

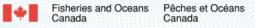
S-131 Update NIPWG9

Niterói, Brazil ~ September 13-16, 2022

Sarah Rahr

Canadian Hydrographic Service – Service hydrographique du Canada

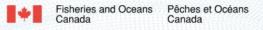




S-131

- S-131: Marine Harbour Infrastructure
- Dual purpose:
 - assisting data exchange
 - distribution to end users
- Development underway by S-131 project team under the IHO Lab





S-131 Marine Harbour Infrastructure

- Designed for the end user
- Aimed for berth-to-berth route planning and execution
- Knowing all the services they need while at port are available and accessible as well as having a smooth transition into their berthing position is essential

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				the loss		PEC BEL	Sering Sering
	fax Seaport			A X XO A	119	36	
Berth	Length	Depth (Avg.) A	pron Width		E	and the	Ramp 1
20	221.5 m / 727 ft		2 m / 25 ft	AT LA	Man and And	IM IM	
21	178.0 m / 584 ft		2 m / 25 ft	PACIN VAL	Map 1 Et	MII	/
22	212.0 m / 695 ft		2 m / 25 ft		0	21	/
23	213.0 m / 699 ft	11.5 m / 38 ft 6	.0 m / 20 ft	XIII T	PBH	5/0/	
• Cru	ise shore power capa	bility (Berth 20 & 22)		5911	(Milling/)	161	
• Ded	licated cruise passeng	er terminals (Berth 20 &	22)		Group	11	
-	T					65	
	an Terminals						1000 C
Berth	Length	Depth (Avg.)	Apron Width	Open Area Storage	Shed Area Storage	Rail Access	Ro-Ro Ramp
	142.0 m / 466 ft	9.2 m / 30ft	Open	4,459 m ² / 47,966 ft ²		No	No
24	171.0 m / 561 ft	12.2 m/40ft [outer71m]	Restricted	4,960 m2 / 53,389 ft2	NI/A	Yes	
24 25	171.0117.0011			4,900 m* / 53,389 m*	19/25	tes	No
	171.0 m / 301 m	6.2 m / 20 ft (inner 100m)	(Grain Gallery	4,700 m² / 53,387 m²	N/A	tes	No
25			Above)				
25 26	209.0 m / 686 ft	13.0 m / 43 ft	Above) 5.5 m /18 ft	N/A	8,729 m2/93,957 ft2	Yes	No
25			Above)		8,729 m2/93,957 ft2		No Berth is capable
25 26	209.0 m / 686 ft	13.0 m / 43 ft	Above) 5.5 m /18 ft Open	N/A 6,387 m ² / 68,750 ft ²	8,729 m²/93,957 ft² N/A	Yes	No Berth is capable
25 26 27 28	209.0 m / 686 ft 209.0 m / 686 ft 171.0 m / 561 ft	13.0 m / 43 ft 14.0 m / 46 ft 13.4 m / 44 ft	Above) 5.5 m /18 ft Open	N/A 6,387 m² / 68,750 ft² 4,170 m² / 44,885 ft²	8,729 m2/93,957 ft2 N/A N/A	Yes Yes Yes	No Berth is capable handling vessel No
25 26 27	209.0 m / 686 ft 209.0 m / 686 ft	13.0 m / 43 ft 14.0 m / 46 ft	Above) 5.5 m /18 ft Open Restricted (Grain	N/A 6,387 m ² / 68,750 ft ²	8,729 m2/93,957 ft2 N/A N/A	Yes Yes	No Berth is capable handling vessel
25 26 27 28	209.0 m / 686 ft 209.0 m / 686 ft 171.0 m / 561 ft	13.0 m / 43 ft 14.0 m / 46 ft 13.4 m / 44 ft 13.5 m / 44 ft (outer 130 m/425 ft) 8.5 m/28 ft	Above) 5.5 m /18 ft Open Restricted (Grain Gallery Above)	N/A 6,387 m² / 68,750 ft² 4,170 m² / 44,885 ft²	8,729 m2/93,957 ft2 N/A N/A N/A	Yes Yes Yes	No Berth is capable handling vessel No 18.9 m/60 ft
25 26 27 28 30	209.0 m / 686 ft 209.0 m / 686 ft 171.0 m / 561 ft 190.5 m / 625 ft	13.0 m / 43 ft 14.0 m / 46 ft 13.4 m / 44 ft 13.5 m / 44 ft 13.5 m / 44 ft (outer 130 m/425 ft) 8.5 m/28 ft (inner 6 lm / 200 ft)	Above) 5.5 m /18 ft Open Restricted (Grain Gallery Above) Open Open 6.0 m / 20 ft	N/A 6,387 m² / 68,750 ft² 4,170 m² / 44,885 ft² 8,419 m² / 90,621 ft²	8,729 m²/93,957 ft² N/A N/A N/A N/A N/A 5,864 m²/63,121 ft²	Yes Yes Yes Yes No	No Berth is capable handling vessel No 18.9 m/60 ft (Ramp @ Berth

S-131 Marine Harbour Infrastructure DB

- Traditional harbour component of Sailing Directions/Coast, as well with IMO Resolutions A.893(21) and A.862(20)
- From local fishing harbours to mega ports

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Pêches et Océans Canada

• Improve the information exchange between harbours and hydrographic offices by acting as a neutral repository of harbour information



Source: CHS Sailing Directions ATL110



Source: CHS Sailing Directions PAC201

Canadian Hydrographic Service – Service hydrographique du Canada

Fisheries and Oceans Pêches et Océans Canada Canada

IHO Lab & CHS Investment

- Joint undertaking Member States & Stakeholders
- Innovative test-bedding
- Project Registry avoid duplication & optimise resources
- Canada recognized importance of S-131– neutral repository
- \$200k investment
- Input from various departments data flow pipeline
- 2 year project underway & on track

S-131 - Goals

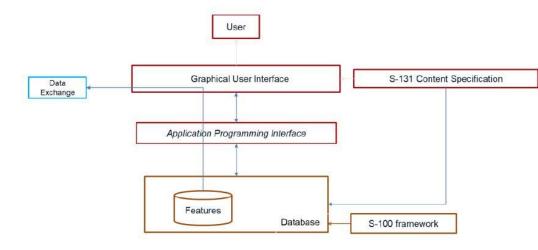
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- Proof of Concept Database solution import, extract, customize
- Trusted environment
- S-131 compatible
- Source supplier input & validate
- API needs capability to connect existing users' GIS
- Filter

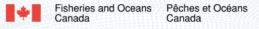
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Interim solution -> permanent

S-131 Project & Participants



- Collaborative effort
- Server: IHO Lab
- Back end: IIC
- GUI: NTOU
- Feature Catalogue: Portolan Sciences
- API tbd (Swagger)
- Hydrographic offices (Canada, Norway, MPA, etc)



S-131: Role of Ports

- Hydrographic offices, stakeholders, shipping companies, brokers and others in the industry
- Ports will play key role bulk of S-131 data
- Easy access, updating and extraction
- Cultivate relationships

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S-131 Database – Overview

- Dataflow/API and DB implementation –progress in parallel with development of use cases (data input, data output and GUI elements).
- As the DB/API is maturing, the GUI is being designed
- Looking ahead:
 - integration of the two main elements
 - comprehensive reference test dataset
- Open source hosting tools (GitHub) for code management, issue tracking and releases
- Monthly meetings of S-131 WG

S-131 Database – Component Status

• Back end: Q2 of Phase 1

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- GUI: MPA & NTOU server specs & workstation setup by e/o 2022. GDLP.
- S-131 Feature Catalogue: draft completed July 2022
- API Middleware

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 Beta database of a fictitious port, tests runs with real ports: to be scheduled

3.87 Product

Name: Product [IHOREG 144] Definition: The various substances which are transported, stored or exploited. Code: product Remarks: Aliases: PRODCT Value Type: enumeration

Listed Values

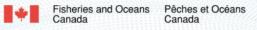
Label	Definition		Remarks
Oil	A thick, slippery liquid that will not dissolve in water, usually petroleum based in the context of storage tanks. [IHOREG 979]	1	
Gas	A substance with particles that can move freely, usually a fuel substance in the context of storage tanks. [IHOREG 980]	2	
Stone	A general term for rock and rock fragments ranging in size from pebbles and gravel to boulders or large rock masses. [IHOREG 955]	4	
Coal	A hard black mineral that is burned as fuel. [IHOREG 982]	5	
Ore	A solid rock or mineral from which metal is obtained. [IHOREG 983]	6	

Challenges

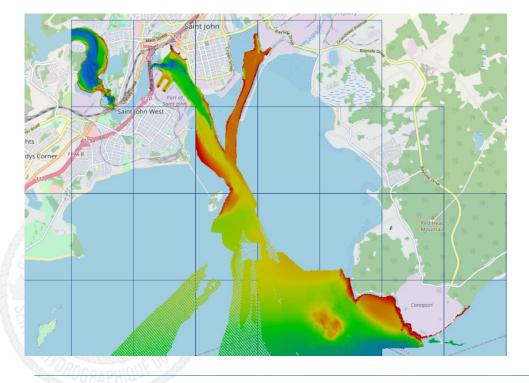
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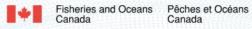
- Identity management Maritime Connectivity Platform? Who is the authority? The intention is not to build a complex identity management system
- Establishing good information flow between ports and hydrographic offices
- Ports and terminal operators: source providers; hydrographic offices to develop and maintain
- How to cultivate relationships with ports?



Upcoming Steps



- Develop documentation
- Define which source(s) responsible for providing what elements of data.
 - Identify test harbours
- Complete testing phase complete system operational
- Explore subsequent improvements and extended data sharing options



Thank you.

QUESTIONS?

Many thanks for the presentation information and imagery derived from sources including CHS, Eivind Mong, IIC, and the S-131 WG.