

REGULATIONS OF THE IHO FOR INTERNATIONAL (INT) CHARTS
2000 Edition

- Ref: 1) Publication M-4 "Chart Specifications of the IHO and Regulations for International (INT) Charts", 1988 Edition (permanently updated by means of change pages)
2) IHB Circular Letter 59/1998 of 21 December 1998

Dear Sir,

IHB Circular Letter 59/1998 circulated a draft new edition of the "Regulations of the IHO for International (INT) Charts" (English version), for comments/approval. Several suggestions for change were received at the Bureau before the deadline of 30 March 1999. They were sent to the IHO Chart Standardization Committee (CSC) for consideration and implementation. The CSC proposed some further editorial changes. All changes have been summarized in Annex A.

The CSC has taken the opportunity of the publication of the INT Chart Regulations to also propose a re-numbering of the three parts of M-4, with the INT Chart Regulations becoming Part A. The reasoning behind this is logical and is explained in Annex B. The IHB supports the new numbering and a copy of the final new edition of the INT Chart Regulations is enclosed (English version). A new Preface to M-4 and an updated List of Effective Pages are included (Correction 1-2000 to M-4). You are kindly requested to incorporate these pages into your copy(ies) of M-4 and to then re-number all pages of the existing Part 1 "Chart Specifications of the IHO" according to the Note in the new Preface. French and Spanish versions of this document are being prepared and will be dispatched as soon as they are ready.

To fully implement the changes resulting from the re-numbering of M-4, the following course of action is planned in 2000-2001:

- Issue the Chart Specifications of the IHO for Small-scale International Charts as Part C of M-4; and
- Issue a revision of existing Part 1 of M-4, including its conversion to Part B, and printing each section as it is completed. This will begin with sections 100 and 500.

The CSC programme for 2000 also includes the development of a new edition of the "Guidelines for Coordinators of INT Chart Schemes" (formerly S-48, to become Part 2 of M-11).

The Bureau is grateful to the CSC for the work carried out, and in particular to its Chairman (Dr. Peter Cox, UK) and Secretary (Ms. Elizabeth Dunn, UK), and the UKHO for their continuous support of the CSC.

Correction 1-2000 of M-4 has been placed on the IHO Website (Go to “IHO Publications”, then “Miscellaneous Publications”) from which printed copies can be produced. However, paper copies are available from the Bureau on request, if needed.

On behalf of the Directing Committee
Yours sincerely,

Rear Admiral Neil GUY
Director

Encls: Annex A
Annex B
Correction 1-2000 to M-4 (English version)

CHANGES RESULTING FROM RESPONSES TO IHB CL 59/1998

1. Proposal by Finland that, in paragraph A-601.1, the term “facsimile materials” be replaced with “reproduction materials”, as the latter term has already been defined in the document (in para. A-501.1). **Accepted**
 2. Proposal by Spain that paragraph A-601.3 is redundant and that there is no need for such an explicit statement. **Not accepted.** Although paragraph A-601.3 may not be essential, it is believed that it serves as a useful reminder of the fact that there is no obligation for financial exchange. If A-601.3 were to be omitted, it could be inferred from paragraphs A-601.1 and A-601.2 that financial exchange is necessary.
 3. Proposal by UK that paragraph A-502.4 is very specific regarding the amount of reproduction material to be supplied, and that, as most Hydrographic Offices’ production systems are evolving, the paragraph could be combined with A-502.5, along the lines of that for digital reprostat [A-501.3]. **Accepted.** A new paragraph A-502.4, which combines paragraphs A-502.4 and A-502.5 as circulated in IHO Circular Letter 59/1998, has been inserted.
 4. Proposal by CSC Secretariat for the following four additional editorial changes, which have been incorporated into the document:
 - Page A-7 – regulation Number column, last entry – amended to 2000 edition.
 - A-302.1, last sentence – paragraph number amended to include the M-4 part number.
 - A-502.2, line 2 – deleted 0.5 mm (0,02 inches) and replaced by 0,5 mm [to tie in with the style used elsewhere in M-4 and to delete imperial measurement].
 - A-505.1 has been amended to remove the apparent contradiction which arose as a result of the reduced detail included in section A-600. The revised wording is taken from the detailed version of A-600 which was in the 1996 draft revision of the regulations circulated to CSC members.
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RE-NUMBERING OF THE THREE PARTS OF M-4
Rationale for the change

1. M-4 was published in loose leaf form in 1988, with the intention that it should eventually comprise:
 - Part 1 Chart Specifications of the IHO – Medium- and Large-scale National and International Charts
 - Part 2 Chart Specifications of the IHO – Small-scale International Charts (Scales 1:2 250 000 and smaller)
 - Part 3 Regulations of the IHO for International (INT) Charts

 2. During the CSC's revision of the Regulations of the IHO for International (INT) Charts, the CSC Secretariat realised that, as it is the Regulations which set out the rules for International charts, it would be more appropriate if they were to be included as the first Part of M-4, i.e.
 - Part 1 Regulations of the IHO for International (INT) Charts
 - Part 2 Chart Specifications of the IHO – Medium- and Large-scale National and International Charts
 - Part 3 Chart Specifications of the IHO – Small-scale International Charts (Scales 1:2 250 000 and smaller)

 3. If the order of the Parts of M-4 was to be changed, now was the logical time to start the change i.e. before the Regulations of the IHO for International (INT) Charts and the Chart Specifications of the IHO for Small-Scale-International Charts were incorporated, and before the planned revision of the Chart Specifications of the IHO for Medium- and Large-scale National and International Charts was started.

 4. To implement the revised organization, it has been considered desirable to change the method of referring to the Parts from numbers [1, 2, 3] to letters [A, B, C]. This:
 - a. allows implementation of the renaming of the Parts to begin with the publication of the revised Regulations of the IHO for International (INT) Charts. Renaming of the existing Part 1 as Part B can be effected as the proposed major revision proceeds.
 - b. has the additional advantage of making paragraph references more distinctive.
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**M-4 - CHART SPECIFICATIONS OF THE IHO
(EDITION 1988)**

CORRECTION No. 1-2000

Reference: Circular Letter 21/2000

The following change pages to the Chart Specifications of the IHO, Publication M-4, Part A "IHO Regulations for International (INT) Charts" should be inserted, following consideration in the above Circular Letter.

Amendments to the Preface and the List of Effective Pages are also made by change pages.

Rear Admiral Neil GUY

INTERNATIONAL HYDROGRAPHIC ORGANIZATION



**REGULATIONS OF THE IHO FOR
INTERNATIONAL (INT) CHARTS**

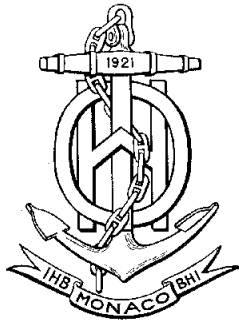
AND

CHART SPECIFICATIONS OF THE IHO

(Edition 1988)

**Published by the International Hydrographic Bureau
MONACO**

INTERNATIONAL HYDROGRAPHIC ORGANIZATION



**REGULATIONS OF THE IHO FOR
INTERNATIONAL (INT) CHARTS**

AND

CHART SPECIFICATIONS OF THE IHO

(Edition 1988)

-
- PART A -- REGULATIONS OF THE IHO FOR INTERNATIONAL (INT)
CHARTS
SECTIONS 100-600
- PART B -- CHART SPECIFICATIONS OF THE IHO MEDIUM- AND
LARGE-SCALE NATIONAL AND INTERNATIONAL (INT)
CHARTS (Scales larger than 1:2 Million)
SECTIONS 100-600
- PART C -- CHART SPECIFICATIONS OF THE IHO SMALL-SCALE
INTERNATIONAL (INT) CHARTS
(Scales 1:2 Million and smaller)
SECTIONS 100-600

Published by the International Hydrographic Bureau
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Principauté de Monaco
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P R E F A C E

The publication M-4 "Chart Specifications of the IHO and Regulations of the IHO for International (INT) Charts", brings together in one comprehensive volume the "Regulations of the IHO for International (INT) Charts" (Part A); the "Chart Specifications of the IHO" (Part B); and the "Specifications for Small-Scale International Charts" (Part C).

This publication is available in separate English, French and Spanish versions. The numbering system is identical in all three versions.

M-4 is divided into three Parts, which are further subdivided into Sections dealing with specific topics. Regulations and Specifications relating to particular topics may be found either by their subject matter in the Contents page at the beginning of each Section, or by reference to the Index at the end of Part B. Cross-referencing draws attention to related Regulations and Specifications.

Copies of charts INT 1, INT 2 and INT 3, which are reference documents complementary to Parts B and C of M-4, are contained in a plastic wallet inside the front cover of the publication. The symbols from INT 1 are also included in the text of Part B for ease of reference.

The procedures for correcting and updating M-4 are described in the Introduction to each Part. The adoption of a loose-leaf format has eliminated the need for new editions and extensive hand-corrections as change pages, incorporating amendments to text and graphics, will be issued whenever amendments come into force. Change pages show, in the bottom right-hand corner, a reference to the most recent amendment. A "List of Effective Pages" commences on page V.

NOTE

From April 2000 (Correction No 1-2000), the section identification and paragraph numbers used throughout this publication reflect the renumbering of M-4 described in IHB Circular Letter 21/2000. All references within the text should reflect the new numbering system. They equate to the former styles of referencing as follows:

<i>M-4 new section number</i>	<i>Initial proposal</i>	<i>Former designation</i>
<i>Part A</i>	<i>Part 3</i>	<i>Appendix A to IHO Circular Letter 34/1984</i>
<i>Part B</i>	<i>Part 1</i>	<i>M-4, Part 1</i>
<i>Part C</i>	<i>Part 2</i>	<i>Appendix 1 to Regulations of the IHO for International (INT) Charts</i>

LIST OF EFFECTIVE PAGES

Numbering	Pages in Force	Numbering	Pages in force	
I (reverse blank)	Corr. 1-2000	PART B	Original Corr. 1-96	
III (reverse blank)	Corr. 1-2000			
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VII	Corr. 1-2000			
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PART A				B-1 (reverse blank)
				B-3 (reverse blank)
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		B-100.i (reverse blank)	Original	
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B-300.15	Original	B-400.12	Original
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B-300.17	Original	B-400.14	Original
B-300.18	Original	B-400.15	Original
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B-400.47	Original	B-400.102	Original
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B-400.90	Original	B-500.4	Corr. 1-89
B-400.91	Corr. 1-94	B-500.5	Original
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B-400.93	Corr. 1-94	B-500.7	Original
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B-600.iv	Original	B-IND.26	Corr. 1-96
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B-600.1	Original	B-IND.28	Corr. 1-96
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PART A

REGULATIONS OF THE IHO FOR INTERNATIONAL (INT) CHARTS

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REGULATIONS OF THE IHO FOR INTERNATIONAL (INT) CHARTS

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INTRODUCTION

In his opening speech at the second International Hydrographic Conference in 1926, Admiral J M PHAFF, the President of the Directing Committee of the IHB at that time, said:

'In a time-worn and completely forgotten pamphlet which was published in Washington, in 1884, Mr E R KNORR, the Chief Draughtsman of a Hydrographic surveying expedition of the United States of America, had already proposed the issue of original charts and he gave figures showing the enormous economies which could be effected if all the nations which publish charts of the same coast or port were to come to an understanding as to the reproduction of these charts on a common basis. This far-seeing man pleaded also for a permanent international Hydrographic institution, giving numerous examples showing the necessity for its existence, and he states that his proposal to convene an international Conference on the subject succeeded to the extent that two Governments actually came into communication with reference to such convocation.

It required the perspicacity of Monsieur RENAUD (*) to rediscover this same obstacle, which impelled him to write an article on the International Chart which appeared in the French "Annales Hydrographiques" of 1918. Following up this idea, the advantages of an international Conference to discuss the subject came likewise to his mind and, as soon as the support of the British Hydrographer was assured, the first really International Hydrographic Conference, the dream of Mr KNORR, was conceived.

These two Chiefs, both of them professional men, well aware of the intricacies of the subject, did not belittle the enormous difficulties which they would have to overcome.'

The draft IHO Regulations for International Charts were compiled from the reports, agreements and studies of the North Sea International Chart Commission. They were amended and agreed by the Chart Specifications Committee and its successor, the Chart Standardization Committee, and were finally completed in 1984. Thus, 100 years after the publishing of Mr Knorr's pamphlet, his vision became reality.

The IHO Chart Standardization Committee (CSC) is responsible for the updating of the Regulations, and all proposals for changes are referred by the IHB to the CSC for advice (TR B5.3 refers). After discussion, the CSC will recommend amendments to the IHB who will then communicate them to all IHO Members by Circular Letter, asking for any comments within three months. After three months, in the absence of objections from one or more Members, the IHB will announce, by a second Circular Letter, that the amendments have come into force and that Members should consequently correct their copies of the Regulations. If necessary, the proposed amendments will be modified to take account of objections or suggestions received and an explanation will be given in the second Circular Letter, which will also promulgate the final version. The Record of Corrections, which follows this Introduction, should be updated when it is announced that amendments have been approved. It is intended that this Record should also serve as a Bibliography.

(*) Ingénieur Hydrographe M J A RENAUD was a founder of the IHB, but died just before the election of Directors in May 1919.

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RECORD OF CORRECTIONS

Regulation Number	Amendment Number	Circular Letters		Remarks
		Promulgated by	Approved by	
Draft edition		39/1981		XIIth IH Conference Decision No 25 refers
1984 edition		16/1984	34/1984	
A-204.2 A-204.3 A-204.4		15/1988		Previously paragraphs 2.9 and 2.10
2000 edition		21/2000		New loose-leaf edition - including editorial updating - incorporated as Part A of M-4

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SECTION 100 - GENERAL

A-101 PURPOSE OF INTERNATIONAL CHARTS

A-101.1 The aim of the international chart concept is to facilitate the provision of minimum sets of charts suitable for the navigational requirements of international (foreign-going) shipping. Such internationally-conceived charts will also enable those IHO Member States who provide, or wish to provide, charts outside their own national waters, to print by facsimile reproduction with only superficial modifications, selected modern charts under the terms of a bilateral arrangement between the Member States [IHO Technical Resolution A3.4 (TR A3.4) refers].

A-102 INTERNATIONAL CHARTING PRINCIPLES

A-102.1 It is necessary first to be clear about the function of each country's series of nautical charts of its own waters. Examination of chart catalogues suggests that these charts have two functions:

a. **MARINE NAVIGATION.** Most hydrographic offices have an obligation to provide nautical chart cover of their national waters to such an extent, and on such scales, as to permit safe navigation^{1, 2} for all classes of vessel, from the smallest to the largest, throughout coastal waters, including major ports visited by the largest vessels, and minor arms of the sea of purely local interest. In this, the best known sense, nautical charts are navigational tools.

b. **INFORMATION SOURCES.** National nautical chart series are usually the largest scale publications available showing the detailed configuration of the seabed offshore. In this respect, hydrographic offices have a *de facto* responsibility for their national waters similar to that of topographic mapping agencies for land areas^{1, 2}. Such information about the shape of the seabed is required by a variety of national users other than navigators: construction engineers concerned with offshore developments, dredging contractors, oceanographers, defence departments, coastal zone managers, and so on.

A-102.2 The combined effect of the two requirements has caused national chart series to cover national waters in great detail, reflected by the very large scales used for port plans, and the existence usually of at least two continuous coastal series, one on a relatively large scale, the other slightly smaller. But ships using national chart

(1) Such obligations are specified in numerous Articles of UNCLOS. Article 24, for example, refers to the duty of a coastal state to give publicity to any danger to navigation, of which it has knowledge, within its territorial seas; Article 44 refers similarly to the duty of states bordering straits. For further details, UNCLOS should be consulted.

(2) The new draft version of SOLAS Chapter V, to be considered by the IMO Assembly, contains an explicit reference to this obligation.

series do not necessarily use every large-scale sheet along their tracks, especially if the waters are not complex. Coasting along the south coast of England, for example, British mariners often prefer the 1:150 000 second-scale cover to the 1:75 000 series - thereby reducing the number of charts in use and hence the number of position transfers between sheets.

- A-102.3 This concept is the basis of the choice of scale - 1:150 000 or thereabouts - by France and Germany for their largest- scale continuous coastal series of the south coast of England. The use of scales smaller than the largest of the national series, provided they are adequate for navigation, may also be possible for harbours and port approaches - Plymouth and the Solent are examples. Of course, in exceptionally complex areas, such as river mouths like the Schelde, no reduction in the scale of the national series may be desirable.
- A-102.4 Another feature of chart series like those of France and Germany is their concentration on the foreign ports most used by their own vessels. Usually only for such most-frequented ports are large-scale charts of harbours and of the approaches to them included in the series.
- A-102.5 Thus, by judicious choice of port and scale, and by varying the latter according to the complexity of the area, France and Germany are able, in those parts of their chart series which cover foreign waters - where visiting French and German ships are in the role of foreign-going international shipping - to keep the total sizes of their world-wide chart outfits within manageable limits, to the advantage of the shipping using them.
- A-102.6 Another aspect of the economy in the size of such world outfits is the limitation, outside national waters, of the number of Notices to Mariners by which they are kept corrected. The careful selection, in a variety of ways, of the detail on these charts, allows Notices to be restricted to items which are essential to foreign-going shipping. The updating of the outfit is thereby kept to manageable proportions.
- A-102.7 The principles just described formed the basis of the original concept of an international set of medium- and large-scale charts, a set less unwieldy than would be obtained by simply combining existing national chart series in full. From such an internationally-conceived set, all nations who wished to do so could benefit - in the words of Technical Resolution K2.2 (now cancelled), it would “enable those IHO Member States who provide, or wish to provide, charts outside their national waters, to print by facsimile with minimum modification selected modern charts”. By following the principle of producer nations making reproduction material for international charts available to printer nations, the intention was:
- a. firstly, to allow countries which do not print charts outside their national waters at present to do so
 - b. secondly, and more importantly, by sharing the production effort, to make it easier for all countries to keep their charts of foreign waters updated, and thereby to use their resources with greater efficiency, one of the prime needs of hydrographic offices.

- A-102.8 More recently the generation of international charts can provide a basis on which to build Electronic Navigational Chart cover for a nation's waters, and provides a framework for the agreement of cover suitable for adoption of charts by one nation in another's waters under the terms of a bilateral arrangement (TR A3.4 refers).

A-103 DEVELOPMENT OF INTERNATIONAL CHARTS

- A-103.1 The idea of international charts was first advanced formally to the IHO at its 9th Conference in 1967 in a motion put by France and the Netherlands. A resolution of that Conference established the Commission on the International Chart, Small Scales (CICSS). The CICSS devised the limits of two series of small-scale charts covering the whole world - a series of 19 charts at scale 1:10 000 000 and another of 60 charts at scale 1:3 500 000. Specifications for the production of these charts were also drawn up and included as Annex 3 to the report of the Commission, issued by the IHO in 1970. They subsequently became Appendix 1 to the IHO Regulations for International Charts. This appendix is scheduled to be republished as Part C of M-4 in 2000. Production of these small-scale international charts was completed in 1987.
- A-103.2 In 1972, the 10th IH Conference resolved that a study be conducted into applying the international concept to medium- and large-scale charts also. The North Sea International Chart Commission (NSICC) was accordingly formed to carry out the study on behalf of the IHO. The NSICC devised a scheme of international charts covering NW Europe and the NE Atlantic; full details were published in the NSICC Report to the 11th IH Conference.
- A-103.3 However, the major task of the NSICC proved to be the production of a comprehensive set of detailed chart specifications for use in preparing international charts at medium and large scales. This work provided the opportunity for considerable advances in the standardization of chart content. This was recognised at the 1977 IH Conference, which constituted a Chart Specifications Committee (CSC) 'to adapt and extend the specifications for International Charts to cover all navigational charts in the interests of standardization'.
- A-103.4 The CSC modified the NSICC Specifications as necessary to produce the Chart Specifications of the IHO (M-4 Part 1, to be re-numbered Part B) which now form the standard for the production of all medium- and large-scale nautical charts, both national and international. Other parts of the NSICC's work concerned the formulation and operation of various bilateral arrangements between nations relating to international charts. The development of bilateral arrangements covering charts is now covered in TR A3.4 (see A-601).

A-104 INTERNATIONAL CHART TERMS

- A-104.1 An 'INTERNATIONAL (INT) CHART' is a chart which:
- a. is produced with limits and scale in conformity with an internationally agreed scheme of such charts

- b. carries the INT number of that sheet,
- c. conforms to the Chart Specifications of the IHO (M-4 Parts B and C),
- d. conforms to the Regulations of the IHO for International Charts (M-4 Part A).

- A-104.2 A 'PRODUCER NATION' is a Member State of the IHO which undertakes the production of an international chart.
- A-104.3 A 'PRINTER NATION' is a Member State of the IHO which uses reproduction material from a producer nation to print an international chart, with only superficial modifications, for inclusion in its own chart series. Bilateral arrangements between IHO Member States covering such charting are the subject of TR A3.4.
- A-104.4 'REPROMAT' is an abbreviation for **reproduction material**; see A-500.
- A-104.5 'NATIONAL WATERS' is used loosely to include adjacent sea areas normally surveyed by any national hydrographic office.
- A-104.6 'BILATERAL ARRANGEMENT' is a formal arrangement between two Member States of the IHO, including the detailed financial and administrative arrangements, for charting in each other's waters. Until bilateral arrangements are in place, or where it is mutually agreed that bilateral procedures are not appropriate or economical, hydrographic offices may operate according to other procedures mutually agreed between them (TR A3.4 refers).
Guidelines for bilateral arrangements between hydrographic offices are provided in IHO Circular Letter 48/1995.

SECTION 200 - SCHEMES OF INTERNATIONAL CHARTS

A-201 SCHEMES

- A-201.1 Two schemes of small-scale international charts covering the world were developed by the CICSS.
- A-201.2 Schemes of medium- and large-scale international charts are devised by regional groupings of hydrographic offices concerned with particular regions (see A-204.8).
- A-201.3 Details of international chart schemes and of scheming principles are shown in M-11, Catalogue of International Charts and Guidance for Regional Coordinators of INT schemes:
- Part 1 Catalogue of International (INT) Charts
 - Part 2 Guidance for Regional Coordinators of International Chart schemes (to be published in 2000, formerly S-48)

A-202 SCHEMING PRINCIPLES

- A-202.1 Adequacy for international (foreign-going) shipping is the keynote, as explained in A-102.3 to A-102.5. Applying this basic principle, the following detailed guidelines may be followed, *inter alia*, when devising international schemes:
- a. the scales used by hydrographic offices when charting other countries' waters should be used for guidance in the choice of scales for the international series;
 - b. wherever possible, sheet limits and scales should be made to conform to those of corresponding charts in the various national chart series, present or projected, which can thereby most readily be modified, or prepared from the beginning, to conform to international specifications or regulations;
 - c. the need for a separate chart may sometimes be avoided by adding it in modified form as an inset plan to another sheet, in order to reduce the total number of international charts;
 - d. chart dimensions shall follow the standards laid down in 1-222 [B-222].
- A-202.2 The choice of scales (see A-202.1a) will depend upon the navigational requirements of international shipping. It will usually be possible to identify scale bands which fulfil different types of navigational function, eg coastal navigation. The precise structure of the scheme may vary from area to area, reflecting differing hydrographic circumstances. For example, in the NSICC scheme the continuous coastal series varies in scale between 1:130 000 and 1:350 000, and all the chosen scales are considered adequate for coastal navigation in the areas to which they apply.
- A-202.3 The selection of ports to be covered in the international series should be related to the frequency of use by foreign shipping. Initially, production priority should be given to major ports. The choice of ports will need to be kept under review in the light of new developments, and the scheme adjusted accordingly.

A-202.4 For more detailed consideration of the principles behind the scheming of international charts and for more detailed guidance, for example if a consensus cannot be achieved, Guidance for Regional Coordinators of International Chart Schemes (Part 1 of M-11) should be consulted.

A-203 PRODUCERS

A-203.1 Producers of medium- and large-scale international charts will normally be the hydrographic offices with a national responsibility for the waters concerned. However, some special cases may be identified:

- a. The allocation of medium scale charts covering more than one nation's waters should be agreed and preferably shared between the nations concerned: in the interests of efficiency of production a single producer nation should normally be identified for each chart.
- b. Where for any reason a single producer nation cannot be agreed for an international chart, the nations involved may collaborate on the production of a single international chart which will bear both their official seals.
- c. If there is a requirement for an international sheet which a national office may not wish to produce, its production may be undertaken by a potential printer nation after discussion and agreement with the national office concerned.
- d. Where two or more bordering Member States cannot agree on which should produce an international chart of their waters, the limits and scale of which they have agreed, then that international chart should not be prepared until such agreement can be reached.
- e. Pending agreement as provided for in A-203.1a to A-203.1d, the states concerned, in a spirit of understanding and cooperation, shall make every effort to enter into practical provisional arrangements, including those provided for above, so as not to interfere with the reaching of a final agreement. Such arrangements shall not prejudice the final agreement and shall maintain the regionally approved chart schemes.
- f. Where an international chart is desired which will cover waters of a nation which is not a member of the IHO, the producer nation will be agreed by the IHO Regional body concerned with international charts. It is not necessary to seek the approval of the non-member nation but consultation on other aspects of charting its waters is recommended.
- g. The addition or omission of inset plans or the omission of internal detail, on or from international sheets which would otherwise correspond to national charts, may be undertaken by a printer nation **but only** under the technical terms of a bilateral arrangement agreed with the producer nation concerned (TR A3.4 refers).

N.B: Producer nation status for any international chart does not have any political significance.

A-204 CHART NUMBERING

A-204.1 The CICSS recommended a numbering system and made a provisional regional allocation of numbers for international charts. Slight adjustment of this allocation was found necessary by the NSICC - see the NSICC Report to the 11th IH Conference. It is recommended that international charts be numbered in accordance with the principles described in the following paragraphs.

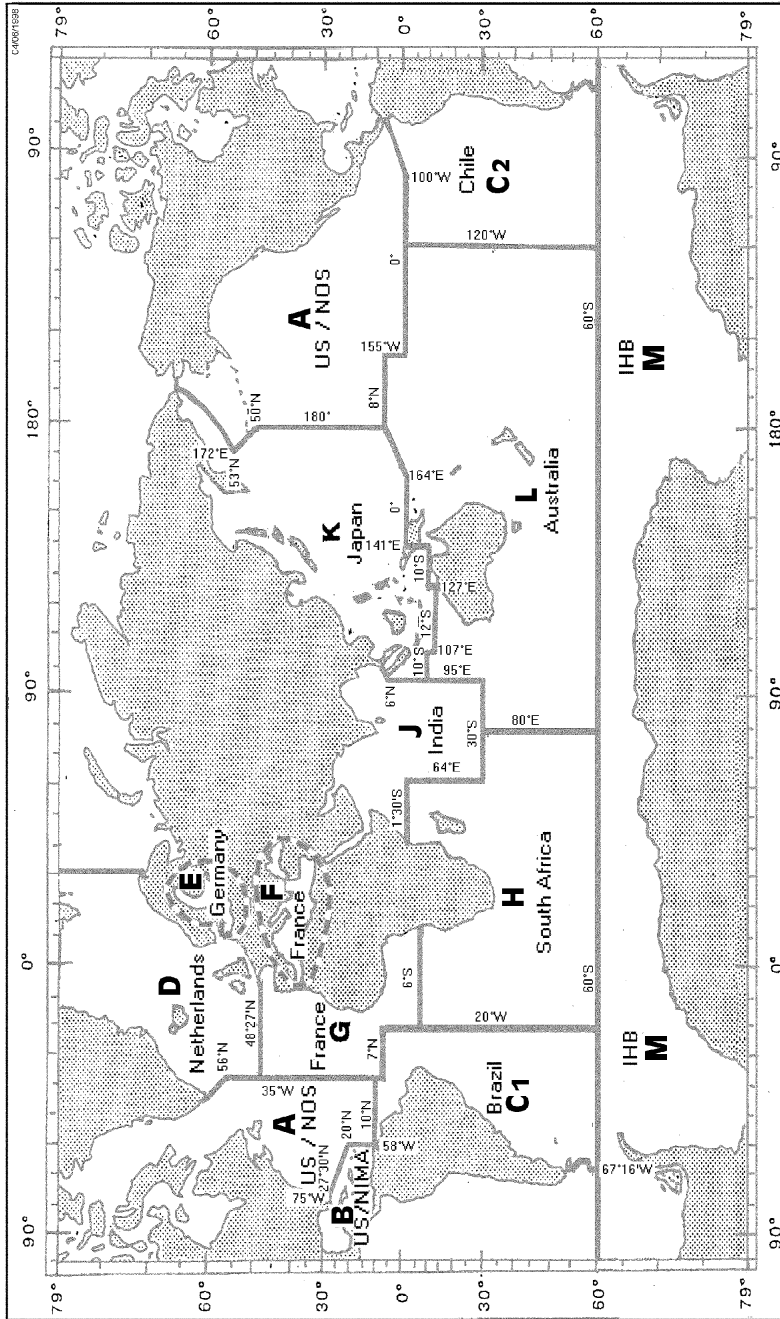
A-204.2 The blocks of INT numbers allocated to major areas ⁽¹⁾ are:

MAJOR AREAS	Allocation of INT Numbers to charts on scales shown		
	1:9 900 000 to 1:1 100 000	1:1 000 000 to 1:375 000 *	1:350 000 * and larger
East side of North Atlantic Region D	100 - 199	{ 1000 - 1019 { 1030 - 1079	1100 - 1169 1300 1305 - 1314 1384 - 1799
Region E		1020 - 1029	1170 - 1299 1301 - 1304 1315 - 1383
Part of Region G		1080 - 1099	1800 - 1999
Central and South Atlantic Region C1 Part of Region H Part of Region G	200 - 299	2000 - 2049 2050 - 2074 2075 - 2099	2100 - 2499 2500 - 2754 2755 - 2999
Mediterranean & Black Seas Region F	300 - 399	3000 - 3099	3100 - 3999
West side of North Atlantic Region B and part of Region A	400 - 499	4000 - 4099	4100 - 4999
West side of North Pacific Region K	500 - 599	5000 - 5099	5100 - 5999
South Pacific Region C2 Part of Region L	600 - 699	6000 - 6029 6030 - 6099	6100 - 6299 6300 - 6999
Indian Ocean Region J Part of Region H Part of Region L	700 - 799	7000 - 7049 7050 - 7074 7075 - 7099	7100 - 7499 7500 - 7749 7750 - 7999
East side of North Pacific Part of Region A	800 - 899	8000 - 8099	8100 - 8999
Antarctica Region M	900 - 929	9000 - 9199	
Other Polar and Special Charts	930 - 999	9200 - 9999	
NOTES: 1. * The scale bands may be varied to suit regional needs. 2. The blocks of numbers listed above include numbers already in use.			

⁽¹⁾ OCEAN CHARTS (1:10M and smaller) are allocated numbers 10 to 99.

- A-204.3 Chart numbers with 2 or 3 digits may be allocated only after consultation with the CSC Secretariat, to permit coordination between regions.
- A-204.4 Chart numbers with 4 digits may be allocated by the Regional Coordinators of INT chart schemes, in consultation with other members of their Regional Groups.
- A-204.5 Each block should be sub-divided on a regional basis, eg:
 1100 - 1169 E coast of Greenland, Faeroes, Iceland, N coast of Russia,
 N Norway.
 1170 - 1299 Baltic.
 1300 - 1399 Skagerrak, Kattegat and Baltic entrances.
- A-204.6 Further sub-division by scale within a block is also desirable. For example, the international charts of the west coast of the British Isles are numbered within the following sub-blocks:
- | | |
|---|-------------|
| General charts of the whole area (1:1 500 000) | 160 - 169 |
| Passage / Landfall charts (1:1 000 000 - 1:375 000) | 1060 - 1069 |
| Continuous coastal cover (1:350 000 - 1:130 000) | 1600 - 1629 |
| Larger scales | 1630 - 1699 |
- NB: The scale ranges quoted in this example proved convenient in numbering scale groups in this area. Elsewhere, different scale ranges may be more suitable according to the nature of the chart cover.
- A-204.7 It is important that gaps be left within both scale groups and regional groups, in order to provide for future additions to the chart series.
- A-204.8 The following diagram illustrates the international charting areas, details the countries responsible for coordinating the international chart schemes in those areas, and lists the relevant Regional Hydrographic Commissions (if any).

IHO INTERNATIONAL CHARTING REGIONS



Note : The names of Member States [and IHB] appearing on the diagram are the coordinators of the regional charting schemes.

REGIONAL HYDROGRAPHIC COMMISSIONS	
A US/Canada Hydrographic Commission (US/CHC)	F Mediterranean and Black Seas Hydrographic Commission (MBSHC)
B Caribbean and Gulf of Mexico Hydrographic Commission (CGMHG)	G Eastern Atlantic Hydrographic Commission (EATHC)
C₁ <i>To be established</i>	H Southern African and Islands Hydrographic Commission (SAIHC)
C₂ South-East Pacific Hydrographic Commission (SEPHC)	J <i>To be established</i>
D North Sea Hydrographic Commission (NSHC)	K East Asia Hydrographic Commission (EAHC)
E Nordic Hydrographic Commission (NHC)	L South-West Pacific Hydrographic Commission (SWPHC)
E Baltic Sea Hydrographic Commission (BSHC)	M Antarctic Hydrographic Committee (AHC)

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SECTION 300 - SPECIFICATIONS FOR INTERNATIONAL CHARTS**A-301 SMALL-SCALE CHARTS**

- A-301.1 International charts on scales of 1:2 Million and smaller shall be prepared in accordance with the Chart Specifications of the IHO for Small-Scale International (INT) Charts in Part C.

A-302 MEDIUM- and LARGE-SCALE CHARTS

- A-302.1 International charts on scales larger than 1:2 Million shall be prepared in accordance with the Chart Specifications of the IHO contained in Part B. These specifications are published for use in compiling medium- and large-scale charts, both national and international. Some paragraphs or sub-paragraphs are applicable only to international charts. These are distinguished by the suffix "I" to the paragraph number, eg B-351.1(I).
- A-302.2 Particular attention is drawn to B-110 which defines various levels of standardization which can be identified throughout the specifications. The intention is to permit some variations between the charting practices of IHO member offices where they would not mislead a navigator, while striving for complete uniformity where essentials are concerned. The depiction of topographic relief is in the first category, as opposed to the definition and use of a submerged rock symbol, which is in the second.
- A-302.3 It is likely that, either temporarily or permanently, there will be national requirements, reflecting a country's needs or preferences, to introduce minor variations into the specifications. Such factors will inevitably affect the degree of modification which a printer nation is obliged, or chooses, to make to a producer nation's reproduction material. However, the aim of the international chart concept is to produce a series which is capable of being reproduced with minimum modification, and the importance of producer offices adhering closely to the specifications is obvious.
- A-302.4 In general, it should be borne in mind that any publisher has a responsibility to the users of any of his publications, and the ultimate decision as to its contents must be his. In the nautical charting context, hydrographic offices publishing national or international charts, whether as producers or printers, are in this position.

A-302.5 The following standard reference graphics are complimentary to the Chart Specifications:

INT1 Symbols, Abbreviations, Terms used on Charts

Provides the chart user with a key to symbols and abbreviations used on charts compiled in accordance with these specifications. Although it may be used by cartographers as a quick reference, the specifications should always be used for detailed guidance.

INT2 Borders, Graduation, Grids and Linear Scales

Shows specimens of the various patterns of border graduation and linear scales.

INT3 Use of Symbols and Abbreviations

A standard reference chart of a fictitious area with as many examples as possible of the use of these specifications.

For the latest edition dates, see P-4, Catalogue of IHO Publications.

SECTION 400 - MAINTENANCE OF INTERNATIONAL CHARTS

A-401 GENERAL

A-401.1 Chart maintenance is the process of examining relevant data as it is received and taking appropriate action to ensure that all information required for safe navigation is incorporated in the charts in use.

A-401.2 The following terms are used when referring to the issue of charts, and in these Regulations:

- a. **New Chart (NC):** The first publication of a national chart which will either:
1. embrace an area not previously charted by that nation to the scale shown; or
 2. embrace an area different from any existing chart of that nation; or
 3. consist of a modernised version (in terms of symbology and general presentation) of an existing chart; or
 4. consist of the adoption by that nation of an international (INT) or national chart, first published by another nation

A New Chart does not necessarily contain newly received information and all information contained may have been previously made available in other national charts. Reference should always be made to the Source / Reliability / Zones of Confidence (ZOC) Diagram (see B-170 to B-178) which will contain details of the original survey data used to compile the New Chart. Where a New Chart does contain newly received information, the source / reliability diagram will not always reflect certain extensive changes, for example to symbology, buoyage or lights.

- b. **New Edition and/or Large Correction (NE, LC):** A new issue of an existing chart, containing amendments essential to navigation which will normally have been derived from newly received information. It will include changes additional to those previously promulgated in Notices to Mariners, and will render the existing edition obsolete. However, it should be noted that considerable parts of the chart may remain unchanged. The chart number normally remains unchanged except for the addition of INT number when the chart becomes INT. Reference should be made to the Source / Reliability / Diagram (see B-170 to B-178) which will contain details of the survey data used to amend the chart. However, the source / reliability diagram will not always reflect certain extensive changes, for example to symbology, buoyage or lights.

It should be noted that a Large Correction, a type of correction used by a limited number of nations, is a particularly restricted New Edition.

Exceptionally, certain charting authorities may issue a New Edition or Large Correction including only Notices to Mariners.

- c. **Revised Reprint:** A new print of the current edition of a chart incorporating no amendments of navigational significance other than those previously promulgated in Notices to Mariners (if any). It may, however, contain amendments from other sources provided they are not essential to navigation. Previous printings of the current edition of the chart always remain in force.
- d. **Chartlet / Block / Patch:** A small auxiliary chart giving new details of a particular area, to be pasted on the chart by the user. Chartlets are normally included in Notices to Mariners.

A-401.3 Charts will be maintained by the issue of New Charts, New Editions and Notices to Mariners (NM). Nations which employ the Large Correction and / or Revised Reprint in their amendment procedures may also use these for international charts.

A-401.4 Each nation, in the role of either producer or printer, will accept responsibility for the operation of a system to ensure adequate maintenance of any international chart included in its national series. The required level of maintenance is determined largely by the rate at which significant new information is received. Receipt of new data is not normally predictable so it is rarely feasible to operate on the basis of regular maintenance programmes. Usually the primary factor that determines the frequency of action is rate of change of the critical data in the chart that affects safety of navigation.

A-402 NEW CHARTS, NEW EDITIONS, LARGE CORRECTIONS and NOTICES TO MARINERS WITH BLOCKS

A-402.1 The responsibility for initiating the issue of a replacement New Chart, New Edition, Large Correction or NM Block normally rests with the producer nation. A printer nation receiving data which might give rise to a New Chart, New Edition, Large Correction or NM Block should pass it to the producer nation for action. All other members of the IHO should similarly pass such data to the producer nation for action.

A-402.2 Producer nations will give advance notification in NMs of their intention to replace an existing chart by New Chart, New Edition or Large Correction. Each printer nation is recommended to take appropriate consequential action to keep its adopted national version of the chart in line with the producer's and will request reformat if required.

A-402.3 On receipt of a Large Correction, a printer nation which does not use that classification may issue the amendment to the adopted version as a New Edition.

A-402.4 Producer nations will indicate to printer nations those charts whose Large Corrections / New Editions include Notices to Mariners only.

A-402.5 Printer nations will normally place a standing order with producer nations for the automatic supply of reformat of NM Blocks affecting all charts adopted by the printer nation.

A-403 NOTICES TO MARINERS - PROCEDURES

- A-403.1 The issue of Notices to Mariners (NM) will be in accordance with the procedures detailed in A-403.2 to A-403.10.
- A-403.2 The promulgation by the various printer nations involved will normally be based on the NM issued by the hydrographic office (HO) who is the designated producer nation of the international chart. For most medium- and large-scale international charts, the producer nation will be the HO with a national responsibility for the waters concerned (see A-203.1).
- A-403.3 Printer nations will arrange with the producer nation for the regular supply of the latter's NM publications.
- A-403.4 Printer nations, using the NM issued by the producer nation, will each draft a corresponding NM, allocate a national number to it, and quote the producer nation's NM number as the authority.
- A-403.5 To accelerate the general release of the information, the producer nation will, if possible, supply advance copies or copies of the draft NM to relevant printer nations.
- A-403.6 If the HO with a national responsibility for the waters concerned is not the designated producer nation of the international chart, the producer nation will request that HO to supply at least one copy of the draft NM to the producer who will undertake to forward copies to printer nations. As the first-scale charts in the international series may correspond to the second-scale charts in the national series, it is important that all Notices which affect the national charts one scale step larger than the international chart be supplied. This will ensure that the supply of updating information is comprehensive enough to maintain all essential items on the international chart.
- A-403.7 The international chart often serves as the national chart of the area. The producer nation will therefore need to issue NMs to safeguard the navigation of both national users of all types and vessels trading internationally. Printer nations may be concerned to keep updating of paper products by international mariners to manageable proportions. National producer nations may be concerned that all updating information they issue be represented on all versions of their chart whether produced by them or by a printer nation. Procedures for handling producer nations' NMs by printer nations will be agreed by bilateral arrangement between producer and printer nations. Whatever procedure is agreed, it is recommended that printer nations incorporate the details contained in all NMs issued by the producer nation in any revised reprint of their national version of the international chart (see A-404.2).
- A-403.8 Normally a printer nation will not issue an NM affecting fundamental hydrographic detail on an international chart without prior consultation with the producer nation. However, exceptionally, a printer has the right to initiate and issue an NM for its version of an international chart if immediate promulgation of

critical information is considered advisable. In such cases, the printer nation should ensure that copies (preferably advance copies) are sent to the producer nation, to the HO with a national responsibility for the waters concerned (if different from the producer nation) and to the other printer nations. The HO with a national responsibility for the waters concerned should also be supplied with a copy of the report or data on which the NM is based. All other members of the IHO should similarly pass such data to the producer nation for action.

- A-403.9 In the list of “charts affected” given in their NM, all nations will quote the international chart number in brackets, adjacent to the national chart number. It is recommended that the number of the previous national NM affecting the chart should also be quoted.
- A-403.10 In the index to their Notices to Mariners, all nations will quote the international chart number in brackets, adjacent to the national chart numbers which are usually arranged in sequence. In addition, the index section should also include a separate list of international chart numbers, arranged in sequence under the heading “International Charts” and quoting alongside the numbers of the relevant national NMs affecting each international chart.

A-404 REVISED REPRINTS

- A-404.1 The designated producer nation of an international chart may issue a revised reprint of that chart. The revised reprint should incorporate no amendments of navigational significance, other than those previously promulgated in Notices to Mariners (if any). It may however contain amendments from other sources, provided they are not essential to navigation. Previous printings of the current edition will remain in force. Advance notification in NMs, or elsewhere, of the issue of a revised reprint is not normally provided. Copies, preferably with the changes indicated, should therefore be supplied by producers to printers, without demand. A printer nation noting changes indicated may request updated reprint from the producer.
- A-404.2 Printer nations may also originate a revised reprint of their national version of an international chart. It is recommended that such a revised reprint should incorporate the amendments resulting from all the NMs issued by the producer nation, even if some of these have not previously been re-promulgated by the printer nation (see A-403.7). This will preserve the homogeneous nature of the international chart series while, at the same time, minimising the correctional task placed on the international mariner. If the revised reprint incorporates other revisions not originated by the producer, a copy (preferably with the changes indicated) will be supplied to the producer, in advance of publication.

SECTION 500 - EXCHANGE OF REPRODUCTION MATERIAL**A-501 GENERAL**

- A-501.1 Reproduction material (repmat) is material made by the producer nation, at some convenient stage in the preparation of an international chart, from which the chart may be reproduced, without redrafting, in modified facsimile by a printer nation. It may be in analogue or digital form.
- A-501.2 Repromat for New Charts, New Editions, Large Corrections or reprints is supplied by producers at the request of printers (see A-402.2 and A-404.1). The terms and conditions for the exchange of repmat will be established bilaterally between individual producer and printer nations (see A-601).
- A-501.3 The following paragraphs provide guidance on the procedures for the supply of repmat in analogue form. Procedures for its supply in digital form will be agreed as part of the bilateral arrangements between producer and printer nations.

A-502 QUALITY OF REPRMAT

- A-502.1 The producer nation shall ensure that the repmat being provided to another nation meets certain standards given below. These represent a minimum specification and should permit the producer nation to use its normal work materials and procedures.
- A-502.2 **Material Characteristics:** Repromat will be prepared on stable base plastic or film. The size of the repmat will not vary from the computed chart size by more than $\pm 0,5$ mm over the longest dimension of the chart graticule.
- A-502.3 **Image Quality:** Repromat images will be precise and free of blemishes and holes, so as not to require opaquing or other touch-up work.
- A-502.4 **Amount and Form of Material:** The most appropriate form and amount of repmat will be agreed as part of the bilateral arrangements between producer and printer nations. Repromat will be in negative or positive form depending upon the printing processes used by the nations concerned. The repmat will be accompanied by a copy of the chart itself.

A-503 REPRMAT FOR NM BLOCKS

- A-503.1 Printer nations will normally place a standing order with producer nations for the automatic supply of repmat of NM Blocks (chartlets, patches) affecting all charts adopted by the printer nation (see A-401.2d).

A-504 PROCEDURES FOR ORDERING AND SUPPLYING REPROMAT

- A-504.1 Repromat is sometimes ruined in the process of shipment, or delayed because the parcel was not properly identified. The following procedures should minimise such problems.
- A-504.2 **Ordering repromat:** The printer nation requiring repromat of an international chart shall order such from the producer nation and shall identify the required repromat by the international number, followed by the national number.
- A-504.3 **Point of Contact:** Each producer nation shall designate an addressee for requests for repromat.
- A-504.4 **Ordering Procedures:** The printer nation shall order the repromat by letter or through the use of a requisition form. Requests shall specify that the repromat is being ordered under the relevant bilateral arrangement (see A-601.1).
- A-504.5 **Wrapping and Packing:** Repromat shall be so packaged as to prevent damage in transit. A mailing tube or box of reinforced cardboard shall preferably be used.
- A-504.6 **Supply Method:** The method of shipment shall be determined when the bilateral arrangement is established. Over long distances air shipment is recommended as, although relatively expensive, it is the fastest and least likely to result in damage. Appropriate identification on the parcel shall be made to preclude undue delay to the parcel in the Customs Clearing House of the receiving nation.
- A-504.7 **Receipt for Material:** The receiving nation shall acknowledge receipt of each shipment of repromat and shall provide a documentary receipt to the producing nation.

A-505 PAYMENT FOR REPROMAT

- A-505.1 Where financial terms and conditions are agreed, they should in accordance with A-601.

SECTION 600 - FINANCIAL ASPECTS

A-601 ARRANGEMENTS BETWEEN PRODUCERS AND PRINTERS

- A-601.1 The exchange of reproduction materials required for the reproduction of international charts as resolved in TR A3.4 should be arranged between the producer nations and printer nations, with the financial terms and conditions as agreed by bilateral arrangement.
- A-601.2 Financial arrangements should be made **that will encourage and not inhibit the early development of a set of worldwide international charts.**
- A-601.3 There is no obligation for a financial exchange between printers and producers. Arrangements should be made between the parties.
- A-601.4 The price of a printer's chart should be determined when the arrangement is reached between the producer and printer nations. It is recommended that the normal pricing policy should be that the price of a printer's chart should not be less than that of similar charts in his own national series.

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