

**18th Annual Meeting**

**October 15 – 17, 2024**

**Beijing, PRC**

**Inland ENC Harmonization Group**

**18th Annual Meeting**

**October 15th – 17th 2024**

**Location: BUPT Jinjiang Hotel  
No. 8, Xitucheng Road, Haidian District, Beijing**

**Lodging: in the same hotel**

A block of rooms has been reserved under “Inland ENC Harmonization Group (IEHG)” from October 14-29, 2024.

Regular King Room: 568 CNY (original price 1080 CNY), including breakfast buffet  
Business King Room: 638 CNY (original price 1680 CNY), including breakfast buffet  
Every room has free WIFI  
  
Please send your choice of room and the dates to Liu Li, [liuli@wti.ac.cn](mailto:liuli@wti.ac.cn) , CC [bernd.birklhuber@bmk.gv.at](mailto:bernd.birklhuber@bmk.gv.at), **before September** to ensure a reservation.

**Local contact:** Liu Li

E-mail: [liuli@wti.ac.cn](mailto:liuli@wti.ac.cn)

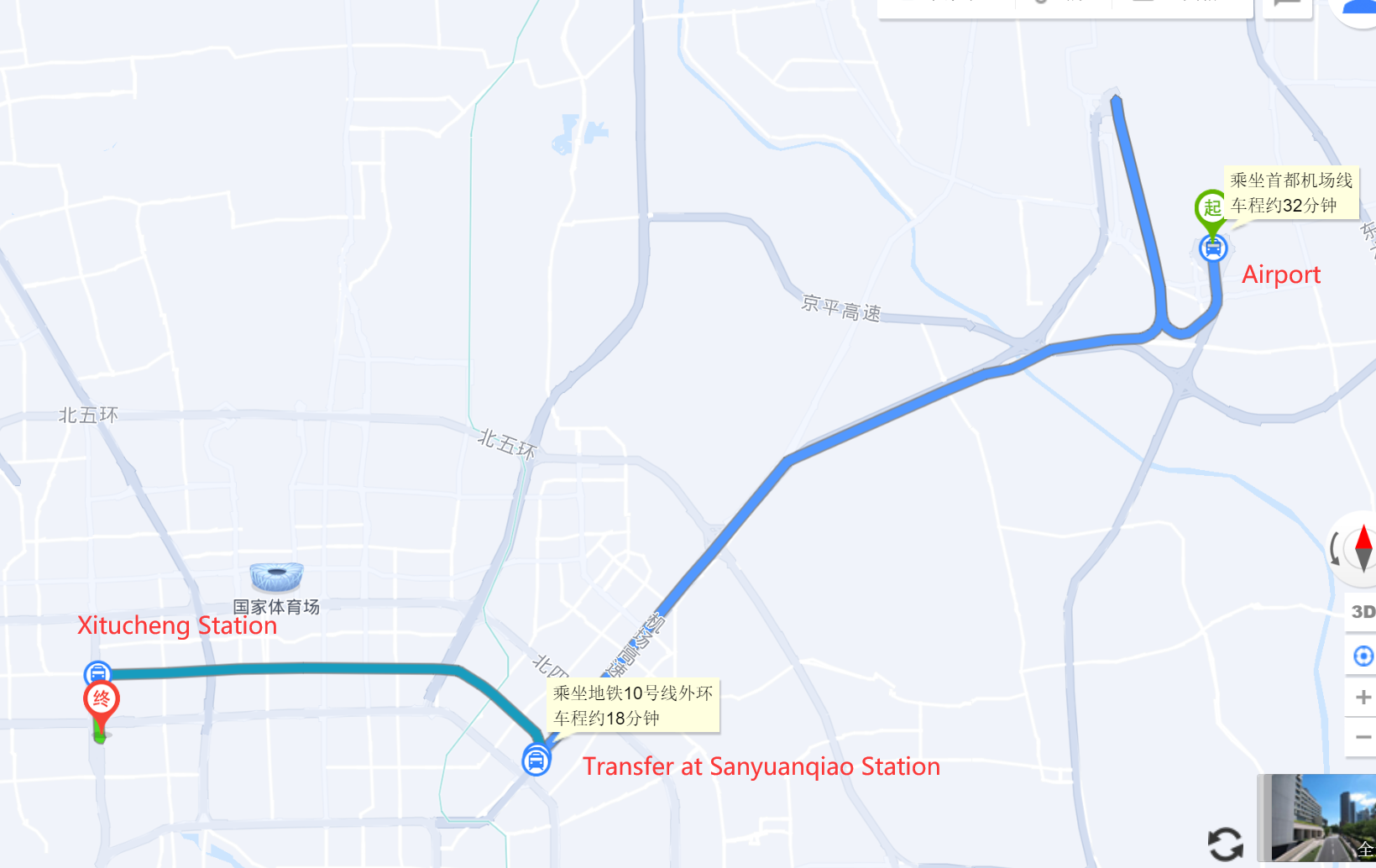
Mobile phone: +86 13810876967

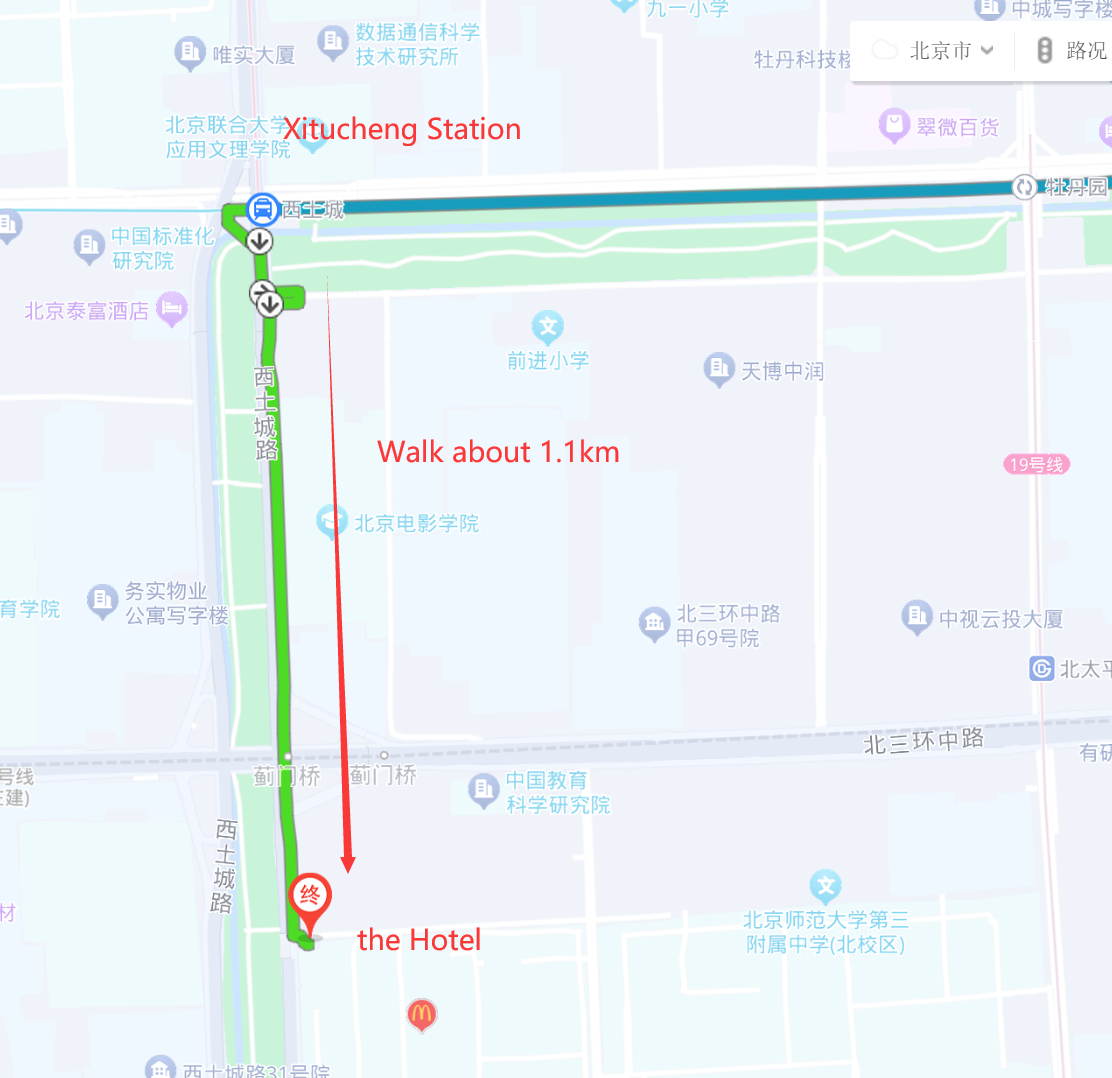
**Transportation to the Hotel from Beijing Capital International Airport (IATA：PEK，ICAO：ZBAA)**

• Taxi – Approx. 100 CNY (one-way)

• Public Transportation – Approximately 30 CNY (one-way)

o Take the Beijing Subway Capital Airport Express to the Sanyuanqiao Station. Transfer to Subway Line 10 and stop at the Xitucheng Station. Exit from the F or E or C of Xitucheng Station. Walk south on Xitucheng Road to BUPT Jinjiang Hotel (on the east side of the road).





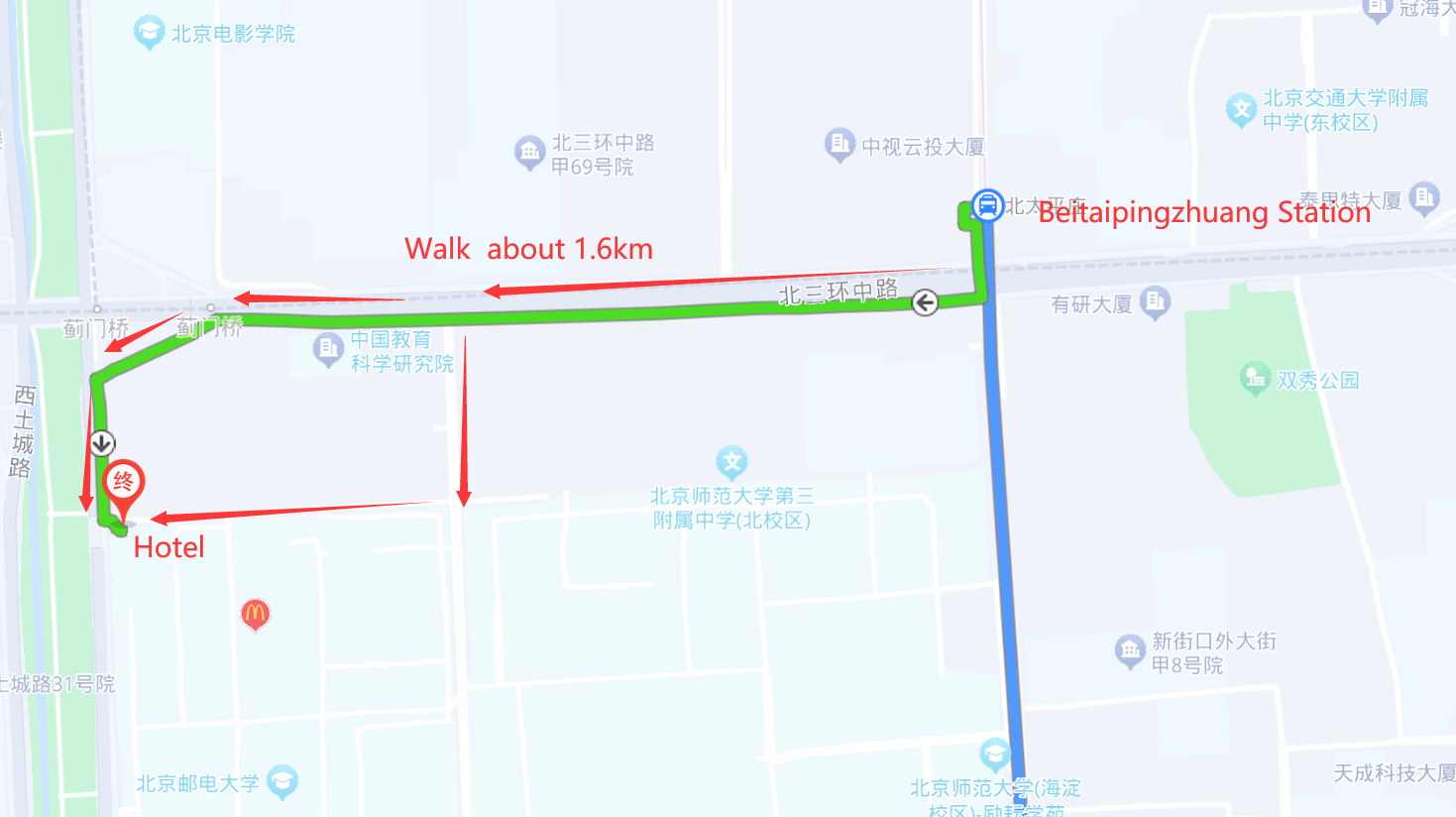
**Transportation to the Hotel from Beijing Daxing International Airport (IATA：PKX，ICAO：ZBAD)**

• Taxi – Approx. 230 CNY (one-way)

• Public Transportation – Approximately 40 CNY (one-way)

o Take the Beijing Daxing Airport Express to the Caoqiao Station. Transfer to Subway Line 19 and stop at the Beitaipingzhuang Station. Exit from the A of Beitaipingzhuang Station. Walk south and cross the Beitaiping Bridge. Turn right and walk west to BUPT Jinjiang Hotel (on the east side of the road).





**Draft Agenda of the IEHG meeting**

Documents for the meeting are available at <https://github.com/IEHG/IEHG-Meeting-2024>

Link for online participation: <https://usace1.webex.com/join/IENC>

Starting time: 15th October 2024, 09:00 (UTC + 8 h)

1. **Welcome  
   Introductions of Participants  
   Organizational details**
2. **Update on the legal and organizational background and the status of implementation:**

China Li Liu  
Europe Gert Morlion  
South America Vitor Pimentel  
U.S. Denise LaDue  
  
Presentations should include information on the planned and completed IENC coverage (names of waterways and kilometers) and the availability   
(max 30 minutes per presentation)

**Action points from last meeting**:

All: Please provide an email to bernd.birklhuber@bmk.gv.at containing updates to the information on the status of implementation.

COMEX² to check whether a reporting tool for discrepancies could be implemented by EuRIS or on national level (the US tool is based on Survey 123 of ArcGIS).

**3. Presentation of Inland ENC applications by private companies**

Private companies that are IEHG participants are invited to present IENC applications   
(max 30 minutes per presentation)

**Action point from last meeting:**TheIEHG website contains a list of both National Organizations and Private Companies involved with IENCs. If not listed, please provide web address to bernd.birklhuber@bmk.gv.at for inclusion on the website.

**4. Election of the Core Group of IEHG (chairs, co-chairs and technical coordinators)**

According to the [Terms of Reference of IEHG](https://3763209771-files.gitbook.io/~/files/v0/b/gitbook-x-prod.appspot.com/o/spaces%2F-LvPWzccdvH_L4gy8dPV%2Fuploads%2FmM7deRlkfLY1c7Y5MYqi%2FToR_for_IEHG_2021.pdf?alt=media&token=c8a4ccb8-2a93-4eb8-b157-58c2dad7094a) the group is electing chairpersons, vice-chairs and technical coordinators by simple majority vote. The meeting should confirm the current Core Group members or elect new members.

Each region can elect its technical coordinator and its candidate for chair/vice chair. The whole group is electing the two chairs from the group of the candidates.

**Action point from last meeting:**   
Bernd Birklhuber to update the list of members accordingly.  
Status: done, action point closed

**Election of the representatives of IEHG in the Domain Control Body and the Executive Control Body of S-100**

IEHG is the owner of the Inland ENC domain in the S-100 registry and has to nominate representatives for the Domain Control Body and the Executive Control Body of S-100 in accordance with S-99. IEHG should confirm the current representatives or elect new representatives.

See Annex B of the [Terms of Reference of IEHG](https://3763209771-files.gitbook.io/~/files/v0/b/gitbook-x-prod.appspot.com/o/spaces%2F-LvPWzccdvH_L4gy8dPV%2Fuploads%2FmM7deRlkfLY1c7Y5MYqi%2FToR_for_IEHG_2021.pdf?alt=media&token=c8a4ccb8-2a93-4eb8-b157-58c2dad7094a)

**Action point from last meeting:**   
Bernd Birklhuber to submit a CR for the Terms of Reference to include the S-100 representatives in the Core Group.  
Status: done, action point closed

**Amendment of the Terms of Reference**

IEHG could check whether the ToR of IEHG need to be updated.

**Action point from last meeting:**Bernd Birklhuber to publish the amended ToR 2023 on the website.  
Status: done, action point closed

**Update of the Introduction of the Encoding Guide for Inland ENCs**

IEHG could check whether the Introduction to the Encoding Guide for Inland ENCs needs to be updated.

**List of members and participants**

IEHG could check whether the list of members and participants of IEHG needs to be updated.

**Action point from last meeting:**Bernd Birklhuber to publish the updated list on the website0  
Done, action point closed.

**5. Updates to the Encoding Guide and Product Specification**

**Action points from last meeting:**

Comex² to take the change from catach\_10 (anchorage for pushing-navigation vessels) in IENC 2.5 to categoryOfAnchorage 16 (anchorage for pushing-navigation vessels) in S-401 into account for the Conversion Guidance.

The S-100 representatives to inform IHO that IEHG agrees in principle with the proposal, but would need additional enumerations for the category of structure (e.g. the already registered “building above navigable water”) and to clarify whether “bulk” is in this case also covering break bulk.

Denise and Gaël to clarify with Jeff the best way forward and to inform Bernd, who will then finalize the CR.  
Status: Question asked to Jeff – bulk includes break bulk, could also be added to the definition

Gaël to contact Jeff and clarify whether we can assign a 17… identifier or IHO is going to assign a code from the S-57 range of numbers and to inform Bernd and Denise.  
Status: done, action point closed

Patrick or René to send an example how the line should look like to Gert. Gert to register the symbol and the line style. Patrick or René to draw up and submit a CR.  
Status: done, action point closed

René to update and resubmit the CR 419 accordingly.

Denise to update the CR 422 accordingly.  
Status: done

Gert to amend the Symbol Library and the Lookup Tables.

Bernd to update the CR 423 accordingly. Status: done

The domain managers to register the changes in the registry.

Gert to update the CR 425 accordingly.  
Status: done, action point closed

COMEX² to take the changes regarding CONDTN 3, STATUS 18 and InDispute in CR 426 into account for the Conversion Guidance.

The S-100 representatives to register the changes contained in CR 430, 435 (enumerations 124-127, MARSYS 13, svgs will be provided by Vitor) and 437 (when submitted).  
Status: done, AP closed

Gert to add the new lines for the Brazilian notice marks (CR 435) to the Lookup Tables.  
Not necessary, because there is just a reference to a conditional symbology instruction regarding notice marks. AP closed

Bernd to publish the Presentation Library with the Brazilian notice marks on the website.

Bernd to update the CR 433 accordingly.  
Status: done, action point closed

Michael to update CR 437 accordingly.

Status: done, action point closed

Bernd and Gert to discuss the CR regarding CEVNI with the CESNI secretariat and to submit it after finalization and the adding of the concepts.

Status: done, action point closed

Bernd Birklhuber to add references to the new documents in the guideline for the drafting of CRs and to publish the documents on the website.  
Status: done, action point closed

Change Requests should be transmitted at least six weeks before the meeting (i.e. before 8th September 2024).

It is intended to review all Change Requests that have been adopted since the last IEHG meeting.   
See <https://ienc.openecdis.org/change-requests> and [IEHG discussion forum](https://passport.apan.org/adfs/ls/IdpInitiatedSignOn.aspx?RelayState=RPID%3durn%3aapan.passport%26RelayState%3dredirect%3a%2fadfs%2fvalidate.ashx)

**6.** **Update intervals and processes, decision on next version or edition**

The meeting decided to publish an edition 2.6 and agreed on the following deadlines:

* Deadline for submission of CRs that affect S-100: 22 March 2024
* Deadline for submission of CRs that do not affect S-100: 17 May 2024
* Deadline for adoption of CRs for 2.6: 28 June 2024
* Distribution of first draft of EG, FC, PS: 12 July 2024
* Deadline for comments on the draft: 23 August 2024
* Distribution of the final drafts (forum): 13 September 2024
* Deadline for veto: 31 October 2024
* Publication of edition 2.6: November 2024

**Action points from last meeting:**

Bernd to publish the deadlines on the discussion forum and to inform the European temporary working group for Inland ECDIS.

Status: done, action point closed

The S-100 representatives to register requested changes as soon as possible.

Bernd to prepare the draft of the PS 2.6.

Denise to prepare the draft EG and FC 2.6.

Gaël to integrate all adopted changes in the S-401 FC.

Status: The S-401 FC available on Github is taking them into account. It is based on S-101 Ed1.1.0 (and not yet on 1.2.0 as agreed this summer)

The meeting could discuss the timeline for S-401.

**7.** **Quality standards for Inland ENCs  
  
Updates of the recommended validation checks for Inland ENCs**

**Action points from last meeting:**Bernd to prepare a draft of the VC 2.6 until 12.07.2024.

Gert to check if COMEX² could contribute to the development of test charts.

**minimum content of Inland ENCs**

**Action point from last meeting:**

China to submit a CR with the necessary amendments of the minimum content for the Chinese inland waterways.

Test Inland ENCs

The meeting could discuss how to develop test IENCs for edition 2.6, agree on a timeline and assign tasks.

**8.** **Status of development of S-99, S-100, S-101 and other S-100 based products**

**Action points from last meeting:**   
Bernd to forward the thanks to Mathias Jonas, to forward the apologies that IEHG is not able to participate in all the S-100 related working groups actively due to a lack of personal resources, and to point out, that a DCEG builder that could not only be used once but would allow to update the tables in already established DCEGs whenever a FC is amended would ensure the full integrity of FC and DCEG, while there would always be a growing risk of inconsistencies between FC and DCEG if the two elements are updated manually. If such a dynamic DCEG builder would also be valued by other S-products, it would be very much appreciated if it would be provided as part of the announced S-100 tool kit. It should also be emphasized how important the integration of S-401 in S-98 will be once S-401 has been finalized.

Status: done, action point closed

keep track of S-101 developments and the consequences for IENCs (Cameron, Tom, René, Friedhelm, Gert, Gaël and Patrick.  
  
Denise to reach out to Tom Bovey regarding S-501 developments to determine whether there will be similar challenges faced by S-501 regarding Interoperability with S-101.

IEHG could be informed about the development of S-501.

**9.** **Interoperability and S-98**

The meeting could agree which parts of S-401 should be finalized independently of the development of S-98.

**10. Development of the Inland ENC Product Specification S-401**

**1. Product specification**

**Action points from last meeting:**   
  
All regions to test edition 1.1.0 of S-401 and to submit feedback

The S-401 expert group to try to include overlay cells in the next edition of S-401 and to report to IEHG (would have to be handled by S-98 if separate PS for overlay cells   
To be discussed whether it is possible and necessary to include them in S-401)  
  
Gert to contact Jeff and to compare the draft with edition 1.2.0 of the S-101 PS.

Edition 1.0.0 of S-101 has been published (see <https://registry.iho.int/document/list.do?product_ID=S-101>), but portrayal, validation, encryption, alerts and indications will only be finalized in an edition 2.0.0 that is scheduled for 2024.

Likewise the edition 1.0.0 of S-401 (see <https://registry.iho.int/document/list.do?product_ID=S-401>) is also without these parts.

Edition 2.0.0 of S-101 should be adopted end of 2024 and will be the first operational edition.

**2. Feature Catalogue**

**Action points from last meeting:**   
  
Gaël to integrate CR426 in the S-401 FC.  
Status: Done in the latest version available on Github, action point closed

COMEX² to finalize the CR for bridges as soon as the S-101 solution is stable. Multiplicity 1,\* for category of opening to allow the encoding of bridges that have different opening spans. Attribute category of opening span also for the opening span and Encoding instruction: category only encoded for opening span, if more than one span and more than one categories of those spans.

Bernd to inform Mathias Jonas about the importance of a dynamic DCEG builder to keep FC and DCEG in line and to ask whether other products might have the same wish.  
Status: done, action point closed

Gert and Gaël to identify the necessary associations.

Status: A new issue for that topic is now created on Github for the Feature Catalogue (#37). I have prepared a table that is listing all the Inland Features with the feature associations. Some proposals are there but the table has to be completed. The table is in the Github.

Gaël to encode them in the draft FC.

Gaël to finalize edition 1.1.0 of the S-401 FC taking also adopted CRs for edition 2.6 into account. This version should then be tested in the viewer of the S-100 test bed and published and registered, together with edition 1.1.0 of the PS.  
Status: done but not yet aligned with 1.2.0

Gaël to submit a CR regarding distanceUnitOfMeasurement.  
Status: done, action point closed

COMEX² to take that into account for the conversion guidance

Gaël to add PICREP, INFORM, NINFOM to all features in the S-401 FC that have these attributes in Edition 2.5.  
Status: done, action point closed

Gaël to add all enumerations of 2.5 (and 2.6) to the S-401 FC.

Status: done, action point closed

Denise to submit CR to delete the enumerations 7 and 14 and to add the enumeration 15 in edition 2.6.

S-100 representatives to solve the inconsistencies in the registry [10 2e errors in the S 100 registry 2023 10 25.docx]

**3. Portrayal Catalogue**

**Action points from last meeting:**

COMEX² with the support of Mikan to

- continue as proposed in the presentation when a stable PCB is available, contribution of all members via the discussion forum

- develop test data based on the input from Laszlo and René

- amend the Conditional Symbologies on the basis of available CS (OpenCPN) or CS of other manufacturers

- consider real world pictures as a solution for the display of multiple notice marks at the same spot

- create a tree structure for the PC

- create the XML for the PC.

Bernd to describe the rules for the selection of the correct notice mark symbol and to send them to Mikan.

All members that submit proposals with new symbols to provide the symbols in SVG format themselves or to provide them in a different format to Claudia Heckert for conversion to SVG. They have to take the new guideline and the form for symbols into account.

Gert to check the consequences of the decision of IHO when it is available.

Vitor to provide the svg symbols and raster symbols of the Brazilian notice marks and the additional lines for the Lookup Tables.  
Status: done, action point closed

Bernd to publish the amended Presentation Library on the website.

The meeting could discuss how to deal with future updates of the S-101 Portrayal Catalogue. Currently it is hard to detect what is changed in the PC. Is it necessary to take all amendments of the S-101 Portrayal Catalogue into account for S-401 in the future?

IEHG has decided to use the European Presentation Library as a starting point for the Portrayal Catalogue of S-401. On the other hand, IEHG decided to stay as close as possible to S-101.

​According to S-101 topmarks are just displayed by their shape. According to the European Inland ECDIS Presentation Library they are displayed by shape and colour. From the point of view of the European side it is easier for the boatmaster to match a topmark in the IENC with a real topmark, if they have not only the same shape but also the same colour. IEHG could decide whether topmarks on aids to navigation on inland waterways shall be displayed with or without their colour.

**4. DCEG / EG**

**Action points from last meeting:**   
  
Comex² and all members of IEHG to continue the development of a DCEG for S-401 taking into account the decisions of IEHG.

Gaël to include Helipad, Dolphin, Bollard and Mooring Area in the S-401 FC when they are finalized for S-101.   
Status: done, but without the feature associations

All to check whether additional categories are necessary.

COMEX² to take them into account for the conversion guidance.

Bernd to compare the general section of the DCEG 2.0.0 when it is available with the draft of the S-401 DCEG and to make the necessary changes;

Denise, Gaël and Bernd to start with the development of the inland specific feature related pages of the DCEG on the basis of the S-101 DCEG 1.2.0 and the amendment of the maritime feature related pages when edition 2.0.0 of the S-101 DCEG is available.

**5. Development of S-401 test cells**

**Action points from last meeting:**

Denise to ask Caris and Esri whether they can develop test cells. The cells provided by Laszlo and René can be taken into account, but cells with features in a geometric pattern (on the correct background of DEPARE or LNDARE) would make checks easier.

[1R7EMS03.000]

[1R57GBG5.000]

**6. Alert catalogue**

The last meeting came to the following conclusions:

Europe: Inland ECDIS standard defines all kind of alarms, there’s no need to focus on an ‘alarm catalogue’.

US and Brazil: no immediate need.

The meeting could discuss whether they are still valid.

**11.** **S-57 to S-100 converter development, conversion guidance**

**Action points from last meeting:**

Gert and Gaël to start working on the inland specific features.

Tom and Gert to start working on the copied and amended features (check all existing maritime rules)  
Ask Jeff for first draft of S-101 to S-57 conversion guidance.

The S-100 representatives to ask IHO whether a quattro fuel (Inland S-57 / S-401 / Maritime S-57 / S-101) would be taken into account.

Denise to check the possibilities of APAN.

Gert to check the possibilities of Github, which is especially targeting developers.

**12. The Aids to Navigation (AtoN) Information Product Specification (S-201) and   
The Navigation Services Product Specification (S-125)**

IALA is working on Product Specifications for Aids to Navigation (AtoN) Information (S-201) and for Navigation Services (S-125). The meeting could be informed about the status of development.

**The Bathymetric Contour Overlay for Inland ENC  
Product Spec. (S-402)**

S-402 has been reserved by IHO for the Bathymetric Contour Overlay for Inland ENC Product Specification as requested by IEHG. The existing Product Specification for bathymetric Inland ENCs and S-401 should be the basis for the development of S-402. IEHG has decided to start with the development of S-402 when the corresponding parts of S-401 have been adopted.

**Ideas for other inland waterway related Product Specifications**

The meeting could e.g. be informed about the ideas for intention sharing on inland waterways in Europe. While the S-421 Product Specification for Route Plans is only dealing with routes that are defined by a few waypoints and is just intended for information exchange between vessel and shore, the idea of intention sharing is to provide a planned track to other vessels in order to improve the planning of passings.

**13.** **Annual Report to HSSC about IEHG**

IEHG is recognized as a NGO with observer status by IHO and is therefore presenting a report on the status of Inland ENC standardization and implementation each year to HSSC.

**Action point from last meeting:**

Denise LaDue and Bernd Birklhuber to update the report to HSSC in time for the HSSC meeting in Japan.

Status: Done, see draft [13 IEHG Report to HSSC 16.pptx], action point closed

The meeting could also discuss how to improve the cooperation with IHO and its working groups.

**14.** **Updates of the Information documents on Inland ENCs**

(Inland ENC.doc and Inland ENC.ppt on the website)

**Action points from last meeting:**

All members of IEHG are invited to submit proposals for amendments of the information document on Inland ENCs (Inland ENC.ppt on the IEHG website).

The Core Group to update regulatory status, coverage and contact persons.

Bernd to add a link to the S-100 registry and the S-401 PS.

Vitor to update the Spanish version and to produce a Portuguese version.  
Status: done, action point closed

Gaël to produce a French version.

Status: done, action point closed, could be reviewed by another French speaker

Claudia to produce a German version.  
Status: done, action point closed

All to take not only the slides themselves but also the notes in the ppt into account.

**15.** **Future operation of:  
  
the ienc.openecdis.org website**  
  
**discussion forum for Inland ENCs**  
  
**Action point from last meeting:**

Denise LaDue to investigate whether it would be possible to display the status of the CRs in the overview (pending, adopted, rejected).

**IENC Register (as part of S-100 Registry)**

**16.** **Any other business**

**17.** **Next meeting – Date and Location**According to rotation principle the next meeting of IEHG could take place in South America in autumn 2025. The meeting could discuss the date and location.

**Preliminary time schedule:**

**October 15th to 17th 2024**

Meeting hours - 09:00 to 17:00

Coffee breaks - 10:30 to 11:00 and 15:30 to 16:00

Lunch hours - 12:30 to 14:00

Local time is UTC + 8 h

**Annex**

**Action points per person/organisation**

|  |  |
| --- | --- |
|  | **Status** |
| **All** | |
| Please provide an email to bernd.birklhuber@bmk.gv.at containing updates to the information on the status of implementation [2e IENC\_Prod\_overview\_20230612.xlsx]. |  |
| The IEHG website contains a list of both National Organizations and Private Companies involved with IENCs. If not listed, please provide web address to bernd.birklhuber@bmk.gv.at for inclusion on the website. |  |
| report discrepancies with S-100 to Denise |  |
| test edition 1.1.0 of S-401 and submit feedback |  |
| All members that submit proposals with new symbols to provide the symbols in SVG format themselves or to provide them in a different format to Claudia Heckert for conversion to SVG. They have to take the new guideline and the form for symbols into account. |  |
| continue the development of a DCEG for S-401 taking into account the decisions of IEHG (together with COMEX²). |  |
| check whether additional categories are necessary for Dolphin, Bollard and Mooring Area (when finalized by S-101) |  |
| submit proposals for amendments of the information document on Inland ENCs (Inland ENC.ppt on the IEHG website). take not only the slides themselves but also the notes in the ppt into account |  |
| **Bernd** | |
| update the list of members | done |
| submit a CR for the Terms of Reference to include the S-100 representatives in the Core Group. | done |
| publish the amended ToR 2023 on the website | done |
| publish the updated list of members on the website | done |
| update the CR 423 (“can be used to do a reliable calculation of the vertical clearance”) | done |
| Publish the Presentation Library with the Brazilian notice marks on the website. (when amended by Gert) |  |
| update the CR 433 (“ammonia” and complex attribute) |  |
| discuss the CR regarding CEVNI with the CESNI secretariat and submit it after finalization and the adding of the concepts (together with Gert) | done |
| add references to the new documents in the guideline for the drafting of CRs and to publish the documents on the website. | done |
| publish the deadlines for 2.6 on the discussion forum and inform the European temporary working group for Inland ECDIS. | done |
| prepare the draft of the PS 2.6 until 12.07.2024. | done |
| prepare a draft of the VC 2.6 until 12.07.2024. | done |
| forward the thanks to Mathias Jonas, to forward the apologies that IEHG is not able to participate in all the S-100 related working groups actively due to a lack of personal resources, and to point out, that a DCEG builder that could not only be used once but would allow to update the tables in already established DCEGs whenever a FC is amended would ensure the full integrity of FC and DCEG, while there would always be a growing risk of inconsistencies between FC and DCEG if the two elements are updated manually. If such a dynamic DCEG builder would also be valued by other S-products, it would be very much appreciated if it would be provided as part of the announced S-100 tool kit.  It should also be emphasized how important the integration of S-401 in S-98 will be once S-401 has been finalized.  inform Mathias Jonas about the importance of a dynamic DCEG builder to keep FC and DCEG in line and to ask whether other products might have the same wish. | done |
| describe the rules for the selection of the correct notice mark symbol and send them to Mikan | done |
| publish the amended Presentation Library on the website (with symbols and Lookup Tables for South America) |  |
| compare the general section of the DCEG 2.0.0 when it is available with the draft of the S-401 DCEG and make the necessary changes; |  |
| start with the development of the inland specific feature related pages of the DCEG on the basis of the S-101 DCEG 1.2.0 and the amendment of the maritime feature related pages when edition 2.0.0 of the S-101 DCEG is available. [10 4f S-101 Annex A\_DCEG Edition 1.2.0.20231016\_Working.doc] (together with Denise and Gaël) | done |
| update the report to HSSC in time for the HSSC meeting in Japan. (together with Denise) | done |
| update regulatory status, coverage and contact persons in the IENC ppt. | done |
| add a link to the S-100 registry and the S-401 PS in the IENC ppt | done |
| Inform all members of IEHG about the next meeting (when location and date clarified) | done |
| **Cameron** | |
| keep track of S-101 developments and the consequences for IENCs (together with Tom, René, Friedhelm, Gert, Gaël and Patrick.) |  |
| **Ckaudia** | |
| produce a German version of the IENC ppt | done |
| **COMEX²** | |
| check whether a reporting tool for discrepancies could be implemented by EuRIS or on national level (the US tool is based on Survey 123 of ArcGIS). |  |
| take the change from catach\_10 (anchorage for pushing-navigation vessels) in IENC 2.5 to categoryOfAnchorage 16 (anchorage for pushing-navigation vessels) in S-401 into account for the Conversion Guidance. |  |
| take the changes regarding CONDTN 3, STATUS 18 and InDispute in CR 426 into account for the Conversion Guidance |  |
| try to include overlay cells in the next edition of S-401 and to report to IEHG (would have to be handled by S-98 if separate PS for overlay cells  To be discussed whether it is possible and necessary to include them in S-401) |  |
| finalize the CR for bridges as soon as the S-101 solution is stable. Multiplicity 1,\* for category of opening to allow the encoding of bridges that have different opening spans. Attribute category of opening span also for the opening span and Encoding instruction: category only encoded for opening span, if more than one span and more than one categories of those spans. |  |
| take the CR of Gaël regarding distanceUnitOfMeasurement into account for the conversion guidance |  |
| - continue as proposed in the presentation when a stable PCB is available, contribution of all members via the discussion forum  - develop test data based on the input from Laszlo and René  - amend the Conditional Symbologies on the basis of available CS (OpenCPN) or CS of other manufacturers  - consider real world pictures as a solution for the display of multiple notice marks at the same spot  - create a tree structure for the PC  - create the XML for the PC.  (with the support of Mikan) |  |
| continue the development of a DCEG for S-401 taking into account the decisions of IEHG. (with all members) |  |
| take Helipad, Dolphin, Bollard and Mooring Area into account for the conversion guidance |  |
| **Denise** | |
| clarify with Jeff the best way forward regarding the attributes catbun and SupplyService and inform Bernd, who will then finalize the CR (together with Gaël) | done |
| update the CR 422 (“VHF activated” has been replaced by “radio activated” in the registry. The symbol and the line in the Lookup Tables should be added to the European standard and to the S-401 PC.) | done |
| prepare the draft EG and FC 2.6 until 12.07.2024. | done |
| reach out to Tom Bovey regarding S-501 developments to determine whether there will be similar challenges faced by S-501 regarding Interoperability with S-101 |  |
| submit CR to delete the enumerations 7 and 14 of techniqueOfVerticalMeasurement and to add the enumeration 15 in edition 2.6 | done |
| start with the development of the inland specific feature related pages of the DCEG on the basis of the S-101 DCEG 1.2.0 and the amendment of the maritime feature related pages when edition 2.0.0 of the S-101 DCEG is available. [10 4f S-101 Annex A\_DCEG Edition 1.2.0.20231016\_Working.doc] (together with Bernd and Gaël) |  |
| ask Caris and Esri whether they can develop test cells. The cells provided by Laszlo and René can be taken into account, but cells with features in a geometric pattern (on the correct background of DEPARE or LNDARE) would make checks easier |  |
| check the possibilities of APAN as a collaboration platform |  |
| update the report to HSSC in time for the HSSC meeting in Japan. (together with Bernd) | done |
| update regulatory status, coverage and contact persons in the IENC ppt. |  |
| investigate whether it would be possible to display the status of the CRs in the overview on the discussion forum (pending, adopted, rejected). |  |
| **Friedhelm** | |
| keep track of S-101 developments and the consequences for IENCs (together with Cameron, Tom, René, Gert, Gaël and Patrick.) |  |
| **Gaël** | |
| clarify with Jeff the best way forward regarding the attributes catbun and SupplyService and inform Bernd, who will then finalize the CR (together with Denise) | done |
| contact Jeff and clarify whether we can assign a 17… identifier for the attribute locationMRN from the HYDRO domain for use in 2.6 or IHO is going to assign a code from the S-57 range of numbers and to inform Bernd and Denise. | done |
| integrate all adopted changes for 2.6 in the S-401 FC | done |
| keep track of S-101 developments and the consequences for IENCs (together with Cameron, Tom, René, Friedhelm, Gert and Patrick.) |  |
| integrate the changes regarding CONDTN\_3, STATUS\_18 and inDispute in the S-401 FC | done |
| identify the necessary associations for the S-401 FC (together with Gert) | started |
| encode the associations in the draft S-401 FC |  |
| finalize edition 1.1.0 of the S-401 FC taking also adopted CRs for edition 2.6 into account. This version should then be tested in the viewer of the S-100 test bed and published and registered, together with edition 1.1.0 of the PS. | done |
| submit a CR regarding distanceUnitOfMeasurement | done |
| add PICREP, INFORM, NINFOM to all features in the S-401 FC that have these attributes in Edition 2.5. | done |
| add all enumerations of 2.5 (and 2.6) to the S-401 FC | done |
| include Helipad, Dolphin, Bollard and Mooring Area in the S-401 FC when they are finalized for S-101. | done |
| start with the development of the inland specific feature related pages of the DCEG on the basis of the S-101 DCEG 1.2.0 and the amendment of the maritime feature related pages when edition 2.0.0 of the S-101 DCEG is available. [10 4f S-101 Annex A\_DCEG Edition 1.2.0.20231016\_Working.doc] (together with Bernd and Denise) |  |
| start working on the inland specific features of the Conversion Guidance (together with Gert) |  |
| produce a French version of the IENC ppt | done |
| **Gert** | |
| amend the Symbol Library and the Lookup Tables for “radio activated” sensor. |  |
| update the CR 425 (copy "RESARE","CATREA27","SY(ESSARE01);LC(ESSARE01)","5","S","STANDARD","26010"  "RESARE","CATREA28","SY(PSSARE01);LC(ESSARE01)","5","S","STANDARD","26010"  to the Lookup Tabels) |  |
| add the new lines for the Brazilian notice marks (CR 435) to the Lookup Tables. | CS, done |
| discuss the CR regarding CEVNI with the CESNI secretariat and submit it after finalization and the adding of the concepts (together with Bernd) | done |
| check if COMEX² could contribute to the development of test charts for 2.6 (and S-401) |  |
| keep track of S-101 developments and the consequences for IENCs (together with Cameron, Tom, René, Friedhelm, Gaël and Patrick.) |  |
| identify the necessary associations for the S-401 FC (together with Gaël) |  |
| check the consequences of the decision of IHO regarding the svg profile when it is available | done |
| start working on the inland specific features of the Conversion Guidance (together with Gaël) |  |
| start working on the copied and amended features (check all existing maritime rules)  Ask Jeff for first draft of S-101 to S-57 conversion guidance (together with Tom) |  |
| check the possibilities of Github , which is especially targeting developers, as a collaboration platform for IEHG | done |
| **Li** |  |
| submit a CR with the necessary amendments of the minimum content for the Chinese inland waterways |  |
| update regulatory status, coverage and contact persons in the IENC ppt. |  |
| **Michael** | |
| update CR 437 (inland specific check with Warning) | done |
| **Mikan** | |
| - continue as proposed in the presentation when a stable PCB is available, contribution of all members via the discussion forum  - develop test data based on the input from Laszlo and René  - amend the Conditional Symbologies on the basis of available CS (OpenCPN) or CS of other manufacturers  - consider real world pictures as a solution for the display of multiple notice marks at the same spot  - create a tree structure for the PC  - create the XML for the PC.  (in support of COMEX²) |  |
| **Patrick** | |
| send an example how the line should look like to Gert. Gert to register the symbol and the line style. Draw up and submit a CR. (or René) | done |
| keep track of S-101 developments and the consequences for IENCs (together with Cameron, Tom, René, Friedhelm, Gert, Gaël) |  |
| **René** | |
| send an example how the line should look like to Gert. Gert to register the symbol and the line style. Draw up and submit a CR. (or Patrick) | done |
| update and resubmit the CR 419 (Encoding Instruction should be added to encode the refgag only if it does allow a reliable calculation of the bridge clearance) |  |
| keep track of S-101 developments and the consequences for IENCs (together with Cameron, Tom, Friedhelm, Gert, Gaël and Patrick.) |  |
| **S-100 representatives of IEHG (Denise, Gaël, Gert)** | |
| inform IHO that IEHG agrees in principle with the proposal regarding roofs, but would need additional enumerations for the category of structure (e.g. the already registered “building above navigable water”) and to clarify whether “bulk” is in this case also covering break bulk. |  |
| register the changes of CR 423 in the registry | done |
| register the changes contained in CR 430, 435 (enumerations 124-127, MARSYS 13, svgs will be provided by Vitor) and 437 (when submitted). | done |
| register requested changes for 2.6 as soon as possible. | done |
| solve the inconsistencies in the registry [10 2e errors in the S 100 registry 2023 10 25.docx] |  |
| ask IHO whether a quattro fuel (Inland S-57 / S-401 / Maritime S-57 / S-101) would be taken into account.  [remark: does not seem necessary, because dual fuel should end 2029 in maritime] |  |
| **Tom** | |
| keep track of S-101 developments and the consequences for IENCs (together with Cameron, René, Friedhelm, Gert, Gaël and Patrick.) |  |
| start working on the copied and amended features (check all existing maritime rules)  Ask Jeff for first draft of S-101 to S-57 conversion guidance (together with Gert) |  |
| **Vitor** | |
| provide the svg symbols and raster symbols of the Brazilian notice marks and the additional lines for the Lookup Tables | done |
| update regulatory status, coverage and contact persons in the IENC ppt. | done |
| update the Spanish version and to produce a Portuguese version of the IENC ppt | done |
| investigate the possibilities for the next meeting | done |

**Participants of 18th IEHG meeting:**

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| Name | Affiliation |  |  |
| Gaël BILLET | Periskal |  |  |
| Bernd BIRKLHUBER | BMK, AT |  |  |
| Qun GU | WTI, PRC |  |  |
| Claudia HECKERT |  |  |  |
| Li LIU | WTI, PRC |  |  |
| Gert MORLION | DVW, BE |  |  |
| Mark PERSOONS | Periskal |  |  |
| Vitor PIMENTEL | DHN, BR |  |  |
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|  |  |  |  |
| Jose CELSO | DHN, BR |  | Online |
| Alberto COSTA NEVES | PCN maritime |  | Online, partially |
| David D’AQUINO | Navico |  | Online |
| Tom DePUYT | ESRI |  | Online |
| Mark HANZSCHE | IIC Technologies |  | Online |
| Duško ISAKOVIC | Sava Commission |  | Online |
| Denise LaDUE | USACE, US |  | Online |
| Friedhelm MOGGERT-KÄGELER | SevenCs GmbH |  | Online |
| Mikan STAMENKOVICH | Navy, US |  | Online, if needed |
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