Bureau International des Containers

BIC Facility Codes
BIC/SMDG API
Geofencing of Facilities
40th UN/CEFACT Forum May 2023

About the BIC

- Non-profit NGO, founded in 1933 under auspices of the ICC
- 2800+ members in over 130 countries
- Official NGO Observer status at IMO, WCO, UNECE
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Bureau International des Containers

BIC – Data Resources

BIC Digitization Offering

BIC Code Register
(Unique Prefix for Containers)

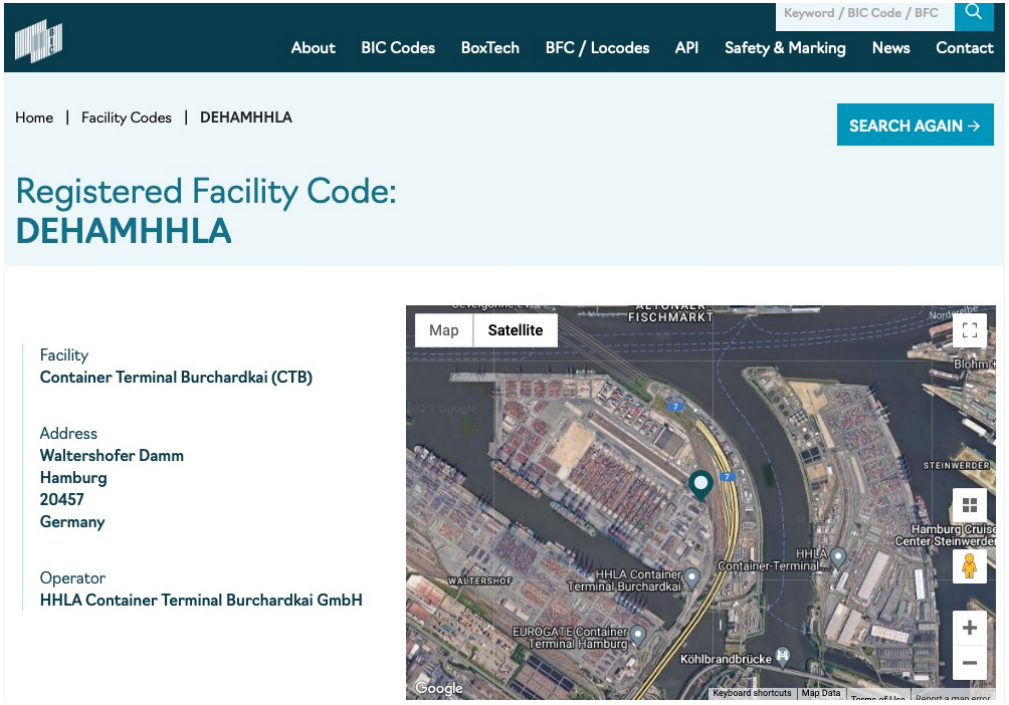
Global Container Database
(Technical Container Details)

BIC Facility Code
(Coded Container Facilities)

DEHAMHCSA

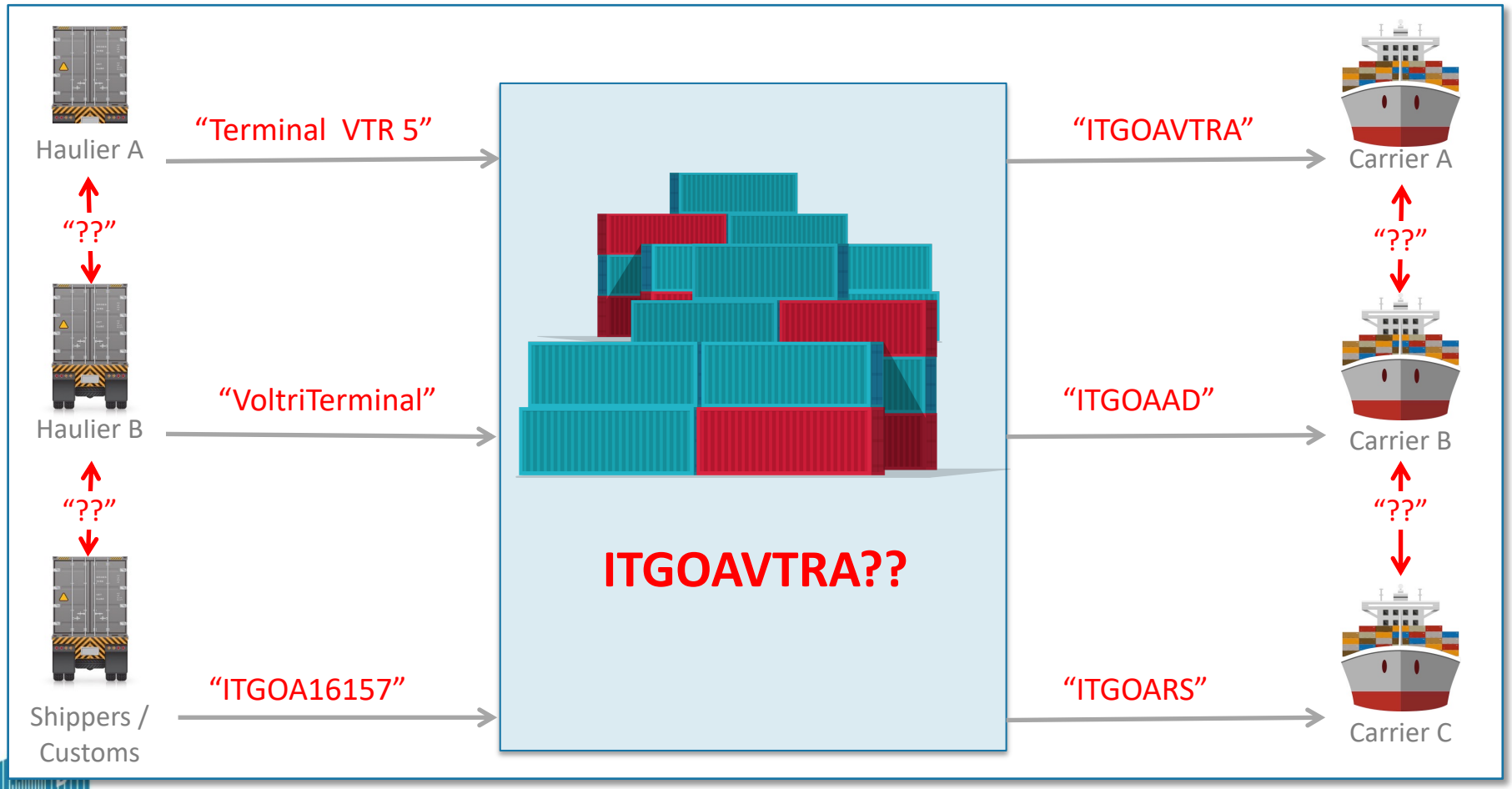
What is the BFC?

- 9 Character Identifier for Container Facilities Globally
- Child Code of UNLOCODE
- Recommended Facility Type Code by DCSA Carriers
- Accessible via Web and API
- Complimentary to the SMDG Terminal Code



Why use a standard code?

With no common language inefficiencies prevail, including wasted time, data re-entry, systems programming, depot changes and new depots, e-mail and phone calls, uncertainty and more. This system (or lack thereof) is also not future-ready!



BIC Facility Code Harmonization Project in collaboration with DCSA, IANA, Lessors, etc.

Data Input

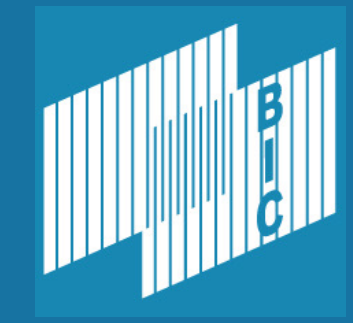
Combined total of over 40,000 Container Facility codes provided by 8 major carriers, 3 major lessors, multiple other service providers. Collaboration with both DCSA (Global) and IANA (for North America)

Machine learning tools allowed verification of addresses, Lat/Long coordinates and harmonization of the lists

Result

Over 17,000 facilities in 192 countries now have a harmonized code, enhanced address and Lat/Long coordinates

** Enhanced = Enhanced address, and GPS coordinates added.*



Joint API for BIC Facility Codes and SMDG Terminal Codes

Facility Code List – Web and API

REGISTERED LOCODE: USOAKNWDA

Facility:
United Intermodal Services Inc

Address:
1195 A Middle Harbor Rd
Oakland
CA 94607
United States of America

Operator:
United Intermodal Services Inc

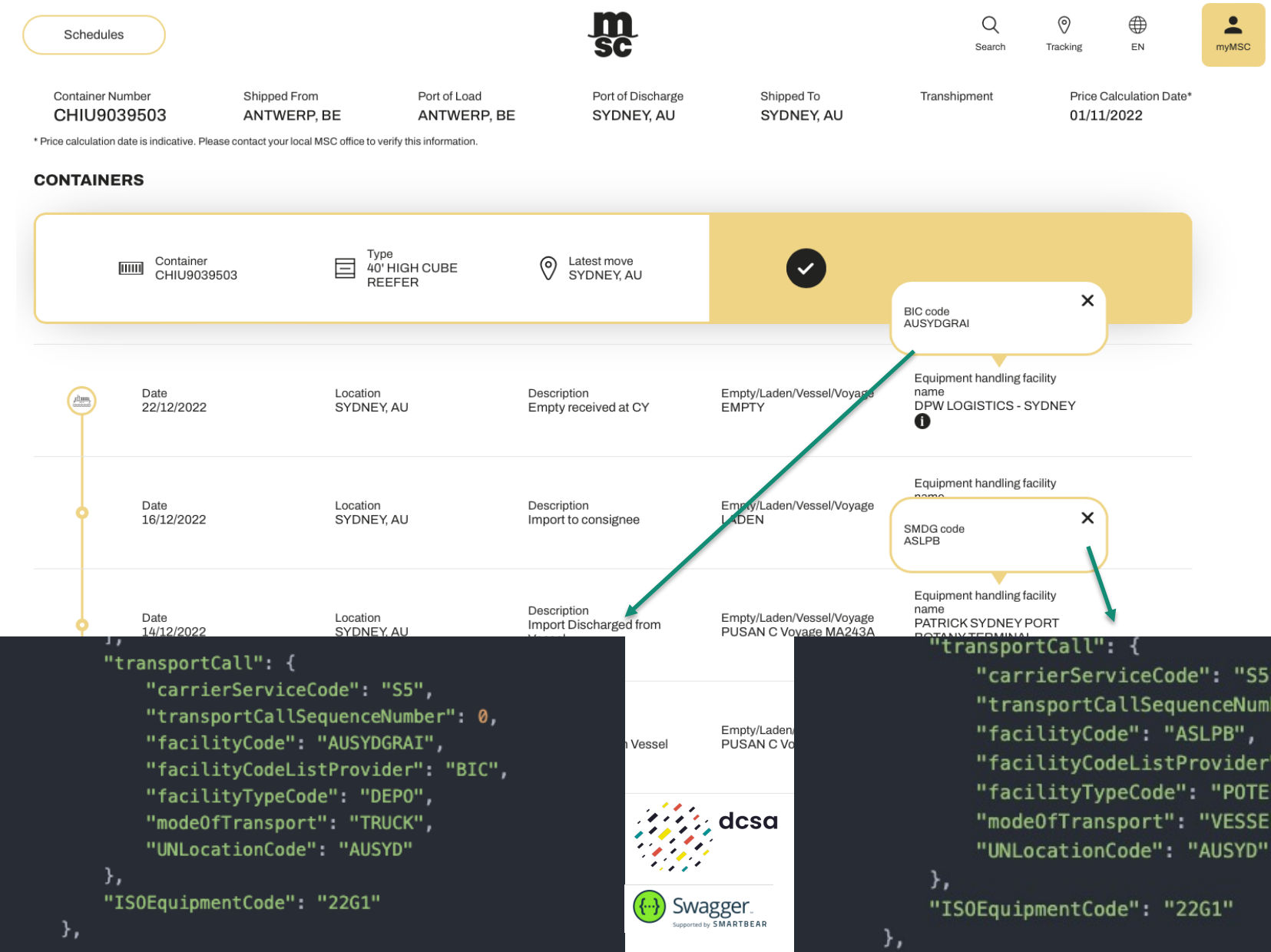
Human Readable

Machine Readable

Recommended Facility


```
{
    "code": "USOAKNWDA",
    "codeProvider": "BIC",
    "unLocode": "USOAK",
    "countryCode": "US",
    "facility": {
        "name": "United Intermodal Services Inc",
        "address": {
            "street": "1195 A Middle Harbor Rd",
            "city": "Oakland",
            "state": "CA",
            "postcode": "94607",
            "country": "United States of America"
        },
        "formattedAddress": "1195 A Middle Harbor Rd, Oakland, CA, 94607, United States of America",
        "geographicalCoordinate": {
            "latitude": "37.7974178",
            "longitude": "-122.3051594"
        }
    },
    "operator": {
        "name": "United Intermodal Services Inc"
    }
```

Usage Example




```
"transportCall": {
    "carrierServiceCode": "S5",
    "transportCallSequenceNumber": 0,
    "facilityCode": "AUSYDGRAI",
    "facilityCodeListProvider": "BIC",
    "facilityTypeCode": "DEPO",
    "modeOfTransport": "TRUCK",
    "UNLocationCode": "AUSYD"
},
"ISOEquipmentCode": "22G1"
},
```

dcsa

Swagger
Supported by SMARTBEAR

```
"transportCall": {
    "carrierServiceCode": "S5",
    "transportCallSequenceNumber": 0,
    "facilityCode": "ASLPB",
    "facilityCodeListProvider": "SMDG",
    "facilityTypeCode": "POTE",
    "modeOfTransport": "VESSEL",
    "UNLocationCode": "AUSYD"
},
"ISOEquipmentCode": "22G1"
},
```

Geofencing Pilot

Geofencing Business Case

With the increasing adoption of smart containers, the need to **geographically define the facilities** and zones through which containers travel in the supply chain is **increasing rapidly.**

A geofence supercharges the business case for Smart Containers: Chain of custody, automatic gate events, zones of interest…

Today a multitude of different parties (IOT providers, individual carriers, terminals) maintain geofencing coordinates; this information is held in many different systems, in different formats, and there is **no single source of truth** or **agreed methodology for geofencing** the coordinates of any facility.

Geofence Paper- Project

- Project will define the **methodology** and rules for different types of facilities to be geofenced
- Provide **examples of geofences** with difference in quality to demonstrate how to review
- Outline the concept of '**nesting**' to cover various use cases or scenarios from a facility geofence
- Provide guidance on **Publication** of Geofences for interoperability between IoT providers
- Geofence Paper will form a standardized base for geofencing

UNECE
UN/CEFACT

Geofence Review Panel

- Review Panel is an open process, goal is to provide a structured way to review contributed or procured geofences for quality
- ‘Reviewed’ geofences are versioned on publication
- Geofences are openly available from the Facility Code API and relate to a coded location
- BIC provide the tooling and forum for review only, the panel decide on geofence quality
- Panel from a variety of backgrounds and companies, all welcome
- Official kick off meeting will take place in June

Geofence Review Tool

GEOFENCE PILOT

Logout

Registered Facility Code: **DEHAMHHLA**

FACILITY
Container Terminal Burchardkai (CTB)

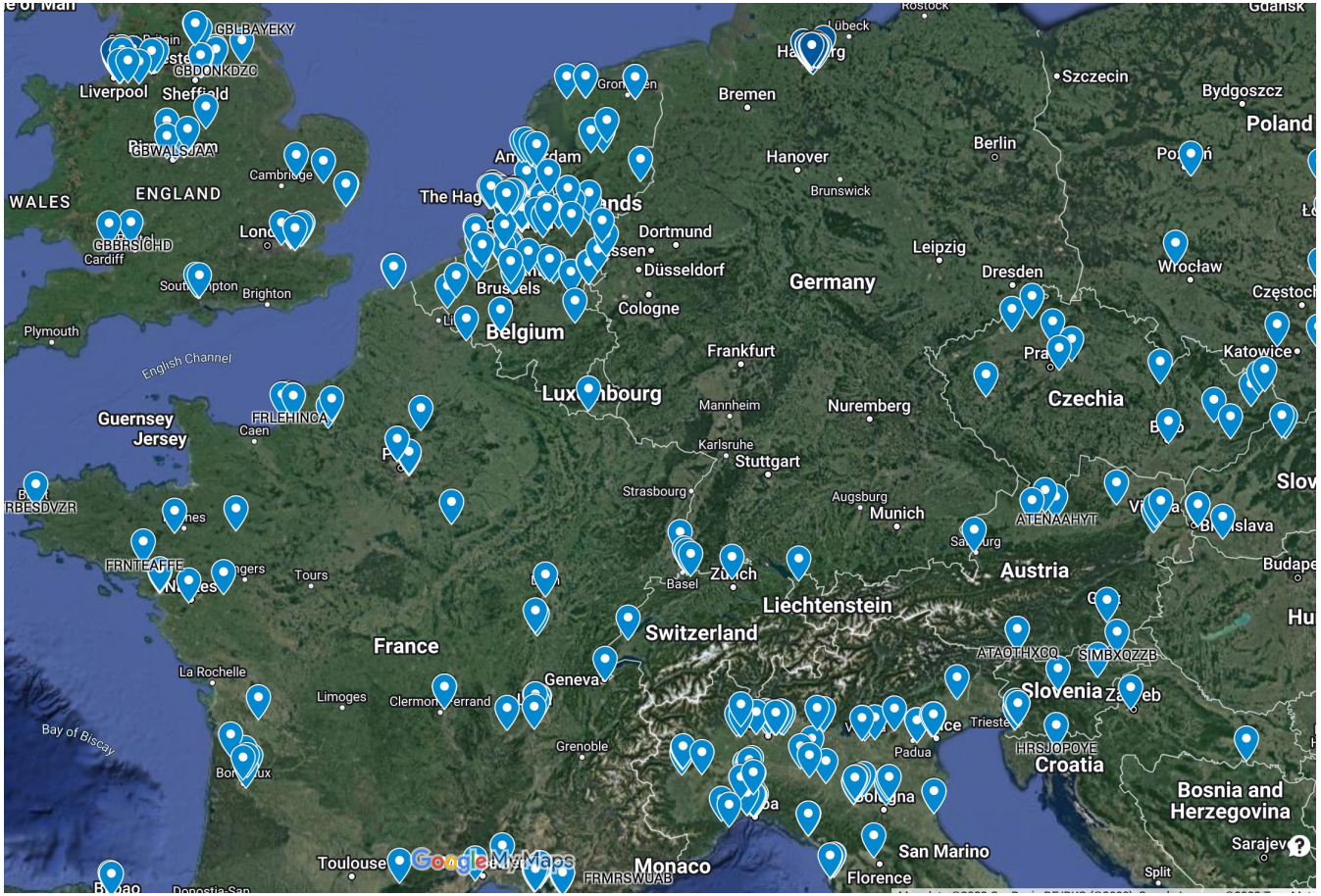
CODE PROVIDER
BIC

ADDRESS
Waltershofer Damm
Hamburg
20457
Germany

OPERATOR
HHLA Container Terminal Burchardkai GmbH

Reject all Geofence Requests

Geofence Pilot – Coverage Growth



Geofences provided under collaborative approach to the pilot

Next Steps?

- **Please contribute your geofences to the library** for consideration of the review panel
- Geofences are **anonymized**, but the more we have early on for review the better for the panel
- **Participate in the review panel**, small effort for wider longer term business and industry benefit
- Depots and Terminals please take ownership of your **‘virtual estate’**
- **Provide your opinions**, be really honest we love that!
- **Review the Geofence Paper**, what’s missing?

Questions:

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david@cif-consulting.co.uk

Douglas Owen
Secretary General

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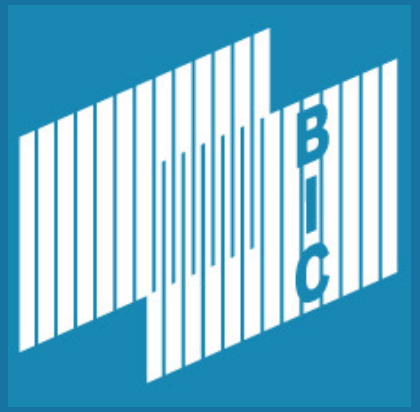

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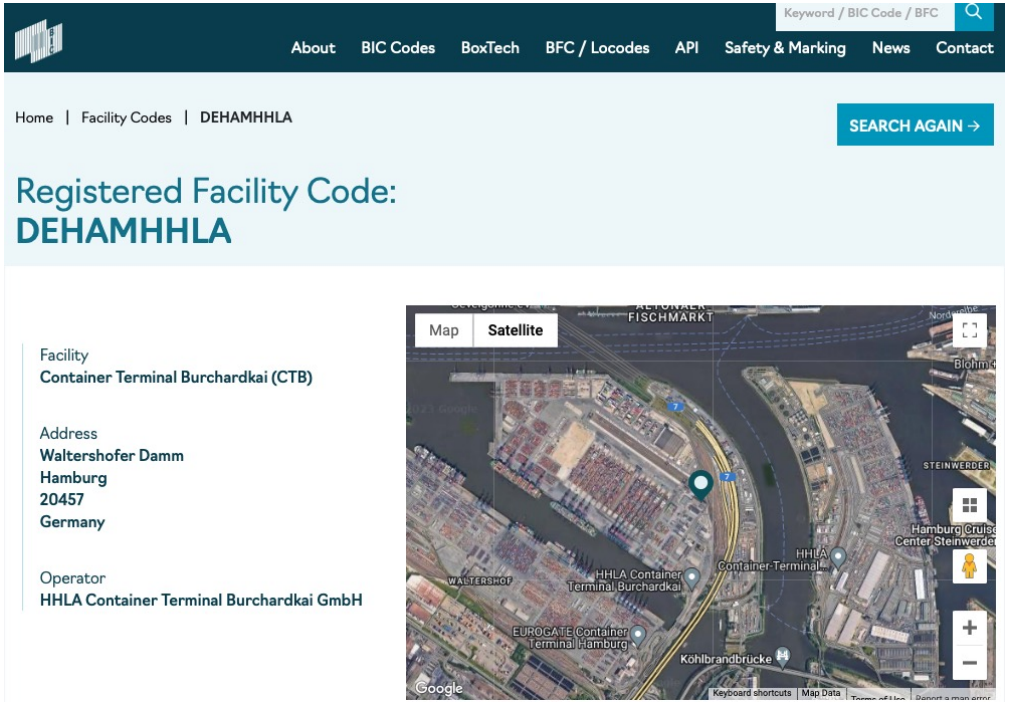

Review Panel Meeting Goals

- Cover pre-agreed and advertised geographical areas during the call
- Review X geofences or as many as the meeting time allows
- Minute the meeting and apply the dated version number i.e. 2023-04-05 to match the geofence version.
- Agree the agenda / areas for review during the next meeting

Purpose and Code of Conduct

Participants of the review panel will:

- Establish a review process and publish versioned geofences against BIC and SMDG codes
- Come to a consensus that the submitted geofence represents the facility as defined in the published rules
- Work together efficiently to discuss and resolve differences around a facility geofence
- Collaborate openly to the process of reviewing geofences, in nature they are subjective and we are looking to find a balanced view initially which can be modified if better information comes forward.

Key rules for Geofences

	BIC	SMDG
Boundary Area Definition	Property boundary OR fenced area of container facility for shared areas within an intermodal terminal or port area.	Property boundary of terminal area, with second geofence to include single width of ship at berth on sea
Land or Sea	Land Only	Both Land and Sea
Overlapping geofence allowed	NO	YES, in very specific cases where berthing area is shared

Preference for Depots / Terminals to own their virtual estate by providing own geofence.

BIC and SMDG geofences can overlap with each other as they are from different ‘families’

Live Workshop

Let's see how a live session works out !

1. Visit https://geofence-review.bic-code.org/
2. Look for facilities in the list or known to you by code
3. If needed re-draw the geofence
4. Click copy icon and paste into email, send that to David@cif-consulting.co.uk and make sure to add the facility code to the email subject

Next Steps?

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