metric) to italic soundings. It is hard to understand how this interpretation could be made if the respondents were aware of INT1 and had looked up the entry for upright sounding symbols. Unless these and similar respondents have been made aware of publications such as INT1 and how they are to be used, what difference will it make in introducing a new method/symbol for providing such quality indicators? Mariners will still need to refer to publications such as INT1 to find out the meaning of the new symbol – merely introducing a new symbol will not guarantee that this will occur.

Chairman: the fact is that not all mariners are aware of INT1 or familiar with all its contents. It is not a SOLAS carriage requirement (as interpreted by UK’s safety agency). For this reason, we try to make symbols as intuitive as possible, but this is not always achievable.

Item 4: It is worth noting that for S-101 ENCs there is a proposal to develop a new feature to specifically identify areas for which there is a discontinuity between surveys. It will be interesting to see what comes of this proposal.

Chairman: agree; please keep us informed.

Simply stating that “Surveys do not match” does not provide any information to the mariner in regard to their decision making in terms of navigation. The addition of text such as “see Source/ZOC diagram”, or showing the year of the surveys on either side of the line (as France), may provide such information.

Chairman: the majority disagree with the original proposal, which needs a re-think; noted for WG9 agenda.

Item 11: To take this a step further, we have concerns over I4 – “Reported, but not confirmed sounding or danger (on small scale charts only)”. Is there any particular historical reason why a symbol that is associated with dangers (K1) has been incorporated into a symbol that may mean something entirely different (i.e. a reported depth which is not dangerous (sounding) on small scale charts)? If there is a reason, is this reason still valid? We would prefer to have a single representation for all instances of reported features, this being I3. The symbol I4, simply by stating “sounding or danger”, is in the first instance ambiguous, and secondly may be confusing to the mariner in terms of their interpretation of the symbol in relation to K1.

Chairman: agree. I suspect the I4 symbol was agreed when the small scale specs were agreed and then found not really to be suitable on larger scales, perhaps for the reasons you state. Even the term ‘small-scale’ is subjective to compilers and users alike, who do not understand that it is ‘code’ for the 1:2M and smaller scale charts covered by Part C of S-4. Consequently, this use (or perhaps misuse) of the dotted circle has found its way onto ‘medium’ scale charts. It would be a challenge to change, as the small scale charts are rarely fully revised; noted for WG9 agenda.

Item 12: We use upright soundings to distinguish soundings which are lower reliability, in accordance with the S-4 guidance at B-412.4, with a statement in the “Depths” chart construction note stating “Depths shown in upright figures are from old or inadequate surveys”.

However contrary to the S-4 recommendation at B-412.4 that for upright soundings “This portrayal is best used to distinguish soundings amongst better data. The impact of the different style will be lost if used for large areas,”, we use the upright style for areas covered only by lesser reliability surveys, in addition to the information provided in the ZOC (in our case) diagram. This is partly due to the scope of reliability in the CATZOC C category being so broad.

Up until a few years ago, we included the legend “Inadequately Surveyed (see Note)”, in magenta, in the areas covered by inadequate surveys, with an accompanying cautionary note. However, this practice was discontinued as it was considered that the information provided in the “Depths” construction note related to upright soundings was sufficient. We have since removed the legend from these areas as charts have been revised through New Edition, but we are now re-considering this decision and may re-introduce a legend to support upright soundings.

Looking at possible symbology changes, options such as increasing/decreasing the size of soundings; using different colours (at one stage a few years ago we talked about using grey for unreliable soundings); or using a thinner line weight for upright soundings may be investigated. The problem that will then occur (as we determined when we were investigating using grey for upright soundings) may be that users would interpret these sounding to be “less important”, and in terms of using a grey colour, this would actually be counter to the meaning of grey soundings as opposed to black in ECDIS (i.e. an indication of safe water in relation to mariner input safety depth). We also investigated using ECDIS-type portrayal to indicate lower reliability soundings, i.e. a circle around the sounding, but this was also rejected for cartographic reasons. After discussions in our office, the following were considered as possible options to focus further attention on bathymetric data quality indicators:

- Insert a small Legend (Key) containing the main bathymetric symbols (sounding, underwater rocks, wrecks, obstructions), including quality indicators, and their description/meaning, on the chart. This suggestion was generally not supported due to its actually taking focus away from INT1, but it was considered that this option should be brought to the attention of CSPCWG.

Chairman: It would also be difficult to find space on some charts and I suspect there would be pressure to continually add more symbols – where do you draw the line?

- Add an additional chart construction note to the chart, e.g.: “**Symbols:** Users of this chart must refer to INT1 for a description of the symbols, abbreviations and terms used. Attention should given, in particular, to the depth data quality indicators used on charts.”. For Australian charts, this would replace the reference to upright soundings that currently appears in our “Depths” construction note.

Chairman: several nations do have some form of note (either in the border or under the title) referring the user to INT1 equivalent. While a useful reference, it does not seem to have ensured the user actually checks INT1 – or even notices the difference between upright or sloping numerals!

Australia agrees that the description for I14 could be improved, but would state simply “Unreliable sounding (because of quality of source data)”. Age and scale are just two factors that contribute to the overall quality of the source data (others include depth measuring and position fixing equipment, vessel characteristics, meteorological conditions and sea state, quality of tidal observations, etc), so need not be specifically mentioned.

Chairman: Age and scale are the two most easily understood by the user (and some of the other factors you list are due to age). There seems to be general agreement with the proposed re-wording.

Item 12, 17: After discussion in our office, the following possible options are suggested in terms of providing more focussed information in INT1 regarding depth quality indicators:

1) Suggest that K3 could be included at I5 (or alternately at I17), as it is directly related to depth (i.e. similar to I13). If the depth shown is “estimated to have safe clearance at value shown” does this really constitute an obstruction? Similarly, I24 could be split into I24.1 for areas (as for current I24) and I24.2 for individual depths swept by wire drag or diver (current K2). If this were to be done, the merits of retaining the current K2 and K3 as they are currently would need to be discussed.

Chairman: There is merit in your suggestion, which also connects with DE’s suggestion from WG7 (11.3) to re-organise INT1 sections K and L, removing some of the composite symbols. I personally think it would be better to keep K2 and K3 together (so the difference is more easily seen), but agree they could well sit in section I (I5 & I6, perhaps). K2 does not really belong in I24, as this sub-section deals with areas and is a special use of the ‘parent’ symbol K2.

2) Another suggestion (which may be a bit radical) is to amend the first part of INT1 Section I to be “Depth Quality Indicators”, as all the current entries in this section may be considered to be actual quality indicators. The following additional entries could then be added:

- Example of a “reliable” (italic/sans serif) sounding (I10 – change one of the example soundings at I10 to an upright sounding);
- Example of “unreliable” (upright) sounding (I14 – which can then be removed);
- Examples of “*PD*” (B8);
- Example of “No bottom found at depth shown” (I13 – which can then be removed);
- Example of “Depth unknown, estimated to have safe clearance at value shown” (K3 – see (1) above);
- Example of “Swept by wire drag or diver” (K2 – see (1) above).

In addition to the above, a Note can then be added at the end of the section to advise mariners to also consult Source/Reliability/ZOC Diagrams for further information related to quality of depth information.

3) Utilise INT1 Section O (currently not used) as a “Depth Quality Indicator” section of INT1, and include everything in this new section (see (2) above). This would have the advantage of the section having its own entry in the “Contents” section of INT1, which would bring greater visibility to the INT1 user. If the numbers are not to be re-used (noting that this section was formerly “Hydrographic Terms”), the numbering could start at O100.

In terms of preference, Australia would prefer the 3rd option over the 2nd option, with the 1st option considered as the minimum requirement.

Chairman: These suggestions have merit. Noted for WG9 agenda.

Annex A, Paragraph 4.2: While Australia does not consider that, in general, the depth data quality indicators currently used on paper charts are unnecessary, we think there should be discussion on the merits of retaining the abbreviations “*PD*” and “*SD*” (indicating the position or the depth of a sounding is unreliable) over indicating this fact through use of an upright sounding. Discussions in our office indicate some confusion over the purpose/use of these abbreviations in relation to soundings (e.g. why these abbreviations would be placed against an italic (sans serif) sounding instead of showing an upright sounding; or whether these should only be used against an upright sounding to indicate additional unreliability in an area covered by soundings that are already indicated to be unreliable (hairline)).

Chairman: Agree there is some confusion and I think the subtlety of the different meanings may be lost on the chart user. See also NZ comments. Noted for WG9 agenda.

CANADA

Item 4: This is always a challenge when compiling any chart with different sources collected at different times. The convention used in Canada is that in most cases (depending on scales of surveys) the most recent survey is considered the most accurate, and contours are compiled accurately from that source then blended into the adjoining source to the flow is even. CHS is now compiling from combined surfaces, with automated contouring programs. These surfaces, even though somewhat averaged, will still have a step at the interface between two disjointed

surveys, so there will be a requirement to manually adjust the contours so that they make sense. We will still use our “cartographic licence” in these cases. We do not see the need for a note on the face of the chart, as we feel the “source classification diagram” does an adequate job.

Chairman: The use of surfaces is gaining ground when using rich survey data but, I believe, cartographic intervention and “licence” is still required, particularly in the boundary between source datasets. An adjustment to the contours may be appropriate but, also, may act to disguise the issue, so that the user may not see anything to persuade him to consult the source diagram. See also comment at Germany.

Item 11: Canada uses the term “Rep” to indicate exactly that, a shoal that has been reported and not surveyed. One may or may not assume that other shoals may be present, but there is no inference either way with this label. Canada does not see value by adding the additional comment that other shoals may be present.

Chairman: All other respondents agree with this small addition.

Item 12.1: Canada’s current charting practice is to use only sloped soundings. There are older charts in our current portfolio with the obsolete style (**Chairman: for CA**) of upright soundings.

Item 12.2: We feel that there are adequate mechanisms in place already to define the reliability of data, particularly the source classification diagram on paper charts. It really comes down to user education.

Item 12.3: Since Canada does not use unreliable sounding presentation (I 14), we do not see a required improvement. On Canadian charts, in addition to a source classification diagram, we at times add notes about the validity or quality of the data. This may occur in areas of poor horizontal control, poor scale of survey compared to the chart scale, or if the survey is doubtful in some other way. Often broken contours are used to highlight that the source data is inadequate for the intended purpose.

Chairman: all these are useful, but perhaps not always adequate by themselves (based on the “evidence” and analysis of users’ understanding of these existing, well established cartographic techniques).

Annex A/4.2: Canada feels the use of upright soundings could be removed as a quality indicator as there are other methods already in use that detail the reliability of source information. Canada has already abandoned the practice of using upright soundings (with the exception of some appearing on legacy charts not yet recompiled), and we have not encountered any problems to date.

Chairman: this suggestion will be noted for discussion at WG9.

FINLAND

Item 12.1: FI uses upright soundings to indicate soundings out of position. Unreliable soundings are shown in red.

Item 12.2: If red colour is not suitable, we have no alternative suggestion. However, we would like to point out that FI has used red to indicate unreliability of soundings and depth contours for decades without any significant feedback.

Chairman: this may be true, but demonstrates the possible confusion caused by non-standardization, which to some extent is inherent in all national series. The evidence is accumulating that the user does not understand (or even notice) the difference between upright and sloping soundings, whatever the meaning.

FRANCE

Item 4: France suggests adopting a legend which includes the survey authority and the year of the survey like “Levé SHOM (1974) / Levé SMBC (1998)”. See the following example from a French chart (‘Levé’ means ‘survey’).

The legend ‘Survey do not match’ could be misinterpreted and the mariner can wonder why the surveys do not match.

The addition of a legend should be a possibility depending of the context, not an obligation.



Chairman: The suggestion made in Letter 7/12 has not been generally approved. This is an alternative which we will ask the WG to comment on. Noted for WG9 agenda.

GERMANY

Item 4: In German waters we do not chart gaps between surveys, only in chart adoptions of foreign HOs. There we also use legends. We prefer to take I 31 (approximate depth contours) instead of gaps as we have problems in the ENC where we still need closed depth contours.

Chairman: Note AU comment about plans for S-101. UK includes such areas as narrow 'unsurveyed' areas on ENC. Sometimes approximate depth contours work well, but in other cases the disparity is too great to 'hide' in that way.

Item 12: In German waters we do not use I 14 or upright soundings but in national adoptions as e.g. of the Norwegian coast you can find them. We have included a glossary in every chart of this coast to explain this symbol for shoal depths.

The quality of survey or unreliability of soundings can be stated in the source or ZOC diagram.

I 25 - Depths (see Note) perhaps also will be a choice to chart these areas.

Chairman: Often it is useful to use a combination of methods to highlight poor data (including notes, the source/ZOC diagram and broken contours). But it is still useful to have some clear way of showing which actual soundings come from poor sources, especially amongst better sources.

INDIA

Item 4: The gap itself is self explanatory about the discontinuity. A cautionary note under 'Depths' may be given instead of cluttering the details in the charted area.

Item 12: INT1 – I25 caters the need.

Chairman: This is true for the cartographer, but unfortunately the answers to the DQWG questionnaire imply that it is much less so for the user (which is really what matters).

JAPAN

Item 4: Any legends should be given in INT 1, as they cause chart clutter if they are shown on paper charts.

Chairman: true, but only effective if the symbolization is well understood – which it seems it is not.

Item 12: Japan uses upright soundings only when they are derived from smaller-scale sources; Japan states this in the title block on our charts.

Item 17: Japan believes that no special action is required, as detailed explanation is given in INT 1.

Chairman: do we put too much confidence in mariners' use and understanding of INT1?

LATVIA

Item 4: Latvia has no experience with showing the discontinuity between surveys on charts. Usually depth contours and areas would be aligned (cartographically matched) in respect to chart scale and only to safe side. But if necessary would agree with France and NOAA comments.

Item 12.2: For now just utilising that mariners use the INT1, but we will consider to add a legend on chart like "Depths. See Note" with the description of the exact unreliability of soundings in the note (NOAA comment). Also it could be worth considering to add additional chart construction note in this matter (AU comment)

Item 17 & last question: We have no exact proposals about these topics, but with kind AU permission we would join the AU comments in 17, and especially on ...4.2 where we have had similar discussions in our office.

Chairman: See my responses at AU, FR and US as appropriate.

NORWAY

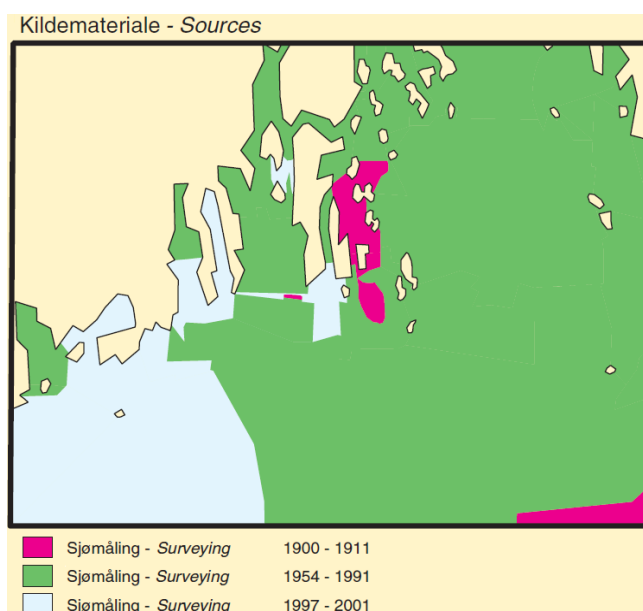
Item 12.1: Norway is using upright figures to indicate depth and position for a shoal deeper than 10 m or depth for adjacent shoal (+) less than 10 m. (Norw. INT1, I b).

Chairman: why 10m? When was this depth adopted and has it been reviewed in the light of increasing draught of some vessels?

INT1 I 14 shows upright figures equal to the NO shoals shown in NO INT1 I b. To NO it is a problem that these figures are alike. NO do not have the possibility to prioritise any alteration to INT figures at the moment. In NO charts unreliable soundings are marked by ED, ES, PA or PD as to what is the unreliable part of it; the position, the depth or total existence.

Chairman: See my comment at Finland. I am not sure what 'ES' stands for – is it Sounding Doubtful?

Item 12.2: Unreliability can, in the source diagram of the paper chart, be shown by use of a colour overlay. Red colour to show most unreliable areas, green is more reliable and blue as the most reliable. Norway has received positive reactions on the use of colours in source diagrams in paper charts. It is found to be understandable in an easy way.



Chairman: This is an interesting idea, although the particular colours used may be a problem (looks like shallow water and intertidal areas – see S-4 B-293.8). Red/amber/green are now commonly used (perhaps internationally?) as quality indicators (although the green still poses a problem). Do the colours take other quality factors than age into account (eg scale)? Are the colours consistently applied across your chart series to particular technology eras (eg leadline, echo sounder, sidescan sonar, swathe)?

NO do not like the idea of introducing a lot of parentheses to indicate the depth of shoals and rocks because this will overcrowd our charts.

Chairman: do you mean adding brackets around a depth out of position?

NEW ZEALAND

Item 4: A white gap is a clear indication of the discontinuity between surveys.

Chairman: clear to us – but not apparently to some users.

Item 17: Change INT 1 K30 to read ‘Safe clearance depth over wreck.’ Then continue the same text as is already there. This text is adapted from NP5011 K3.

Chairman: I assume you mean adopt all the text in UK’s 5011 K3 (except the last sentence)?

Otherwise, adding before existing K30 would be duplication.

Annex A: Could ‘PD’ be removed and ‘PA’ used instead? The shade of meaning between these is probably not obvious or important to a mariner.

Chairman: I agree for soundings PD is not useful. For other things it may be useful, which is why it is in Section B, not I. Noted for WG9 agenda.

Could ‘ED’ and ‘SD’ be removed and ‘Rep _____’, with or without the year, be used? These are essentially reported but not confirmed soundings.

Chairman: This seems to me to have merit. Noted for WG9 agenda.

SPAIN

Item 12.2: We may use sloping soundings in bold type to make unreliability stand out.

Chairman: Have you actually used this method, or is it a suggestion? I think the same problem will happen as with upright (ie the user will not notice or understand the meaning of the slightly heavier style – which will not be very noticeable with only one or two figures). It may simply be interpreted as a printing flaw.

SOUTH AFRICA

Item 12.2: Recommend we introduce a colour (eg red, blue) to limits or grey shading to such areas within the Source Diagram itself with an explanatory note under the title block as on INT 3.

Chairman: this is similar to Norway.

Item 12.3: Recommend add also in brackets..... (age, method of survey eg lead line, scale or quality of source data).

Chairman: This is the opposite of AU proposal, but the vote suggests the original proposal in Annex B is generally an acceptable improvement on the current wording. I also think this may make the entry rather long (especially for multilingual versions of INT1).

US(NOAA)

Item 4: Table 2.3.2 Item 4: NOAA agrees with the idea, but not this exact wording. “Surveys do not match” might not mean much to the chart user. Why do they not match? The response from France has merit. In such **rare** cases, NOAA tends to add a legend, such as, “Hydrography eastward is from surveys of 1939” to explain the bad match. This is more likely to be immediately understood by the chart user than relying on the Source Diagram or ZOC Diagram to explain the situation.

Chairman: See comment at France.

Item 12.1: Table 2.3.2, Item 12: NOAA does the reverse of other Hydrographic Offices (does that surprise you?) Depths on most NOAA charts are in “**English**” units (I sense Andrew finds

that term, ironic). These depths in feet or fathoms have been in **upright** font since the 1830's. NOAA has a standard for showing unreliable soundings on these charts with **sloping** text, but unreliable depths are so rare on NOAA charts, that I can't ever remember the convention being used.

Chairman: so the exact opposite of INT specifications. No wonder the users are confused!

NOAA charts that show depths soundings in **meters**, show those depths in a **sloping** font, just like everybody else and the standard for NOAA metric charts is for unreliable soundings to follow the convention in S-4; but I can't remember this ever being necessary on a NOAA chart.

Chairman: I am amazed that a country as large as US has no water areas that have not been surveyed to modern standards. Alaska?

Item 12.2: Whether unreliable soundings are shown with **upright** font or **sloping** font, it is questionable whether or not the chart user understands what the cartographer is trying to tell him/her.

A sizable area of unreliable soundings could be outlined on the chart with a reference to another dreaded chart note, such as "*(See Note B).*" Yes, we all hate to clutter the charts with labels and notes, but at least the mariner gets an understandable explanation rather than more non-intuitive symbology that he/she might or might not look up in INT 1.

Chairman: agree.

The note could be something to the effect of:

NOTE B
UNRELIABLE SOUNDINGS

The depths charted within the outline in upright text are from surveys conducted in 1899 and were obtained from a smaller scale chart. These depths must be considered unreliable.

Further comments from the Chairman and Secretary:

It is clear that further work would be useful on some of these topics and CSPCWG9 may present the ideal opportunity to air them in a discussion format. Consequently, we will produce a paper (EN) for the meeting containing suggestions from above and maybe some additional ones that we can think of.