

IHO-SGP Innovation and Technology Laboratory

5th Governing Board Meeting, VTC

12 July 2023, 12:00 ~ 14:00 (UTC+2, CEST)

List of Decisions and Actions from the 5th Governing Board Meeting: **Draft**

Doc No.	Title	Remarks
GBM05-01a	Confirmation of Minutes of last Meeting	
Decision 5/1	The Meeting approved the draft decision and actions of the 4 th GB Meeting posted on the IHO Lab GB4 webpage.	
GBM05-01b	Review and Update actions of last Meeting	
Decision 5/2	<p>The Meeting reviewed and updated the actions from the 4th GBM and concluded that all action items have been completed except:</p> <p><i>Pending:</i> Action-No. 4/02 Project Github link in the S-131 project on the IHO-SGP Lab webpage accordingly.</p>	
GBM05-2	Update on Approved the IHO Lab Projects	
GBM05-2a	S-57 to S-101 Conversion	
Action 5/1	<p>PT Leader, Jonathan Pritchard, shared that the S-57 to S-100 Conversion workshop aims to equip HOs and stakeholders to make an informed choice as they plan on the migration and production of S-101. The workshop would be held in Singapore the week preceding S-100WG8 meeting.</p> <p>GM shared that IC-ENC was approached for funding of EUR26k, for the Training and Conversion workshop with participating HOs. This agenda will be tabled at IC-ENC Steering Committee Meeting for consideration. Separately, MPA in-kind funding is EUR9.1k.</p> <p>GM would update GB on outcome on IC-ENC funding.</p>	
Action 5/2	<p>HSSC Chair, Magnus Wallhagen, asked if workshop would be open to all IHO MS. GM responded that it would but would be self-funding basis. The IHO-SG Lab would support with logistics and computers, if required.</p> <p>Chair enquired if Primar was approached and, if not, to seek their interest to participate. GM responded that they have not been approached but would do so. GM proposed that if Primar was to participate, it could be to fund their members to attend the Workshop.</p> <p>GM indicated that the East Asia RENC was approached but have expressed that they would not be participating.</p>	
Decision 5/3	<p>GM and PT Lead added that the intention was to keep the workshop to about 10-15 participants as a larger scale may present challenges for hosting.</p> <p>GBM5 approved this phase of the S-57 to S-101 conversion project and confirm to proceed accordingly.</p>	
GBM05-2b	Marine Harbor Infrastructure Database Project (S-131)	
	<p>PT Lead, Sarah Rahr, shared progress and challenges on API and GUI, and upcoming steps to have more participating ports of varying sizes, cargoes and types of operations by Q3 2023 and testbed release by Q2 2024. Currently, PT is digitizing Singapore port information, and has approached other ports e.g., Montreal, Vancouver, Halifax and Rotterdam.</p>	

<p>Action 5/3</p> <p>Action 5/4</p> <p>Action 5/5</p> <p>Action 5/6</p> <p>Action 5/7</p> <p>Decision 5/4</p>	<p>Project team is exploring a “middleware” solution to ease GUI access while maintaining the integrity of the data, and to prepare for more complex ports’ data.</p> <p>PT Lead suggested a S-131 workshop to be held in Q4 2023 focusing on how to use the application as a way to reach out and invite more ports and MS to test, garner support and participation.</p> <p>HSSC Chair asked about rights to this software/database and sustainability for it in the future after the project is completed. PT Lead suggested to have a template for coastal states or MS, to facilitate possible customisation either in reporting, uploading, or managing their data. Yong Baek highlighted that according to previous GB minutes, this application will be open sourced, so IHO-SG Lab would not have any copyrights issues to this source code.</p> <p>Chair asked about NIPWG involvement and PT Lead confirmed PT had been working closely with Chair of NIPWG, and project progress would be shared during NIPWG10 in September 2023.</p> <p>Chair asked how to present these developments to more parties in IHO and IMO EGDH. Yong Baek suggested to report findings and progress to HSSC, and to highlight IHO-SG Lab’s contributions to standards development and product specifications during 7th Council in October 2023.</p> <p>GM added S-131 in-person meeting would be held in Singapore the week after S-100WG8.</p> <p>GBM5 approved this phase of the S-131 project and confirm to proceed accordingly.</p>	
<p>GBM05-2c</p>	<p>S-100 ECDIS capable of displaying S-102 with S-101</p>	
<p>Decision 5/5</p>	<p>GM shared that previous applicant SevenCs had withdrawn due to misalignment of scope and timeline, and unable to allocate resources accordingly.</p> <p>GM approached KRISO, and together with CHS, would submit new proposal with a revised scope.</p> <p>GB Members agreed and approved this project would be replaced by the new proposal.</p>	
<p>GBM05-2d</p>	<p>IHO & IALA collaboration to Demonstrate Interoperability of S-101 and S-125 at Sea</p>	
	<p>PT Lead, Dr Oh, shared findings on demonstration sea-trial and workshop held in Singapore. The demonstration proved that the concept was tangible and presented a low-barrier for implementation. Results were shared during IALA workshop held in Singapore (April), Brazil, and will also be presented at upcoming NIPWG10 September 2023.</p> <p>NIPWG Chair, Eivind Mong, shared lessons learnt on interaction between test system and actual situation at sea when ship went out of planned route and preset buffer area. Test system and dialog could also be improved to help users find information quickly and easily. As S-100 products and systems evolve, more emphasis to be placed on end-user needs.</p> <p>HSSC Chair asked if S-124 portrayal is limited by IMO or WMO. NIPWG Chair responded that based on Circ 243/Rev 2, there are no MSI or NW symbology requirements by IMO.</p> <p>GM shared concerns on progress of AtoN authorities on S-201 and MRN, and whether IALA has any workplan addressing these issues. These would have significant impact on production and storage of data.</p>	

<p>Action 5/8</p> <p>Action 5/9</p> <p>Decision 5/6</p>	<p>NIPWG Chair said that in Canada, adoption is slow, and funding is likely the problem to install and operate a S-201 database, including works on a national MRN policy. There are constant reminders to IALA to align priorities.</p> <p>NIPWG Chair planned to emphasise and share the outcome of S-124/125 project during ARM in October 2023.</p> <p>Yong Baek mentioned intention is to test the display with S-101, not to enforce display/implement on ECDIS, and also not to enforce MRN to be adopted in the system. Taking S-100 roadmap into consideration, it does not appear there are plans on how to implement MRN in S-101.</p> <p>GM shared that the final project report had been submitted.</p> <p>Chair asked what is next or is the project considered to be completed. GM confirmed that it has been completed and suggested the need to publicise the outcome of the project to IALA members to help them understand and be kept abreast with the S-100 product specifications and services. HSSC Chair shared that there are plans to conduct another IHO-IALA workshop September 2024, in Annapolis MD, USA.</p> <p>Chair reminded participation in these workshops is important to achieve synergy between IHO and IALA.</p> <p>GBM5 approved this phase of the S-125 project and confirmed it had been concluded accordingly.</p>	
<p>GBM05-3</p>	<p>Project proposal</p>	
<p>GBM05-3a</p>	<p>Portrayal of S-102 with S-101 on an S-100 compatible ECS</p>	
<p>Action 5/10</p> <p>Action 5/11</p> <p>Decision 5/7</p> <p>Action 5/12</p>	<p>PT Leader, Dr Oh, presented the revised S-102 proposal, deliverables and scope. This proposal resulted from a discussion in Singapore. Concerns such as how to integrate the S-102 overlay on S-101 and possible impact of S-104 were discussed. The discussion also addressed possible foundations to be set for digital twins and S-102 in future projects.</p> <p>Project Team planned to use KHOA S-100 testbed ECS. KHOA previously faced performance issues to draw high density bathymetry, and S-102 portrayal was embedded in source code rather than on portrayal catalogue. GM added that although 7Cs would not be directly involved in the project, they have offered their S-100 compliant ECDIS for testing the S-102 products.</p> <p>S-102 portrayal catalogue is under development (not in GI Registry), so there is not yet an official catalogue for S-102. GB Members mentioned that NIWC had developed and tested S-102 with a draft portrayal catalogue, and recommended to test it against S-100 Edition 5 and S-98.</p> <p>GM added that project could also recommend the various resolutions required to produce a certain desired outcome. Currently, all multibeam are set to a standard, but hydrographic community remains unsure if the data can harmonise with S-101 contour lines.</p> <p>Yong Baek suggested the need to differentiate between navigation and non-navigation use cases. HSSC Chair said focus should be on use for navigation and how to produce safety contour using S-98, and be used in a safe way. Jonathan Pritchard offered to participate in the PT.</p> <p>Chair said to focus on navigation first (IHO S-100 products) and digital twin would take second priority.</p>	

Action 5/13	Yong Baek asked to have test scenarios to test/recommend resolutions for shallow areas and mid-shallow areas as the findings would be valuable for S-102 producers.	
Action 5/14	NIPWG Chair corrected that it should not be CCG as co-applicant; should be CHS.	
Action 5/15	HSSC Chair asked if any possibilities to involve SealQ. NIPWG Chair would check with CHS (Lynn).	
Decision 5/8	HSSC Chair would provide Finland HO contact details and correspondence on open- source algorithm to Dr Oh . GBM5 approved the project for the submission of a revised scope and proposed that the contents of the proposal should be discussed with the IHO working groups related to interoperability and encoding.	
GBM05-4	Way forward	
Decision 5/9	Chair, GM and GB Members expressed appreciation on projects' progress, efforts undertaken and execution by IHO-SG Lab and the Project Teams.	
Decision 5/10	GM shared challenges to solicit new projects and ideas and do not wish to wait until GBM to submit proposals. GM suggested to inform GB via correspondence.	
Decision 5/11	GM also highlighted the need to engage more with industry to address concerns on sustainability, i.e., what happens after the projects.	
Action 5/15	Chair agreed and is open to have a VTC any time, citing critical period for IHO on S-100 developments and the need to make decisions intersessional by correspondence. Yong Baek requested documents to be sent at least 3 weeks before meeting to help participants understand better.	
GBM05-5	Any Other Business	
	Election of Governing Board	
Decision 5/12	Chair shared that it is unlikely the next technical director could take over chair of IHO-SG Lab for a period of two years as the Rules of Procedure stipulates a rotation between IHO office bearers and host country.	
Decision 5/13	Chair and GM suggested Singapore's Thomas Ting take over in the interim after end-August, until new chair has been selected.	
Action 5/16	GB Members mentioned an opportunity at 7 th Council to propose to change Rules of Procedure, either to make the Technical Director permanent chair, or amend limitations of the IHO office bearer. GM to submit proposal to 7 th Council for Thomas Ting to be interim chair, as a representative of host country.	
GBM05-6	Next meeting (Venue and Date)	
Decision 5/14	GBM5 decided to hold the 6 th Meeting of GB physically in Singapore and circulate the tentative date/venue taking into consideration with other IHO meetings in the second half of 2023.	

List of Participants

- Abri Kampfer (abri.kampfer@iho.int) : **Chair**
- Magnus Wallhagen (Magnus.Wallhagen@Sjofartsverket.se): **HSSC Chair**
- Parry OEI (Parry_OEI@mpa.gov.sg) : **General Manager**
- Yong BAEK (yong.baek@iho.int) : **Secretary**
- Victor Sim (victor_sim@mpa.gov.sg) : **Observer**

Project Team Leads:

Title	Members
S-131 MHI	Jonathan Pritchard (jonathan.pritchard@iictechnologies.com) Sarah Rahr (Sarah.Rahr@dfo-mpo.gc.ca)
S-57 to S-101 conversion	Jonathan Pritchard (jonathan.pritchard@iictechnologies.com)
S-124/S-125 Seatrial	Sewoong OH (osw@kriso.re.kr) Eivind Mong (Eivind.Mong@dfo-mpo.gc.ca)
Displaying S-102 with S-101 <i>*new proposal</i>	Sewoong OH (osw@kriso.re.kr) Eivind Mong (Eivind.Mong@dfo-mpo.gc.ca)