UNIFORMITY IN CHARTS AND HYDROGRAPHIC DOCUMENTS

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During the VIIIth International Hydrographic Conference at Monaco in May 1962, many problems were discussed with the object of obtaining uniformity as far as possible in charts and hydrographic documents. This uniformity is a very important goal which would enable mariners to use foreign charts and documents with a minimum of uncertainty.

However, the discussions during the Conference have also shown that it would be unwise to introduce uniformity for uniformity's sake only, without keeping in mind the underlying principles. Uniformity or standard-ization mainly concerns three different subjects, i.e.

a) the general lay-out of charts and documents;
b) the use of symbols;
c) the use of abbreviations.

Uniformity consists of two distinct features. The first is the fact that the general lay-out of charts and documents is the same for all countries and that the same symbols and abbreviations are used, as far as practicable, the world over.

The second side of this question is the fact that on one and the same chart the symbols and abbreviations used should be in accordance with a consistent set of underlying principles.

It is this first part of the question of uniformity that the International Hydrographic Bureau has been able to achieve successfully. Adherence to the resolutions and recommendations, as laid down in the Repertory of Technical Resolutions, by the majority of the States Members has resulted in a remarkable degree of uniformity of charts and documents published by the different hydrographic offices. Of course, several States Members deplore the retardation of the introduction of the metric decimal system by the hydrographic offices with a world coverage, but this cannot be regarded as unwillingness to comply with the existing resolutions. There is hope of obtaining uniformity in this field as soon as the English speaking countries have come to a general decision regarding the metric decimal system, a decision that involves infinitely more than the change from fathoms and feet to metres and decimetres on charts and in documents only.

It is, however, the second side of the problem of uniformity that becomes more and more of interest to us. The question can be asked whether there is a consistent set of principles underlying our endeavours

to uniformity. A second question might be whether our present system of obtaining uniformity makes it possible to create a set of underlying principles or to comply with an already existing one.

To the best of my knowledge the answers to these questions are the following. Though the system of symbols and abbreviations is based on logical reasoning, there does not exist at this moment a consistent set of principles according to which these symbols and abbreviations are built up. Our present system of obtaining uniformity does not *a priori* make it impossible to create such a set of underlying principles or to comply with the already existing rudiments of such principles. One of the tasks of the IHB should be to conceive and create such a set of underlying principles, and it must be considered as the duty of all States Members to assist the IHB in this task.

As the Repertory of Technical Resolutions shows a historical growth, every International Hydrographic Conference whittling away certain undesired outgrowths and inserting new grafts, whereas many new decisions are taken between Conferences through majority votes by correspondence, it is not in the least astonishing that the present contents of the Repertory show a certain amount of inconsistency and a mixture of principle and detail.

Perhaps some examples will explain this. But first it should be made quite clear that there is no question that the author is criticizing the tremendous amount of work that has been done to obtain much-needed uniformity. The author is of the opinion, however, that uniformity has reached a level where it becomes necessary to lay down certain principles according to which further standardization should be carried out. Absence of such principles might well mean that continuing uniformity in one field would destroy the already obtained uniformity in some other field.

When looking at resolution B 137 II (b), we find the underlying principle that a depth figure out of position should be indicated by writing it in a different type to the other soundings.

From this fundamental resolution several details originate, such as a depth figure out of position

(*a*) near a dangerous rock,

(*b*) near a wreck symbol,

(*c*) near any other symbol that prevents the depth figure to be printed in its correct position.

Another fundamental resolution can be found at B 147, indicating that a height figure out of position shall be placed immediately adjacent to the exact position and enclosed in brackets.

From this fundamental resolution a number of detailed resolutions are derived, such as B 133, and B 134. In B 134 I, however, as in B 163 I, a sounding figure is described that in reality represents a height.

Consequently a choice has to be made whether B 137 II (b) or B 147 applies, or possibly a combination of both principles, when such a height-representing sounding figure is to be charted out of its exact position.

Looking at the first part of B 134 I, the impression is gained that the figure represents a *sounding*, whereas the underlining shows that the figure represents a *height*. In that case the second part of B 134 I is *not consistent* with the already stated principles. According to B 137 II (b) the sounding figure out of position should be written in a different type to the other soundings. The brackets around the *underlined sounding* are in accordance with B 147 as the underlined sounding *in totum* represents a height.

When we now look at Proposal 30 submitted by the IHB to the VIIIth International Hydrographic Conference, it can be seen that in the « symbol solution », the « depth figure placed immediately adjacent to it and in parentheses » is not in accordance with B 137 II (b).

Of course the IHB Directing Committee knows better than any of us how much trouble it has required to find acceptable solutions particularly regarding wrecks. Proposal 30 was submitted as the result of several questionnaires sent out, and the proposed symbol solution was the one that had acquired a relative minimum of « no » votes and consequently could be expected to have the maximum probability of being accepted.

In my opinion, this points to the crux of the matter. If this symbol solution had been adopted it would have meant a step forward on the tortuous road towards uniformity of the charts of the world, but a serious step backwards regarding the linearity of thought underlying the symbols used on one and the same chart.

As has been stated in the beginning of this article, it is my opinion that this linearity of thought should not be sacrificed on the altar of world uniformity. It seems as if the time has come to start defining the basic principles according to which world uniformity on charts and in documents should be further accomplished.

This means, that the Technical Resolutions should be divided into :

Fundamental Technical Resolution (FTR) and

Derived Technical Resolutions (DTR).

In that case it might perhaps be necessary that a two-thirds majority be required to establish or amend Principal Technical Resolutions, as an amendment or alteration would influence all Derived Technical Resolutions based on that FTR.

Let us now, for the sake of argument, consider the following two imaginary Fundamental Technical Resolutions :

6100 It is resolved that all underwater obstacles with a depth over them of 20 metres (11 fathoms) or less below chart datum, shall be considered dangerous to surface navigation.

6200 It is resolved that all obstacles dangerous to surface navigation (see 6100) shall be shown on charts surrounded by a danger line, which consists of the symbol for the 1 m isobath (i.e. a line of small dots).

It is very well possible that FTR 6100 will have no DTR's based on it. On the other hand it would make resolution B 141 I superfluous. It is certain, however, that FTR 6200 will have several DTR's — especially symbols — that will be based on it, such as resolutions B 135, B 136, B 137

and B 141 V (b), which could be numbered 6201, 6202, 6203 and 6204 respectively.

There will be, of course, quite a number of existing resolutions that are neither a FTR nor a DTR but can be considered Independant Technical Resolutions (ITR). B 142 is one of the many examples of such an ITR.

Now the question can be asked whether a change of principle in the Repertory of Technical Resolutions is feasible, and whether the advantages would outweigh the apparent disadvantages inherent in such a change.

The author already gave considerable thought to the problems to be solved when all technical resolutions were to be redivided into fundamental and derived resolutions, but at this moment it is considered to be more advantageous to await the comments and suggestions of others. There is not the slightest doubt that such a rescheming of all technical resolutions would require a major effort, not only from the Directors and Technical Staff of the International Hydrographic Bureau, but from all Hydrographic Offices as well.

On the other hand it cannot be stressed enough that uniformity can only be aimed at successfully by the application of a rigourous system of standardization or normalization, which, in essence, means nothing other than the necessity to take a sequence of consistent decisions. In the present Repertory of Technical Resolutions many basic decisions are laid down, whereas many other decisions are of a derived nature or independent ones. In order to make it possible to take consistent decisions, these fundamental, inviolable, resolutions should be recognized as such and preferably be printed in different type, or numbered in a different way. The next step should be to bring together a fundamental resolution and the derived resolutions based upon it.

IHB Note. — Since the 1952 International Hydrographic Conference, when a "Special Committee on Revision of Resolutions" was actually set up, the Repertory of Technical Resolutions has been the subject of continuous and thorough study; several modifications thereto were initiated by the IHB as well as by States Members, with the purpose of rendering this basic document as clear and practical as possible. The work achieved may be ascertained by comparing the 3rd edition (1948) with the 4th and 5th, and by reading the foreword ot the two latter editions.

It was indeed considered at the time to present the resolutions in the form of a kind of Code of regulations, but on trying to put this project into practice, it was found that, for several reasons which would take too long to explain here, the material did not lend itself to such an arrangement and that the most homogeneous and applicable form was the present one.

The article by Captain LANGERAAR, hydrographer of a country which has always taken an active and a much appreciated part in the work of the IHB, shows the aspect of the problem as it is visualized from the outside. To enable States Members to consider all aspects of the problem, the Bureau will publish in the next issue of the Review another article showing its viewpoint. States Members will then be in a position to submit, if they so wish, definite proposals at the next conference.