

S-131 DB project update on system development

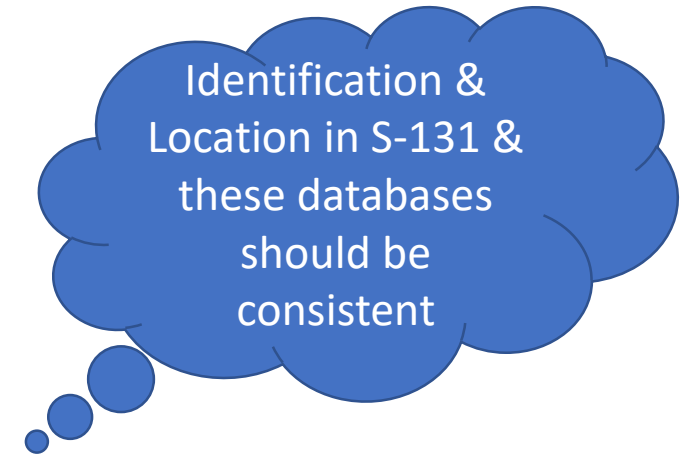
Shwu-Jing Chang

ENC Center, National Taiwan Ocean University

2022/09/14 NIPWG9-12.2.1

1st Step: Identification & Location

- Reference databases
 - UN/LOCODE
 - <https://unece.org/trade/uncefact/unlocode>
 - SMDG (Container) Terminal Code
 - ~ monthly update on <http://smdg.org/smdg-code-lists>
 - IMO Port Facility Number (GISIS ISPS Code database)
 - <https://gisis.imo.org/Public/ISPS/Download.aspx>
 - [IMO GISIS Port Reception Facility Database]
 - MEPC.1/Circ.834/Rev.1 ..Guidance for port reception facility providers and users
- Add port database, feature types & objects with featureName
 - Upload shape file
- Locate & identify the features → edit



S131 Project

User Name

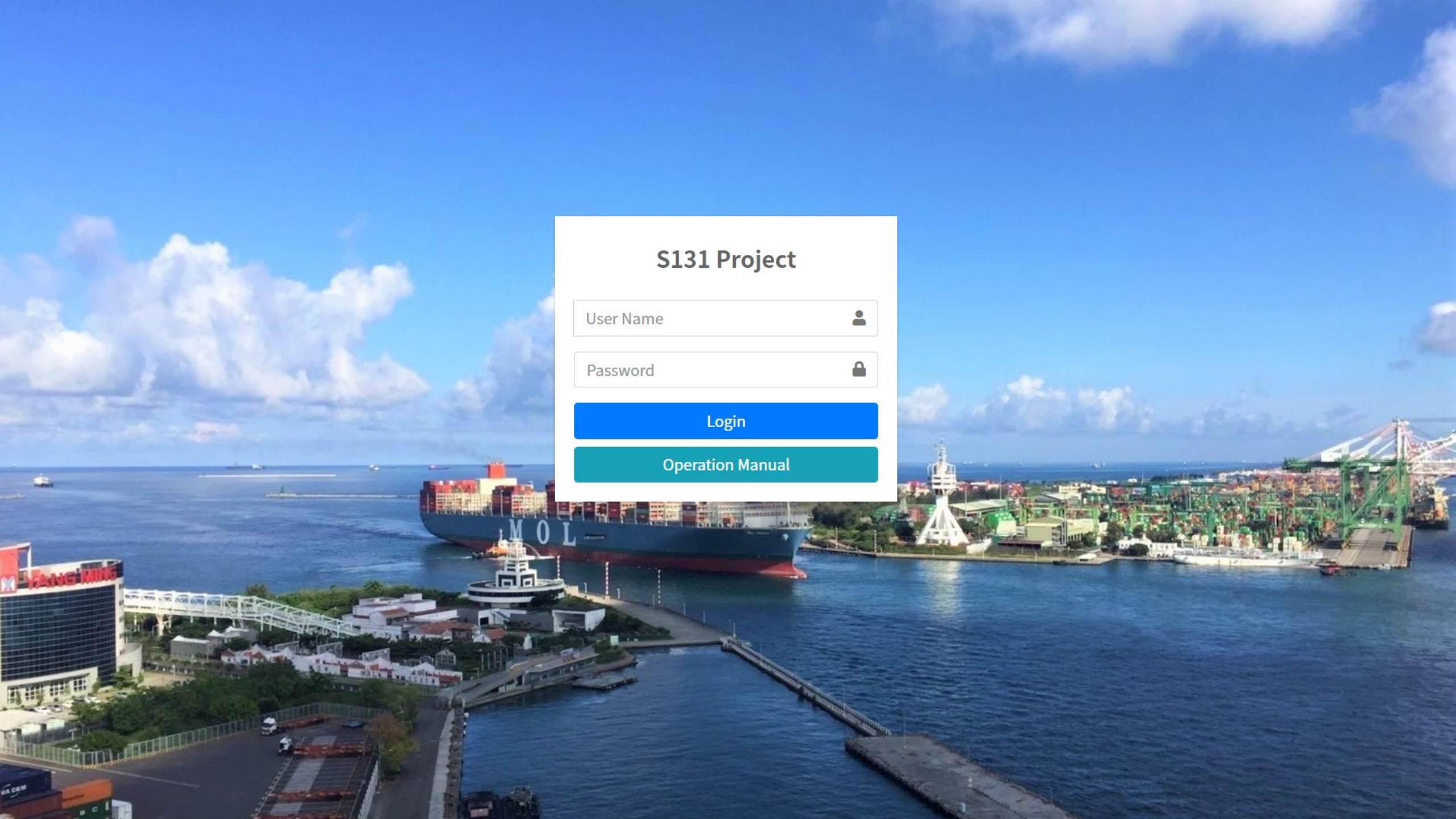


Password



Login

Operation Manual



- # of ports with UN/LOCODE
- # of container terminals with SMDG terminal code
- # of port facilities with IMO approved port facility number

Layers

- WPI Ports(NGA)
- Terminal(SMDG)
- Approved Port Facilitie

Browser



Visibility Control of Layers

S131 Project Project Database Log Out

Layers

- WPI Ports(NGA)
- Terminal(SMDG)
- Approved Port Facilitie

Browser

The map displays a global distribution of port locations. Red circular markers with numbers indicate port locations, while blue circular markers with numbers indicate terminal locations. Labels for various ports and terminals are scattered across the map, including Cambridge Bay, Pangnirtung, NOSAT | SALTEN TERMINAL, ISREY | KLEPPSBAKKI, CACBK | CORNER BROOK TERMINAL, RUMAG | MAGADAN COMMERCIAL PORT, RUPKC | SEROGLAZKA TERMINAL PETR, VNDAD | DA NANG TERMINAL, BRSUA | TECON SUAPE SA, PFPPT | PORT OF PAPEETE, Port Rikitea, English Harbor, Johnston Atoll, Diego Garcia, PGPOM | MOTUKEA INTERNATIONAL TERMINAL, FJSUV | PORT OF NOUVEAU, NCNOU | PORT OF NOUVEAU, and Edinburgh Of The Seven Seas. The map also shows geographical features like Cambridge Bay, Pangnirtung, and Diego Garcia.

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https://s100.ntou.edu.tw/s131/index/# --Region-- --Port--

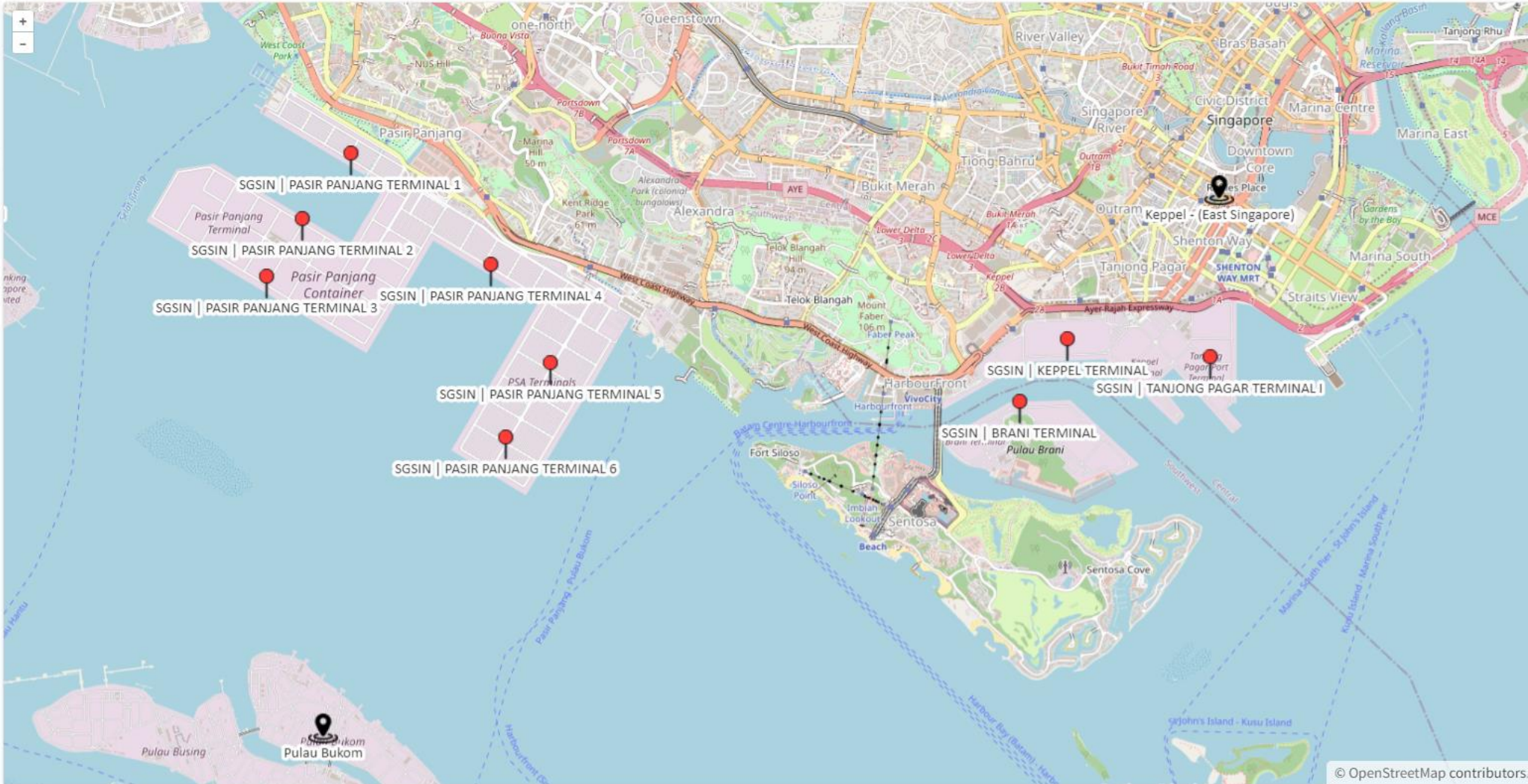
Layers as common resources

S131 Project Project Database Log Out

Layers

- WPI Ports(NGA)
- Terminal(SMDG)
- Approved Port Facilitie

Browser



The map displays the Singapore Strait and surrounding landmasses. Key port terminals are highlighted with red pins and labels: PASIR PANJANG TERMINAL 1 through 6, PASIR PANJANG Container, PSA Terminals, KEPPEL TERMINAL, and TANJONG PAGAR TERMINAL I. Other labeled areas include Pulau Brani, Pulau Busing, and Pulau Bukom. The map also shows major roads like the West Coast Highway and Ayer Rajah Expressway, and various districts such as Marina East, Marina South, and Downtown Core.

1.235125 103.818279 --Region-- --Port--

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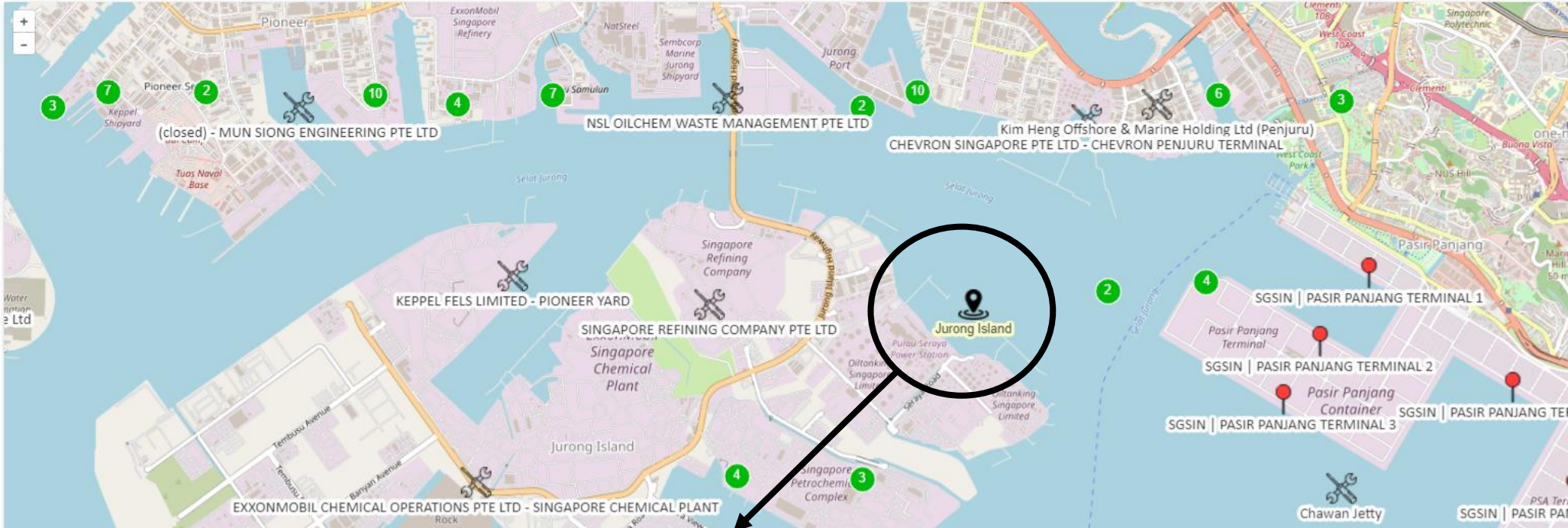
Query: UN/LOCODE (from UNECE & WPI)

S131 Project Project Database Log Out

Layers

- WPI Ports(NGA)
- Terminal(SMDG)
- Approved Port Facilitie

Browser



Properties

mainportname	un_locode
Jurong Island	SGJUR

1.260992 103.749398 --Region-- --Port--

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Query: SMDG Terminal Code

S131 Project Project Database Log Out

Layers

- WPI Ports(NGA)
- Terminal(SMDG)
- Approved Port Facilitie

Browser

Properties

name	unlocode	terminal_code	terminal_company_name	terminal_facility_name	terminal_website
SGSIN PASIR PANJANG TERMINAL 3	SGSIN	PSAPP3	PSA CORPORATION LIMITED	PASIR PANJANG TERMINAL 3	https://www.singaporepsa.com/our-business/terminals

SMDG Terminal Code PSAPP3

1.262837 103.732229 --Region-- --Port--

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Query: IMO Port Facility Number

S131 Project Project Database Log Out

Layers

- WPI Ports(NGA)
- Terminal(SMDG)
- Approved Port Facilitie

Browser

Properties

country_name	port_name	facility_name	imo_port_facility_number	description
Singapore	Singapore	EXXONMOBIL CHEMICAL OPERATIONS PTE LTD - SINGAPORE CHEMICAL PLANT	SGSIN-0026	Chemical Operations

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Location error, can be easily identified via GUI

(Just one example of the cases)

IMO INTERNATIONAL MARITIME ORGANIZATION **GISIS: Maritime Security**

Public Area > Maritime Security > Port Facilities > Port Facility Details

Organizational Contacts | Port Facilities | Security Arrangements | Download

Updated: 2020-06-09

Port Facility Details / Republic of Korea

Port: Incheon (KRICH)

Facility Details

Port facility name:	Incheon Coal Terminal
IMO Port facility number:	KRICH-0110
Alternative names for this port facility, if applicable:	
Port facility description:	Open port, Bulk carrier ship, 1berth(150,000DWTx 1), Lenght 240m / Depth 16.0m, Coal
Latitude:	26° 05.00' N
Longitude:	126° 36.00' E



IMO INTERNATIONAL MARITIME ORGANIZATION **GISIS: Maritime Security**

Public Area > Maritime Security > Port Facilities > Port Facility Details

Organizational Contacts | Port Facilities | Security Arrangements | Download

Updated: 2020-06-09

Port Facility Details / Republic of Korea

Port: Incheon (KRICH)

Facility Details

Port facility name:	Incheon Container Terminal
IMO Port facility number:	KRICH-0005
Alternative names for this port facility, if applicable:	
Port facility description:	Open port, Container ship, 2berth(40,000DWTx 2), Lenght 600m / Depth 14.0m, Containers
Latitude:	37° 26.30' N
Longitude:	126° 35.90' E

facility_name	imo_port_facility_number
Incheon Coal Terminal	KRICH-0110

Zoom to a port

S131 Project Project Database Log Out

Layers

- WPI Ports(NGA)
- Terminal(SMDG)
- Approved Port Facilitie

Browser

Zoom to the "country" + "port"

NOMAN Mandal

NOKRS Kristiansand

NOARE Arendal

NOTVE Tvedestrand

NORIS Risør

NOKRA Kragero

NOKRS | KRISTIANSAND CONTAINER TERMINAL

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58.135412 7.975412 Norway NOKRS Kristiansand

Add a port database

S131 Project Project ▾ Database ▾

Layers

- WPI Ports(NGA)
- Terminal(SMDG)
- Approved Port Facilitie

Browser

Database Manager | Vector

Port *

--Port--

Kri

- NOKSU Kristiansund
- NOKRS Kristiansand**
- FIKRS Kristinestad
- NGOKR Okrika
- CMKBI Kome Kribi 1 Marine Terminal
- KRINC Inchon

3.270311 99.225942 --Region-- --Port--

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Add Feature Type → Add Feature Object

The screenshot displays a GIS application interface with several key components:

- Top Bar:** Shows "S131 Project", "Project", and "Database" dropdown menus, along with a "Log Out" button.
- Layers Panel:** Lists "WPI Ports(NGA)", "Terminal(SMDG)", and "Approved Port Facilitie".
- Browser Panel:** Shows a tree view with "NOKRS Kristiansand" selected. A context menu is open over it, with "Add Feature Object" highlighted.
- Feature Type Selection Dialog:** Titled "Add Feature Type | Vector", it shows a list of feature types. "Harbour Area Section" is selected and highlighted in blue.
- Feature Manager Dialog:** Titled "Feature Manager | Vector", it prompts for a "Vector Dataset" and includes "Add" and "Cancel" buttons. Below the buttons, it says "Upload shape file (zip)".
- Map:** Shows a map of a harbor area with various features like "Kongsgård", "Kuvika Bertesbukta", and "Myrbukta".

Select a field for the FeatureName (display text)

The screenshot displays a GIS application interface. At the top, there is a header with 'S131 Project', 'Project', and 'Database' dropdown menus, and a 'Log Out' button on the right. On the left side, there are two panels: 'Layers' and 'Browser'. The 'Layers' panel shows three layers: 'WPI Ports(NGA)', 'Terminal(SMDG)', and 'Approved Port Facilitie'. The 'Browser' panel shows a tree view with 'NOKRS Kristiansand' selected, containing sub-items like 'Harbour Area Section', '1', '2', '3', '4', and 'Berth'. The main map area shows a street map of Kristiansand, Norway, with a red pin marking the 'NOKRS | KRISTIANSAND CONTAINER TERMINAL'. A dialog box titled 'Shp File Prop Mapping | Vector' is open in the center, listing several fields with dropdown menus for selection. The 'QUAYNAME' field has 'FeatureName' selected. The map also shows various streets, water bodies, and industrial areas like 'Glencore Nikkelverk' and 'NOKRS | KRISTIANSAND CONTAINER TERMINAL'. At the bottom, there is a search bar with 'Norway' and 'NOKRS Kristiansand' entered, and a search icon.

Layers

- WPI Ports(NGA)
- Terminal(SMDG)
- Approved Port Facilitie

Browser

- NOKRS Kristiansand
 - Harbour Area Section
 - 1
 - 2
 - 3
 - 4
 - Berth

Shp File Prop Mapping | Vector

DATAAPT_1	
DATAAPT_2	
PORT	
PORTFACILI	
INFORMATIO	
TYPEOFQUAY	
QUAYID	
QUAYNAME	FeatureName

58.139859 7.981343 Norway NOKRS Kristiansand

Query properties → to assist editing of the feature

The screenshot displays a GIS application interface. At the top left, there is a logo and navigation elements: "S131 Project", "Project", and "Database". At the top right, there is a "Log Out" link. The interface is divided into several panels:

- Layers:** A table showing the current layers and their properties.
- Browser:** A tree view showing the project structure, including "NOKRS Kristiansand", "Harbour Area Section", "Berth", "Mooring/Warping Facility", "NOSVG Stavanger", "CAMTR Montreal", and "TWHUN Hua-Lien Kang".
- Map:** A map showing a port area with several berths labeled 9/6 through 9/10. A red line indicates a boundary. A red pin is placed on the map, and a label "NOKRS | KRISTIANSAND CONTAINER TERMINAL" is visible.
- Properties:** A window showing the details of the selected feature.

unlocode	terminal_code	terminal_company_name	terminal_facility_name	terminal_website
NOKRS	KRSCT	GREENCARRIER FREIGHT SERVICES / SEAFRONT PORT SERVICES AS	KRISTIANSAND CONTAINER TERMINAL	https://www.portofkristiansand.no/

geometry	OBJECTID_1	DATA CAPTURED	DATA CAPTURED_1	DATA CAPTURED_2	PORT	PORT FACILITY INFORMATION	TYPE OF QUAY	QUAY ID	QUAY NAME	TYPE OF QUAY_1	LINK	LOKAL ID	NAMESPACE	ACCURACY
[object Object]	7	2020/12/11 12:00:00.000	ukj	ukj	NOKRS	Kristiansand sentrum	betong	4104	Berth 9	annen	https://www.portofkristiansand.no/om-oss/kai-og-terminaler/caledonien/	8dc2627a-96b5-49b8-93f8-d5e105cf844c	http://data.geonorge.no/Havnedata/so	30

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CAMTR (Port of Montreal, Canada)

S131 Project Project Database

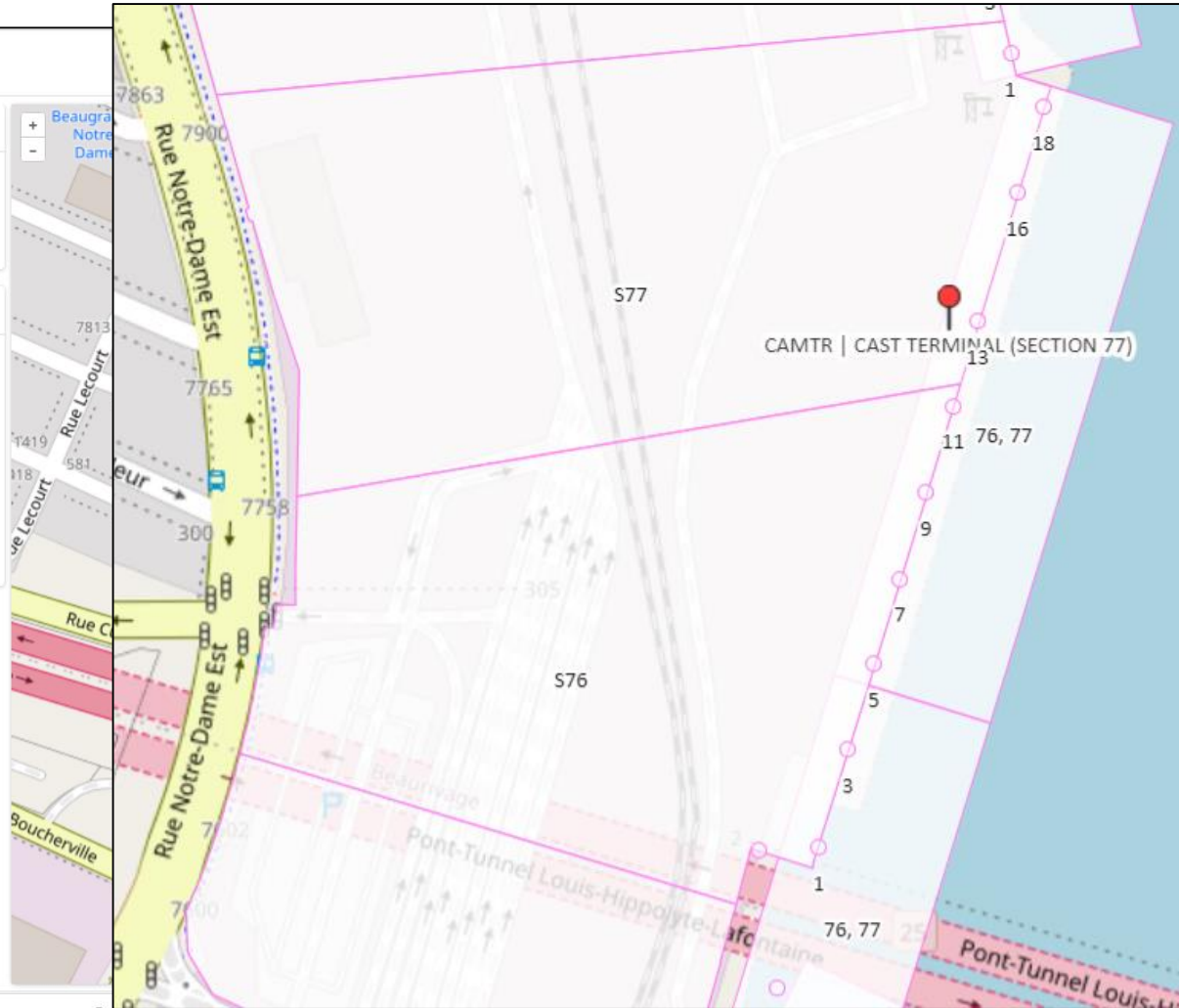
Layers

- WPI Ports(NGA)
- Terminal(SMDG)
- Approved Port Facilitie

Browser

- NOKRS Kristiansand
- NOSVG Stavanger
- CAMTR Montreal
 - Harbour Area Section
 - Berth
 - Mooring/Warping Facility
 - TWHUN Hua-Lien Kang

45.588304 -73.509891



unlocode	terminal_code	terminal_company_name	terminal_facility_name	terminal_website
CAMTR	MGTCAS	MONTREAL GATEWAY TERMINALS	CAST TERMINAL (SECTION 77)	https://www.mtrtml.com/maps/index.php

Zoom to the feature e.g. from Japan to CAMTR Berth “B1,B2”

The image displays a GIS application interface with two main panels. The left panel contains a 'Layers' section with 'WPI Ports(NGA)', 'Terminal(SMDG)', and 'Approved Port Facilitie' layers. Below it is a 'Browser' section showing a tree view of data layers: 'NOKRS Kristiansand', 'NOSVG Stavanger', 'CAMTR Montreal', 'Harbour Area Section', and 'Berth'. Under 'Berth', there are sub-layers 'M2, M3, M4, M5', 'B1, B2', 'B7, B8', and 'B6'. A context menu is open over the 'B1, B2' layer, with options: 'Add Feature Type', 'Add Feature Object', 'Zoom To', 'Delete', 'Edit', and 'Set Layer To Top'. The 'Zoom To' option is highlighted. The right panel shows a zoomed-in map of a port area. It features a central blue-shaded area labeled 'B1, B2' with a vertical line of 11 numbered points (1-11). To the left is a smaller area labeled 'B1'. To the right is an area labeled 'M2, M3, M4, M5' with a vertical line of 11 numbered points (1-11). Further right is a vertical road labeled 'Avenue Pierre-Dupuy' and a grey-shaded area labeled 'Profil O'. The map also shows 'Port de Montréal-Bickerdijk' and 'M2'. The bottom status bar shows coordinates '45.495119', '-73.545750', and a search icon.

Edit geometry & others

The screenshot displays a web-based GIS application interface. At the top left, there is a logo and navigation elements: "S131 Project", "Project", and "Database". At the top right, there is a "Log Out" link. The interface is divided into several panels:

- Layers:** A list of layers including "WPI Ports(NGA)", "Terminal(SMDG)", and "Approved Port Facilitie".
- Browser:** A tree view showing a project structure with folders like "NOKRS Kristiansand" and "TWHUN Hua-Lien Kang", and sub-items like "Harbour Area (Administrative)", "Pilot Boarding Place", "[14]", "AnchorBerth", and "A2", "A3", "A1".
- Feature Attribute Manager | Vector:** A panel showing a tree view of the selected feature "A2" with attributes "featureName" and "geometry".
- Geometry:** A table displaying the geometry data for the selected feature. The table has two columns for X and Y coordinates and a row index from 109 to 122.
- Map:** A map area showing a red line representing the geometry of the selected feature. A blue dot is visible on the map, likely representing a vertex of the geometry.

Red arrows point from the "Feature Attribute Manager" and "Geometry" panels to the map area, indicating the relationship between the data and the visual representation. A pink arrow points from the "Layers" panel to the map area.

Index	X Coordinate	Y Coordinate
109	23.96239880000000	121.61650540000001
110	23.96249360000001	121.61643180000002
111	23.96258849999999	121.61636790000003
112	23.96268779999998	121.61630400000001
113	23.96278700000000	121.61625000000001
114	23.96289090000000	121.61620080000002
115	23.96299930000000	121.61615660000001
116	23.9631076	121.61611729999998
117	23.96321589999999	121.6160878
118	23.9633288	121.61605829999998
119	23.96343719999998	121.6160387
120	23.96354999999999	121.61602390000002
121	23.96377580000000	121.61601410000002
122	23.9638932	121.616019

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Demonstration ?