Bureau International des Containers

BIC Facility Codes
BIC/SMDG API
Geofencing of Facilities
Singapore - April 2023

About the BIC

- Non-profit NGO, founded in 1933 under auspices of the ICC
- 2800+ members in over 130 countries
- Promoting safety, security, standardization, and efficiency
- Official NGO Observer status at IMO, WCO, UNECE
- Active at ISO, CEN and other standards organizations
- Based in Paris

BIC – Data Resources

BIC Digitization Offering

BIC Code Register
(Unique Prefix for Containers)

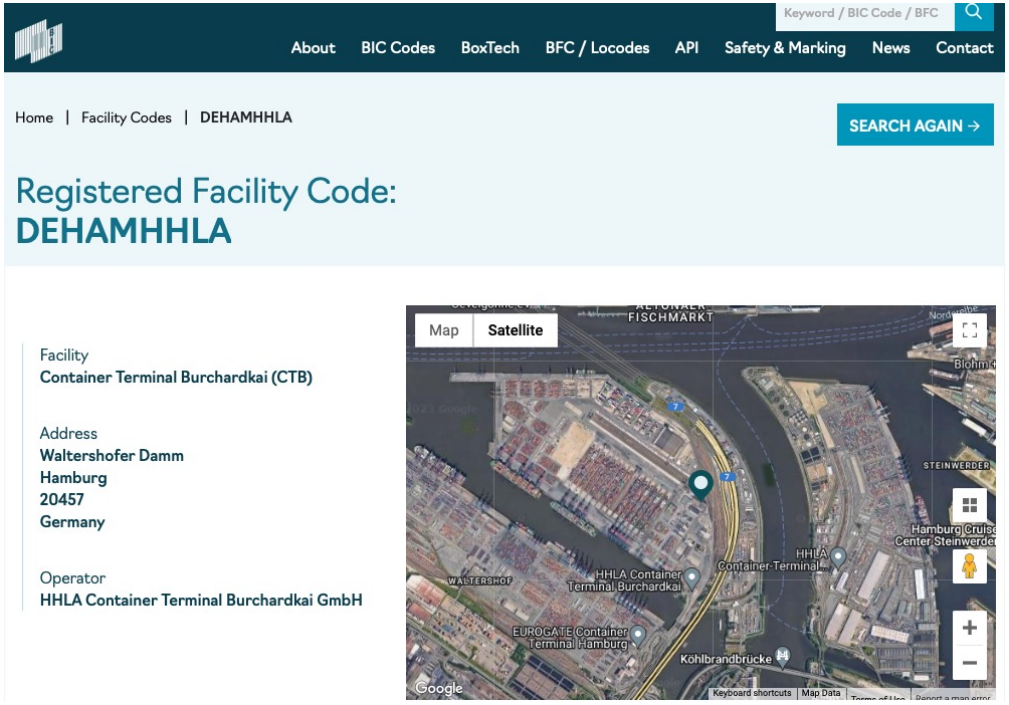
Global Container Database
(Technical Container Details)

BIC Facility Code
(Coded Container Facilities)

DEHAMHCSA

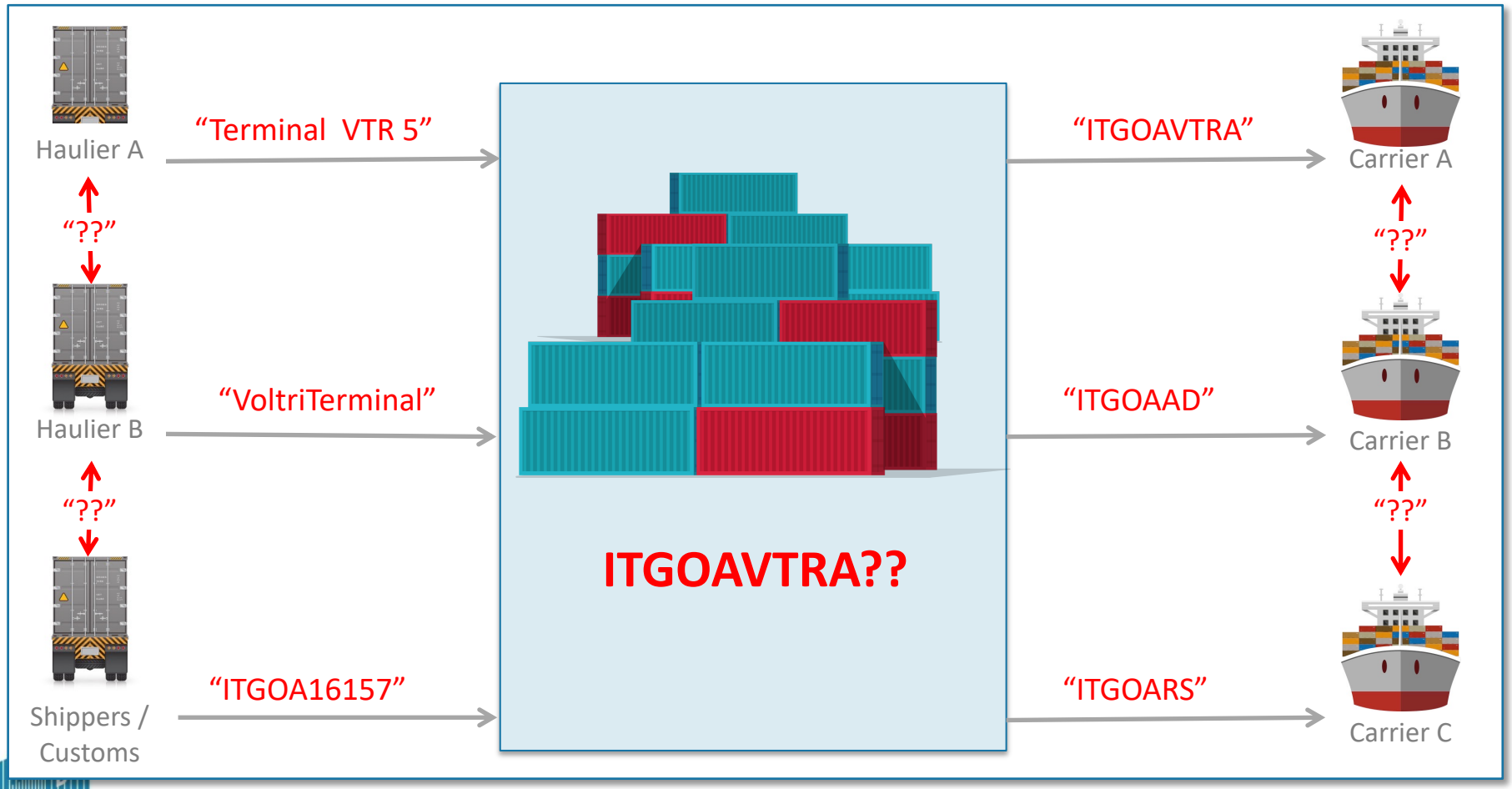
What is the BFC?

- 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

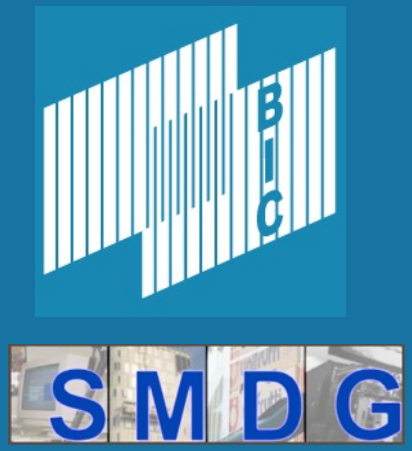
Combined total of over 40,000 Container Facility codes provided by 8 major carriers, 3 major lessors, multiple other service providers. Collaboration with both DCSA (Global) and IANA (for North America)

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

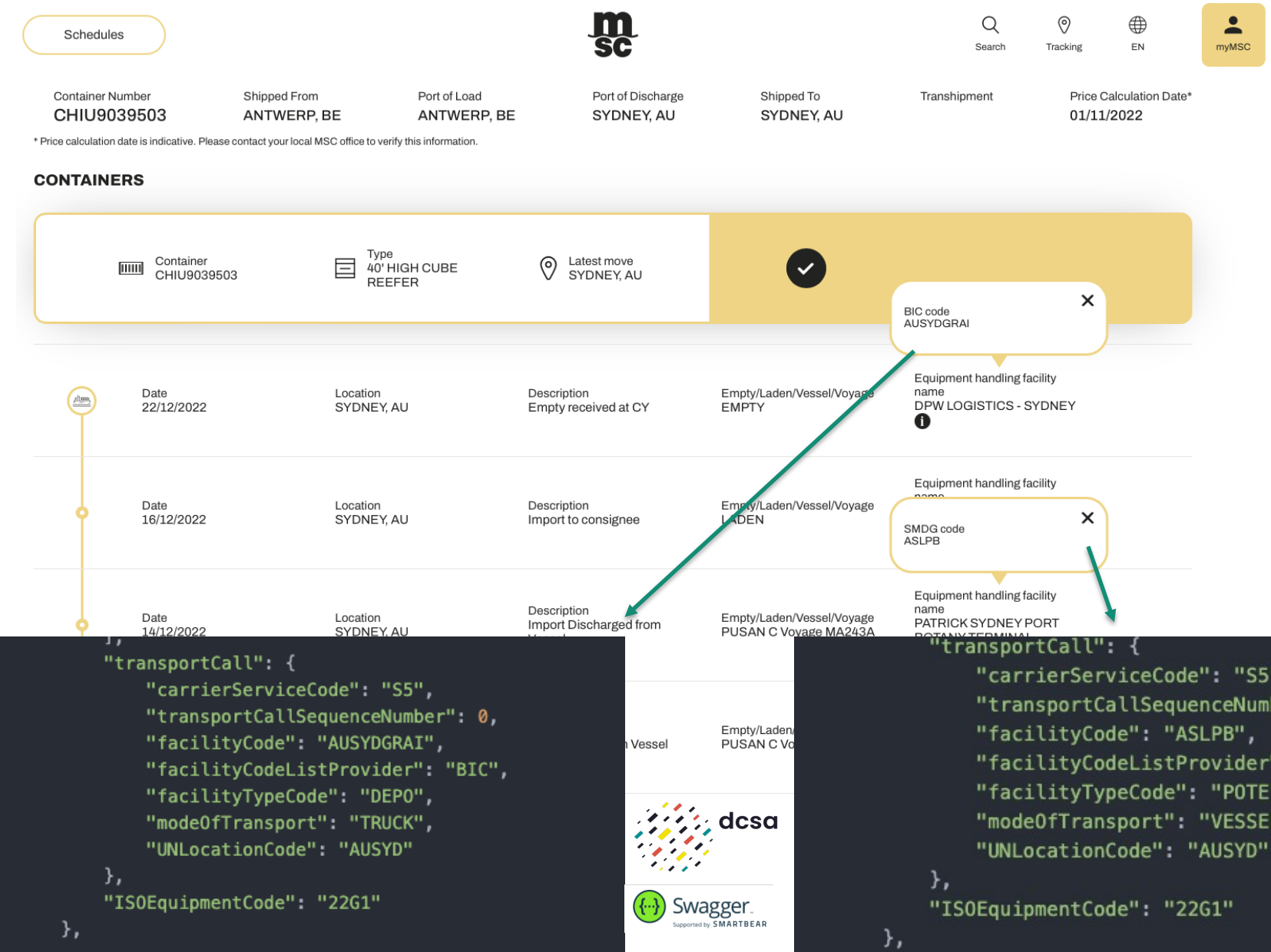
Human Readable

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.

Purpose and Code of Conduct

BIC host the database and facility code API for both **BIC Facility Codes** (BFC) and **SMDG Terminals** and we are leveraging the existing infrastructure to provide an industry platform for a **common geofence library** and review process.

The **Geofence review tool** will support industry participants to participate in the review panel and follow the methodology, once a quorum is reached to approve and publish the versioned geofences via the Facility Code API.

Decisions on the quality of the geofence and the facility it represents will be made by the review panel.

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.

SMDG Terminal Geofences

SMDG specific geofence discussion and **live demo of the geofence review tool** for visualization of the below topics outlined in the '**homework**' primer paper - distributed yesterday

1. Berth Width (none, 1, 2 other?)
2. Multiple Terminals with a single SMDG Terminal Code
3. Shared Pier or Quay
4. Virtual Terminals – how to handle.

Live Workshop

Let's see how a live session works out !

1. Open SMDG Terminal Code List
2. Copy the Address field (*column L – Terminal Address*)
3. Paste into the search box on https://geojson.io
4. Draw your opinion of the geofence
5. Click copy icon and paste into email, send that to David@cif-consulting.co.uk and make sure to add the SDMG terminal code to the email subject

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
- **Provide your opinions**, be really honest we love that!
- **Review the Geofence Paper**, what's missing?

Questions:

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