Bureau International des Containers

Update on BIC Facility Code Harmonization & API & Geofencing Overview

UN/CEFACT TL Forum, 6 Oct 2021
About the BIC

• Non-profit NGO, founded in 1933 under auspices of the ICC
• 2100+ members in over 130 countries
• Promoting safety, security, standardization, and efficiency
• Official NGO Observer status at IMO and WCO, UN/ECOSOC
• Active at ISO, CEN and UNECE
• 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)
BIC Facility Code Harmonization Project in collaboration with DCSA, IANA, Lessors, etc.

Data Input
Combined total of over 35,000 Container Facilities were 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.
API for BIC Facility Codes and SMDG Terminal Codes
API is now live

- All facility codes Harmonised
- Serves both BIC and SMDG codes
- 17,000 unique facilities in 192 countries now in the dataset
- Facilities have been enhanced with address detail, latitude and longitude

API ACCESS
TO BIC FACILITY CODES

FIND OUT MORE 🔗
Facility Codes API - Examples

Carriers

- dcsa
  Tracking API (BIC, SMDG)
  Vessel Schedules (SMDG)

Lessors

- TRITON
  Depot Lifecycle API (BIC)

Software Providers

- Avantida by E2Open
- Change
- EOS

Regional and Port Community

- IANA
  Intermodal Adapts — Celebrating 30 years

IPCSA
  International Port Community Systems Association

100+ other companies
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

```json
{
  "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": "37.794178",
      "longitude": "-122.3051594"
    }
  },
  "operator": {
    "name": "United Intermodal Services Inc"
  }
}
```

Machine Readable

www.bic-code.org
Geofencing Pilot

Objectives

- Demonstrate the industry benefits of a single, API-accessible platform containing agreed geofencing coordinates of terminals, depots and other zones of interest in the supply chain.

- Prove the data-collection process and establish best-practices for governance and collection of Geofences.
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.

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 for the geofencing coordinates of any facility.
Why Collaborate on Geofencing?

- A single, **agreed definition of each facility** regardless of which carrier or which IOT provider is being used.
- A standard method of accessing geofencing data using a **standard API**.
- **Reduction in time** to utilise library of Geofences
- **Reduces duplication** of effort.
- Strengthens the **case for smart containers**, leading to faster adoption.
- **Multi-regional collaboration** means a standard can be used throughout supply chain.
- Mapping zones-of-interest (e.g. specific areas within terminal, restricted zones, M&R on terminal) further supports collection and measurement of KPIs; and collecting and exchanging data for the purposes of improving efficiency, productivity and safety.
1. Governance and Geofence Ground Rules
2. New Functionality for the Facility Code API
   a. Storage of Geofence against the appropriate BIC Facility Code
   b. Retrieval of the Geofence for a given BIC Facility Code
   c. Query if GPS coordinates within Geofence and which one
3. A Visualization depending upon the data of events taking place ‘real time’ for historical data points.
Geographical Feature – Examples – SMDG and BIC

BIC:
DEHAMEGHA, DEHAMFXHE, DEHAMS MCU, DEHAMXKPB, DEHAMAKNM, DEHAMROSL, DEHAMRMTD, DEHAMMNXR, DEHAMMPAQ, DEHAMBUSA, DEHAMHHLA

SMDG:
DEHAMEGH, DEHAMCTB, DEHAMRMH

Blue = BIC Facility Code, Red = SMDG
Good example clearly defining two facilities located immediately next to each other

GBLIVJMDA
GBLIVWKDV
Summing up

- API is live and serving both BIC and SMDG codes
- Adoption of harmonized codes is progressing
- Geofencing next; if interested please get in touch.
- Welcome your feedback

bic-code.org/api-information-page/
Questions:

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