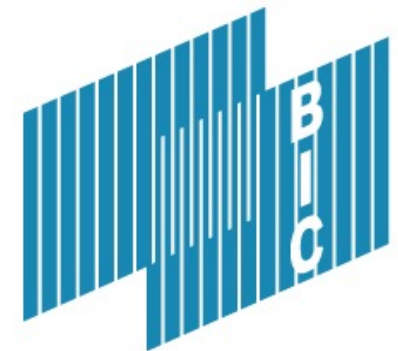


# Bureau International des Containers

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

- 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

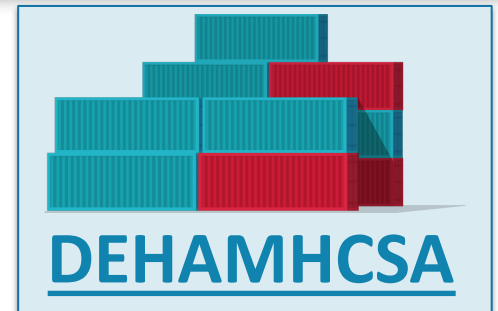
BIC Code Register  
(Unique Prefix for Containers)

Global Container Database  
(Technical Container Details)

BIC Facility Code  
(Coded Container Facilities)

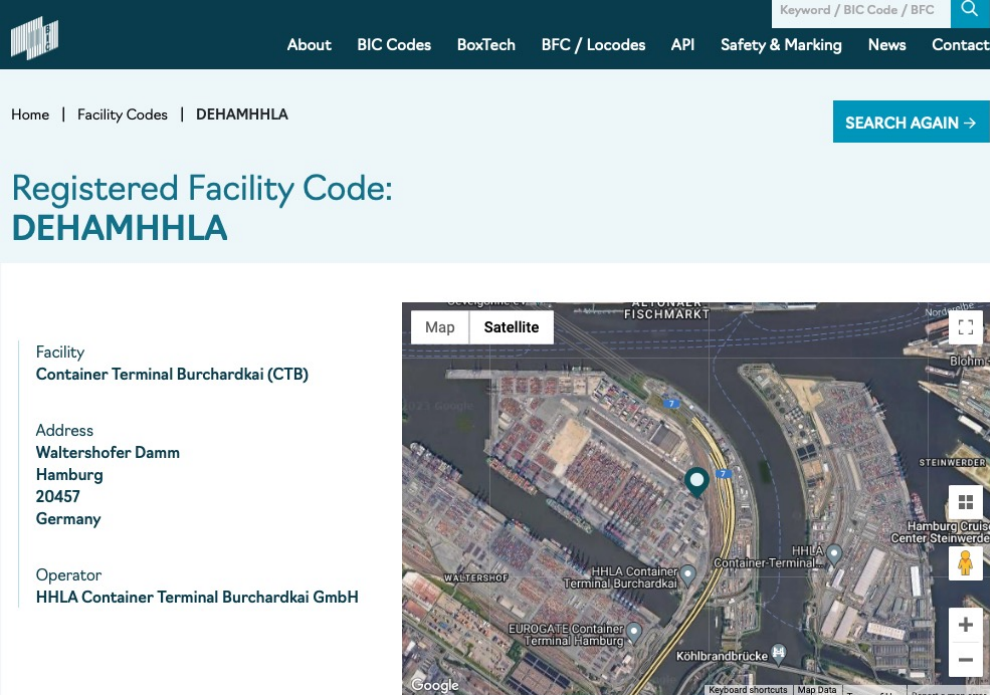


MAX.GR.	30.480	KG
TARE	67.200	LBS
NET	2.200	KG
	4.850	LBS
	28.280	KG
	62.350	LBS



# 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



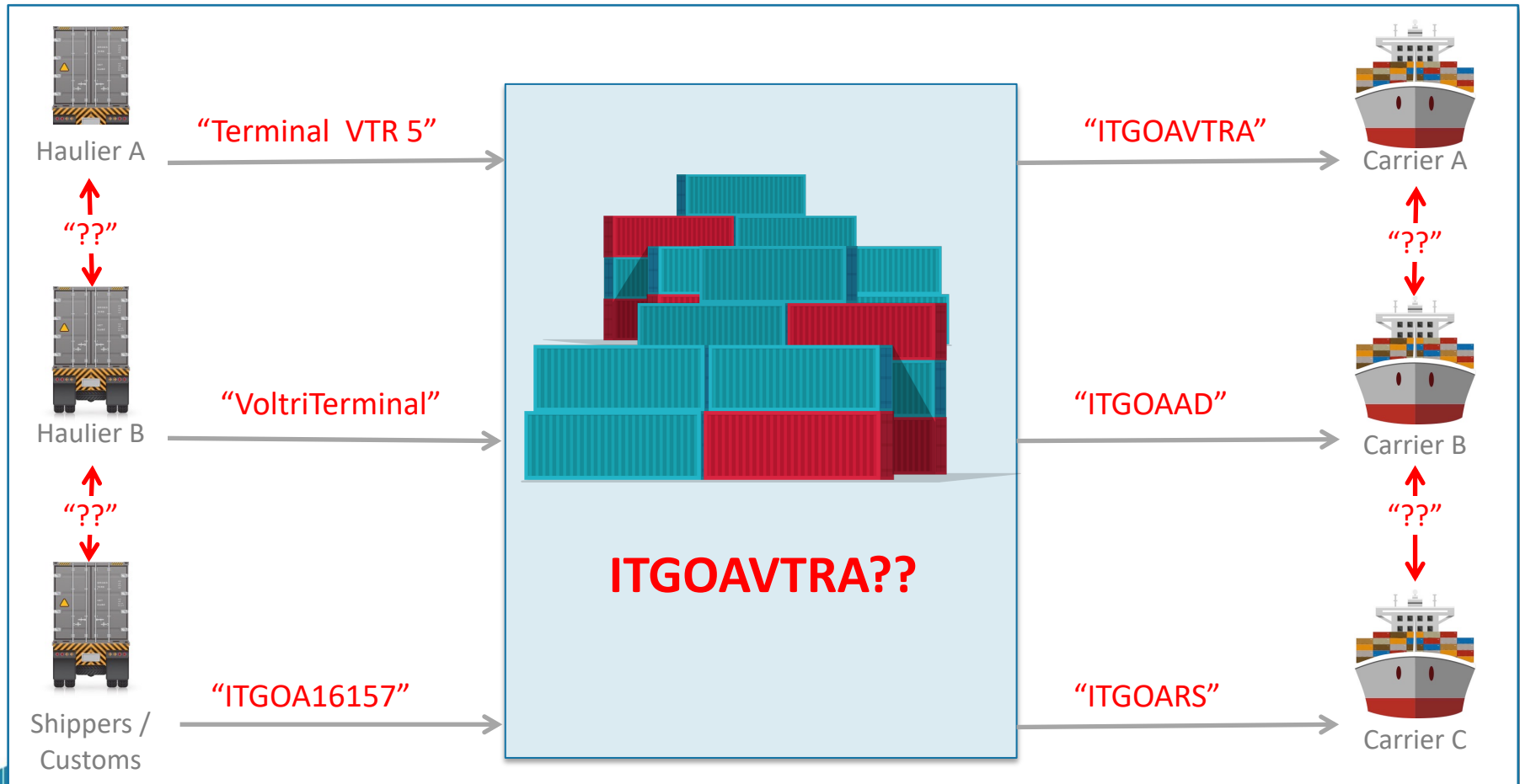
The screenshot displays the BFC website interface. At the top, there is a navigation bar with a search icon and the text "Keyword / BIC Code / BFC". Below this, a secondary navigation bar includes links for "About", "BIC Codes", "BoxTech", "BFC / Locodes", "API", "Safety & Marking", "News", and "Contact". The main content area features a breadcrumb trail: "Home | Facility Codes | DEHAMHHLA". A prominent blue button labeled "SEARCH AGAIN ->" is positioned to the right. The central heading reads "Registered Facility Code: DEHAMHHLA". To the left of a satellite map, the following details are listed:

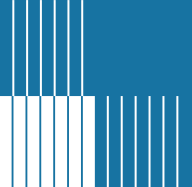
- Facility: Container Terminal Burchardkai (CTB)
- Address: Waltershofer Damm, Hamburg, 20457, Germany
- Operator: HHLA Container Terminal Burchardkai GmbH

The satellite map on the right shows the location of the Container Terminal Burchardkai in Hamburg, Germany, situated along the waterfront. Other nearby landmarks like "EUROGATE Container Terminal Hamburg" and "Kohlbrandbrücke" are also visible.

# 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)

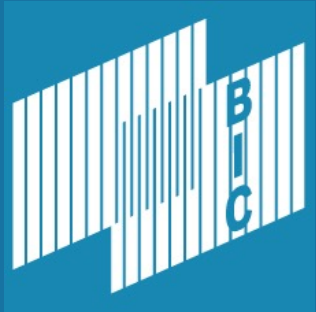
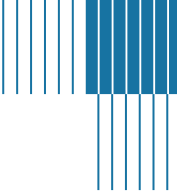
Machine learning tools allowed verification of addresses, Lat/Long coordinates and harmonization of the lists

## 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



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"
  }
}
```



Machine Readable



# Usage Example

Schedules



Search



Tracking



EN



myMSC

Container Number: **CHIU9039503**   Shipped From: **ANTWERP, BE**   Port of Load: **ANTWERP, BE**   Port of Discharge: **SYDNEY, AU**   Shipped To: **SYDNEY, AU**   Transhipment:   Price Calculation Date\*: **01/11/2022**

\* Price calculation date is indicative. Please contact your local MSC office to verify this information.

## CONTAINERS

Container: **CHIU9039503**   Type: **40' HIGH CUBE REEFER**   Latest move: **SYDNEY, AU**

Date	Location	Description	Empty/Laden/Vessel/Voyage	Equipment handling facility name
22/12/2022	SYDNEY, AU	Empty received at CY	EMPTY	DPW LOGISTICS - SYDNEY
16/12/2022	SYDNEY, AU	Import to consignee	LADEN	ASLPB
14/12/2022	SYDNEY, AU	Import Discharged from	PUSAN C Voyage MA243A	PATRICK SYDNEY PORT

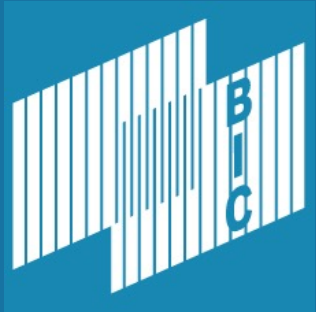
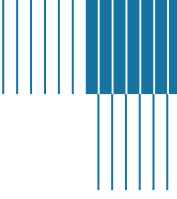
BIC code  
AUSYDGRAI

SMDG code  
ASLPB

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

```
"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 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.



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](mailto:David@cif-consulting.co.uk) and make sure to add the SDMG terminal code to the email subject



- **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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