COSPAS-SARSAT
INTERNATIONAL 406 MHZ
BEACON REGISTRATION DATABASE (IBRD)
SOFTWARE MAINTENANCE MANUAL

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**INTERNATIONAL 406 MHz BEACON REGISTRATION DATABASE (IBRD)
SOFTWARE MAINTENANCE MANUAL**

History

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1. INTRODUCTION

1.1 Purpose

This document provides information to support software maintenance efforts for an International 406 MHz Beacon Registration Database (IBRD). Topics covered include the overall system structure, specific software components, the underlying data structures, detailed module mappings and information on performing software modifications.

1.2 Background

Cospas-Sarsat Participants operate a satellite system capable of detecting and locating distress alert transmissions from radio beacons operating at 406 MHz.

The Cospas-Sarsat 406 MHz system provides search and rescue (SAR) services with distress alerts that include the unique hexadecimal identification (HexID or UIN) of the transmitting beacon. This beacon identification can be decoded to obtain information which may include:

a)   the type of beacon, i.e. aircraft Emergency Locator Transmitter (ELT), vessel Emergency Position Indicating Radio Beacon (EPIRB) or Personal Locator Beacon (PLB),
b)   the country code and identification data which form the unique beacon identification, and
c)   the type of auxiliary radio locating (homing) device.

If a beacon is properly registered, the HexID of the beacon can be used to access additional information. Beacon registration databases can provide information of great use to SAR services, including:

a) specific aircraft or vessel identification information,
b) the make/model of aircraft or vessel in distress,
c) communications equipment available, and
d) the number of persons onboard.

Such information can be made available to SAR services only if the required information is provided to the registration authority by the beacon owner/operator.
Registration of 406 MHz beacons is required in accordance with international regulations on SAR established by the International Civil Aviation Organization (ICAO) and the International Maritime Organization (IMO), and registration information must be made available to SAR services on a 24-hour basis. A number of countries have made 406 MHz beacon registration mandatory and maintain national 406 MHz beacon registration databases.

However, despite the clear advantages of registration, a large number of 406 MHz beacons are not properly registered due to a lack of registration facilities in a number of countries. Furthermore, a number of beacon registries do not have 24-hour points-of-contact easily accessible by SAR services.

The IBRD is freely available to users with no access to national registration facilities and to Administrations who wish to avail themselves of the facility to make their national beacon registration data more available to SAR services.

The IBRD provides various levels of access to:

a)   beacon owners who wish to register their beacons,

b)   Administrations who wish to make registration data available to international SAR services, and

c)   SAR services that need to access beacon registration data to efficiently process distress alerts.

[Cospas-Sarsat provides the IBRD solely for the purpose of assisting SAR Services in SAR operations and is not intended to fulfil the obligation of National Administrations, as required by IMO and ICAO, to provide a National beacon registration facility.]

- END OF SECTION 1 –

2.   OVERVIEW

The IBRD System provides an internet-based capability for storing and querying data pertaining to the registration of 406 MHz distress beacons, including interfaces to display and edit this information. The various software components are discussed at a general level in the next section, and in further detail as appropriate in the sections that follow. All IBRD System components run on cloud computing platforms provided by major providers in this space – specifically, Amazon Web Services (AWS) and IBM Cloud. The central structural element of the IBRD System is the database running on IBM Cloudant's database-as-a-service (dbaas), which houses the registration records and other information used for supporting operations such as user accounts and permissions, beacon registration contacts, type approval certificate information, configuration, logging and the generation of reports.

To provide an appropriate level of security, performance, and cost efficiency, the services that support IBRD have the high-level structure depicted in Figure 2. Physical hardware is abstracted and managed by the cloud computing platforms, providing opportunities to use redundant systems, and allowing the IBRD to interact with compute and storage resources in a flexible, scalable manner.
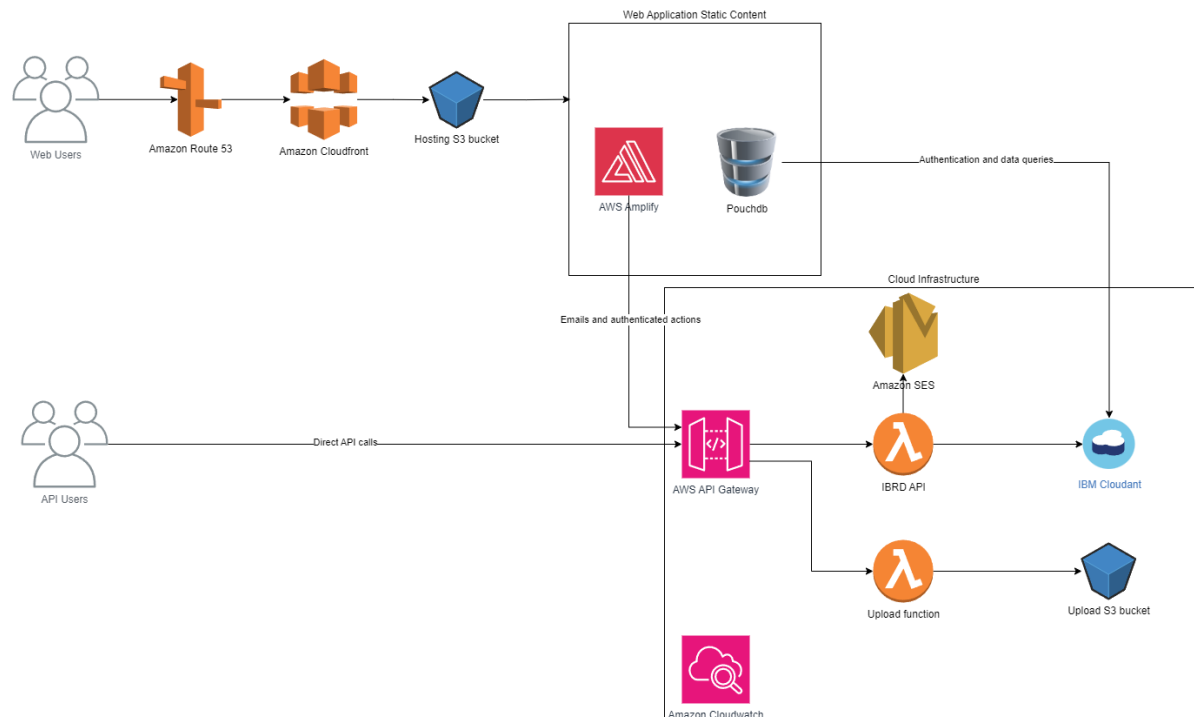
Figure 2.1: IBRD Component Structure

An actor accesses the system using any web browser or programmatically via API. A web user's request is routed through AWS Route 53 which provides domain name system (DNS) services,

passing interactions and web content between the user and IBRD over the internet. An API user interacts directly with AWS API Gateway as they do not need to view web content during operations.

AWS CloudFront is used as a content delivery network, caching the static web pages of IBRD at edge servers located around the globe for improved latency and speed. It integrates with AWS Shield for integrated DDoS protection and AWS Web Application Firewall (WAF) for application security. Since internet traffic cannot directly access the IBRD's website files on S3, CloudFront and its associated security features help protect the application against malicious actors.

PouchDB is an open-source JavaScript database that is designed to run within a web browser. It enables developers to build web applications that can work both online and offline by providing an API for storing, retrieving, and querying data locally within the browser. PouchDB is particularly useful for building progressive web apps (PWAs) and other types of applications that require offline capabilities.

One of the key features of PouchDB is its synchronization capabilities. It can sync data between the browser and a backend database, such as Apache CouchDB or IBM Cloudant. This allows applications to seamlessly replicate data between the client and server, ensuring that users have access to the most up-to-date information regardless of their network connectivity.

Static web page content such as text, cascading style sheets (CSS), JavaScript and background images are stored in AWS simple storage service (S3), organized in 'buckets' as noted in Figure 2. Beacon registration data and supplementary data are stored in IBM Cloudant DB, accessed via application programming interface (API) calls through AWS Lambda compute-on-demand functions.

AWS Amplify is a collection of back-end tools provided by AWS that simplifies the process of building and deploying web applications. It offers the hosting services for deploying the IBRD application logic API's to AWS Lambda and static files to AWS S3. Continuous Integration (CI) and Continuous Deployment (CD) capabilities are also possible through AWS Amplify.

AWS Simple Email Service (SES) provides the email service that allows IBRD to send notification and confirmation emails. SES has high deliverability rates, using mechanisms such as sender authentication, bounce and complaint handling and reputation monitoring. The services is highly cost-effective since fees are only paid for emails sent.

- END OF SECTION 2 -

3.   SOFTWARE COMPONENTS

This section introduces the various software components that make up the IBRD System. Further details and underlying elements are detailed in the following sections.

3.1   Main IBRD Application

The central component of the IBRD System is a web application that employs JavaScript and a Non-Relational Query Language (NoSQL) database to provide a reliable and full featured system for storing and querying data pertaining to the registration of 406 MHz distress beacons.

The main IBRD Application software involves a straightforward set of source code written in JavaScript paired with static web pages, with some services (such as user authentication) executed on demand via AWS Lambda JavaScript functions. The software also uses various other web programming tools including: Cascading Style Sheets (CSS), eXtensible Markup Language (XML), properties files and various image files. Although the following sections describe many of these elements and their usage to some degree, it is assumed that users of this manual either have some background in these areas or will accordingly consult other resources for further information. Sections 5, 6, and 7 focus on the details of these various software elements that make up the main IBRD application.

Included in the main IBRD application is a HexID decoder. The HexID decoder provides the specialized function of decoding the beacon identification code used for 406 MHz emergency distress beacons. The HexID decoder can process first generation beacons (FGB) and second generation beacons (SGB).

FGBs employ a 60-bit digital code (translates to 15 hexadecimal characters) and SGBs employ a 92-bit digital code (translates to 23 hexadecimal characters). These HexIDs, intended to be unique to every beacon, have embedded with them a variety of useful information.

For a full explanation of the various encoding protocols and data that may be encoded, the documents "<406MHz TECHNICAL BEACON SPECIFICATION…>" (C/S T.001 and C/S T.018) should be consulted. The HexID decoder included within the IBRD system decodes (at minimum) the fields required to register a HexID in the IBRD, but may not decode all of the fields potentially available in a HexID or broadcast beacon message.

This software component takes the hexadecimal representation of the applicable binary bits as input, and returns the decoded fields needed by the IBRD application.

3.2   Cloud Computing Platforms

The following table is a list of cloud computing elements used by IBRD.

Table 3.1 - List of cloud computing elements used by IBRD

Computing Platform	Product/Service	Description
AWS	Route 53	DNS hosting and registration. Allows visitors to reach IBRD via website URL
AWS	Simple Storage Service (S3)	Asset storage. Stores static website assets for IBRD.
AWS	Lambda	On-demand execution of code, used to run JavaScript to execute program logic and interact with the database via API calls.
AWS	API Gateway	Create, publish, monitor, and secure API calls used for IBRD functions such as user authentication, beacon Hex ID decode, sending emails and interacting with the IBRD database.
AWS	Amplify	Manages deployment of application code to AWS Lambda across development, staging and production environments. Allows Continuous Integration (CI) and Continuous Deployment (CD) to accelerate the software development process.
AWS	Cloudwatch	Monitors health and availability of all AWS services via metrics and logged events
IBM Cloud	Cloudant	No-SQL Database JSON document store. High availability, scalable and resilient containing IBRD registration data and supplementary data.
GitHub	GitHub	Online code repository. Storage and management of IBRD application source code

- END OF SECTION 3 -

## 4.	DATA STRUCTURES AND CONFIGURATION

IBRD relies on a NoSQL database for storage of beacon registration records and supplementary data such as beacon registration contact information, type approval certificates (TACs), and logging. This database is a commercial database-as-service (DBaaS) in IBM Cloud and is based on the open-source Apache CouchDB project. It has a built-in replication protocol allowing data to flow seamlessly between the cloud host and end-user devices, allowing an 'offline-first' user experience, high performance, and strong reliability.

Unlike relational databases based on tables and rows, the IBRD database is stored as a collection of documents written in JavaScript Object Notation (JSON) language. JSON comes from JavaScript and represents simple objects in a universal file format.

The IBRD arranges data in 'databases', analogous to tables in relational databases and 'documents' are analogous to rows within tables. A document is the unit of storage in CouchDB/Cloudant. documents are added and updated as necessary.

Each document contains data in key – value pairs separated by a colon (e.g. "hexId" : "A782E62B8E3D300"). Data is accessed with via HTTP API and can therefore be accessed by any device on the internet that speaks HTTP: application code, web browser or mobile phone. All connections are secured via SSL.

In IBM Cloud, there are two resources, ensuring separation of production data from development and test data:

Instance Name	Purpose
IBRD-TORONTO	Production databases
IBRD-TORONTO-STAGING	Development and staging databases

The following sections provide details on the beacon registration data and supporting databases. Each database has a 'dev', 'staging' and 'prod' instance, named as "<database name>_<environment>". For example, there is an "ibrd_dev", "ibrd_staging" and "ibrd_prod".

### 4.1	Database "ibrd_prod"

### 4.1.1	Purpose

> The "ibrd_prod" database is the main data collection for the IBRD. Its purpose is to store all the beacon registration data and configuration items. In effect, this table is *the* beacon registration database, with all other databases providing supporting functions.

> The IBRD database contains several different types of documents. The majority of documents in this database are beacon registrations, identified by their naming

convention of "beacon_<HexID>" and documentType "beacon". Some documents contain configuration items, enumeration (drop down) lists, and website content.

4.1.2 Document Layout – Beacon

Unlike relational databases based on tables, the IBRD database does not have a rigid schema and each document can have a different collection of key-value pairs. If a given document contains no data for a given key, it is possible the key will be omitted from the document completely. For data consistency, the following convention is followed for beacon registration documents in the "ibrd_prod" database.

The number of fields is large, because best practices in a NoSQL database recommend that all information about a single object – in this case, a registered beacon - be contained in a single document, without needing to refer to other documents or join tables.

Application logic may apply restrictions or an input mask to limit user input to expected values.

Field Name	Type	Description	Source
_id	string	A unique identifier string contained by every document. For beacon documents, the format of the _id field is "beacon_<HexID>". For configuration or support documents, the name indicates the document's purpose (e.g. IBRD_CONFIG)	database
_rev	string	The revision token (rev token) identifier. Each document revision is given a unique revision token, created automatically each time a document is added or updated using the API. The rev token starts with a "1-" followed by a unique hash string generated automatically. Each revision increments this digit and adds a unique hash string.	database
type	string	Type of document. Generally has a value of 'beacon'	database

hexId	string	Expressed as exactly 15 or 23 hexadecimal characters (0-9, A-F).	data provider
password	string	Legacy data field, imported from previous IBRD when the beacon record was the primary method to authenticate login. Not currently used. Passwords are stored against the user profile document.	data provider
CSTACNumber	string	Legacy data field, imported from previous IBRD, deprecated. Superseded by typeApprovalCertificate field.	beacon decode
beaconCountryCode	string	Standard 3-digit Maritime Identification Digits (MID) country code to which the beacon is registered, as determined by the decoding algorithm.	beacon decode
beaconRegType	string	Legacy data field, imported from previous IBRD, not used	beacon decode
beaconType	string	Protocol used for beacon coding, e.g. "EPIRB MMSI (STANDARD)".	beacon decode
beaconActivationMethod	string	Activation capability of beacon (See IBRD_CONFIG ["BeaconActivationMethod"])	data provider
beaconManufacturer	string	Name of manufacturer of beacon	data provider
beaconModel	string	Model name of beacon	data provider
beaconHomingDevice	string	Frequency or type of homing device. (See IBRD_CONFIG ["BeaconHomingDevices"])	beacon decode / data provider
additionalBeaconData	string	Any other information specific to the beacon that may be useful	data provider
ownerName	string	Full personal name, company name, or government agency name	data provider
address	string	Beacon Owner's street address	data provider
city	string	Beacon Owner's city	data provider
province	string	Beacon Owner's province / state	data provider

mailCode	string	Beacon Owner's postal code	data provider
mailCountry	string	Beacon Owner's country	data provider
emailAddress	string	Beacon Owner's email address	data provider
phone1Num	string	Beacon Owner's Phone number 1	data provider
phone1Type	string	Phone number 1 type (see IBRD_CONFIG["phoneType"])	data provider
phone2Num	string	Beacon Owner's Phone number 2	data provider
phone2Type	string	Phone number 2 type (see IBRD_CONFIG["phoneType"])	data provider
phone3Num	string	Beacon Owner's Phone number 3	data provider
phone3Type	string	Phone number 3 type (see IBRD_CONFIG["phoneType"])	data provider
phone4Num	string	Beacon Owner's Phone number 4	data provider
phone4Type	string	Phone number 4 type (see IBRD_CONFIG["phoneType"])	data provider
vehicleType	string	Vehicle type for aircraft, vessel or personal use	data provider
usageMoreInfo	string	Vehicle type for aircraft, vessel or personal use	data provider
vehicleName	string	Name of vehicle or vessel, aircraft make and model	data provider
vehicleManufacturer	string	Name of vehicle manufacturer	data provider
vehicleModel	string	Name of vehicle model	data provider
callSign	string	Vehicle call sign if it is different than the decoded one	data provider
vehicleRegistrationNumber	string	IMO number or national vessel / aircraft registration number	data provider
color	string	Color of vessel / aircraft for ELT beacons	data provider
length	string	Length of vessel / aircraft	data provider
MMSI	string	MMSI number entered by the Data Provider if it is different than the decoded one	data provider

peopleCapacity	string	Occupant capacity of vessel / aircraft	data provider
phoneInmarsat	string	INMARSAT telephone number	data provider
radioEquipment	string	Radio equipment on board vessel / aircraft	data provider
primaryContactName	string	Name of primary emergency point of contact	data provider
primaryContactAddressLine1	string	First line of address for primary emergency point of contact (e.g., street, apartment, etc.)	data provider
primaryContactAddressLine2	string	Second line of address for primary emergency point of contact (e.g., city, province, country)	data provider
primaryPhone1Num	string	Primary emergency contact's phone number	data provider
primaryPhone1Type	string	Primary emergency contact's phone number (see IBRD_CONFIG["phoneType"])	data provider
primaryPhone2Num	string	Primary emergency contact's phone number 2	data provider
primaryPhone2Type	string	Primary emergency contact's phone number 2 type (see IBRD_CONFIG["phoneType"])	data provider
primaryPhone3Num	string	Primary emergency contact's phone number 3	data provider
primaryPhone3Type	string	Primary emergency contact's phone number 3 type (see IBRD_CONFIG["phoneType"])	data provider
primaryPhone4Num	string	Primary emergency contact's phone number 4	data provider
primaryPhone4Type	string	Primary emergency contact's phone number 4 type (see IBRD_CONFIG["phoneType"])	data provider
alternateContactName	string	Name of secondary emergency point of contact	data provider
alternateContactAddressLine1	string	First line of address for secondary emergency point of contact (e.g., street, apartment, etc.)	data provider
alternateContactAddressLine2	string	Second line of address for secondary emergency point of contact (e.g., city, province, country)	data provider

alternatePhone1Num	string	Secondary emergency contact's phone number	data provider
alternatePhone1Type	string	Secondary emergency contact's phone number (see IBRD_CONFIG["phoneType"])	data provider
alternatePhone2Num	string	Secondary emergency contact's phone number 2	data provider
alternatePhone2Type	string	Secondary emergency contact's phone number 2 type (see IBRD_CONFIG["phoneType"])	data provider
alternatePhone3Num	string	Secondary emergency contact's phone number 3	data provider
alternatePhone3Type	string	Secondary emergency contact's phone number 3 type (see IBRD_CONFIG["phoneType"])	data provider
alternatePhone4Num	string	Secondary emergency contact's phone number 4	data provider
alternatePhone4Type	string	Secondary emergency contact's phone number 4 type (see IBRD_CONFIG["phoneType"])	data provider
initialDate	string	Date when beacon was first registered	database
lastEditDate	string	Date when beacon was last accessed	database
confirmPrintDate	string	Date when the request for confirmation e-mail was sent	database
confirmationCompletedDate	string	Date request for confirmation was acknowledged by owner	database
additionalData	string	Any other information specific to the beacon that may be useful (e.g., manufacturers' serial number).	data provider
operatorId	string	Legacy data field, imported from previous IBRD, not used. Has been replaced by 'owner' field.	data provider
operatorLanguage	string	Communication Language preference. This value is not related to system functionality but provides context in case direct communication with the Beacon Owner is necessary	data provider
specialStatusDate	string	Associated Date/Time for change of beacon status	database

specialStatus	string	Any special state of the beacon such as 'OUTOFSERVICE', etc. (see IBRD_CONFIG["specialStatus"]	data provider
specialStatusInfo	string	Verbose description of the specialStatus field, such as 'Out of Service/Destroyed'. (see IBRD_CONFIG["specialStatus"]	data provider
previousSpecialStatus	string	Stores the previous value of the specialStatus field after it has been changed.	database
lastContactDate	string	Legacy data field, imported from previous IBRD, not used	database
contactRemarks	string	Legacy data field, imported from previous IBRD, not used	database
nbLifeBoat	string	Number of lifeboats (survival equipment) on vessel for EPRIB beacons	data provider
survivalType1Num	string	Number of survival equipment on vessel for ELT beacons	data provider
survivalType2Num	string	Number of other survival equipment on vessel for ELT beacons	data provider
survivalType1Desc	string	Description of lifeboats (survival equipment)	data provider
survivalType2Desc	string	Description of other survival equipment on vessel for ELT beacons	data provider
vehicleCellularNum	string	Cellular Telephone associated with Vehicle	data provider
confirmationStatus	string	Status of the "request for confirmation" process	data provider
owner	string	Login name of Beacon Owner	data provider
challengeQuestion	string	Challenge question user selected for supporting re-instatement of password	data provider
challengeResponse	string	Challenge response user selected for challenge question for supporting re-instatement of password	data provider
aircraft24BitAddress	string	24-bit address of the aircraft, expressed as 6 hexadecimal characters	data provider

aircraftOperatingAgency	string	Aircraft operating agency designator and operator's serial number.	data provider
vehicleNationality	string	MID country code for vessel flag State or aircraft nationality of registration.	data provider
sVDRPresent	string	Legacy data field, imported from previous IBRD, not used	data provider
salt	string	Legacy data field, imported from previous IBRD, not used	data provider
resetKey	string	Legacy data field, imported from previous IBRD, not used	data provider
resetKeyExpires	string	Legacy data field, imported from previous IBRD, not used	data provider
carrierKey	string	Legacy data field, imported from previous IBRD, not used	data provider
callSignDecoded	string	Vehicle call sign decoded from the HexID	beacon decode
MMSIDecoded	string	MMSI number decoded from the HexID	beacon decode
aircraft24BitAddressDecoded	string	24-bit address of the aircraft, decoded from HexID expressed as 6 hexadecimal characters	beacon decode
userConfirmationRequired	string	Records whether an imported user from previous versions of the IBRD needs to undergo the first login / choose password process	database
isDelegated	string	Indicates whether a beacon has been delegated to another user by a National Data Provider	database
accountOwnerName	string	The name of the user account owner	database
blockId	string	Legacy field and not used in current IBRD. Previously contained User identification (or login name), specifically for National data providers only from previous versions of IBRD.	database
protocol	string	Beacon Decode protocol based on HexID	beacon decode
locationProtocol	string	Type of Location Protocol for Beacon Decode	beacon decode

beaconNumber	string	Beacon serial number	beacon decode
defaultData	string	Default data binary string used in beacon decode	beacon decode
countryName	string	Country Code from 406 Beacon Id	beacon decode
protocolToDecode	string	Protocol flag from beacon decode	beacon decode
checksum	string	Beacon checksum used to verify the integrity of the data transmitted by the beacon	beacon decode
beaconManufacturerOther	string	Name of manufacturer of beacon, entered by the data provider if 'Other' was selected in the Beacon Manufacturer drop down list	data provider
serialNumber	string	Beacon serial number from beacon decode	beacon decode
typeApprovalCertificate	string	Type Approval Certificate for this beacon	Beacon decode
maintProvider	string	Releated maintenance provider user when a Beacon has been released to maintenance	data provider
beaconHomingDeviceOther	string	Beacon homing device entered by data provider if 'Other' was selected from the Beacon Homing Device drop down	data provider
medicalInfo	string	List of relevant medical information such as medications or conditions	data provider
contactNumber	string	Beacon Owner contact phone number copied from data provider's user profile	data provider
phone1TypeOther	string	Phone number type entered by data provider if 'Other' was selected from the phone type drop down.	data provider
phone2TypeOther	string	Phone number type entered by data provider if 'Other' was selected from the phone type drop down.	data provider
phone3TypeOther	string	Phone number type entered by data provider if 'Other' was selected from the phone type drop down.	data provider

phone4TypeOther	string	Phone number type entered by data provider if 'Other' was selected from the phone type drop down.	data provider
primaryPhone1TypeOther	string	Phone number type entered by data provider if 'Other' was selected from the phone type drop down.	data provider
primaryPhone2TypeOther	string	Phone number type entered by data provider if 'Other' was selected from the phone type drop down.	data provider
primaryPhone3TypeOther	string	Phone number type entered by data provider if 'Other' was selected from the phone type drop down.	data provider
primaryPhone4TypeOther	string	Phone number type entered by data provider if 'Other' was selected from the phone type drop down.	data provider
alternatePhone1TypeOther	string	Phone number type entered by data provider if 'Other' was selected from the phone type drop down.	data provider
alternatePhone2TypeOther	string	Phone number type entered by data provider if 'Other' was selected from the phone type drop down.	data provider
alternatePhone3TypeOther	string	Phone number type entered by data provider if 'Other' was selected from the phone type drop down.	data provider
alternatePhone4TypeOther	string	Phone number type entered by data provider if 'Other' was selected from the phone type drop down.	data provider
homePort	string	Vessel's home port	data provider
vehicleColor	string	Vessel's color for EPRIB type beacons	data provider
nbLifeRaft	string	Number of life rafts on vessel for EPIRB beacons	data provider
equippedWithDataRecord	string	Whether vessel is equipped with simplified voyage data recorder for EPIRB beacons	data provider

picture1	string	Optional picture relevant to vessel or beacon	data provider
aisNumber	string	AIS Number for EPIRB type beacons	data provider
Imarsat	string	INMARSAT Number	data provider
vehicleSatellitePhone	string	Vessel Satellite Phone Number	data provider
radioEquipmentOther	string	Radio Equipment type entered by data provider if 'Other' was selected from the phone type drop down.	data provider
additionalComment	string	Additional optional miscellaneous comments	data provider
picture2	string	Optional second picture relevant to vessel or beacon	data provider
dateCreated	string	Date the beacon record was created	database

4.1.3   Document Layout – "IBRD_CONFIG"

The special IBRD_CONFIG document in the "ibrd_prod" database contains configuration items and content strings used the IBRD API's and website. Like other documents, it is a JSON object that can be referenced by web pages or API code. Configuration items include enumeration lists for fields when registering a beacon, password reset questions (not answers) and web page content in multiple languages.

The following is a brief description of the configuration items and content strings contained in IBRD_CONFIG. The full contents of the document are listed as JSON expressions in Annex B.

a)   IBRD_CONFIG["maintenance"]

This is a flag that determines whether the system is in maintenance mode. Normally set to a value of "false". When the string is modified to say "true", the IBRD system will be placed in maintenance mode.

b)   IBRD_CONFIG["beaconActivationMethod"]

List of allowed values for the Beacon Activation Method field for EPRIB beacons.

c)   IBRD_CONFIG["beaconHomingDevices"]

List of allowed values for the Beacon Homing Device frequencies for beacons.

d)   IBRD_CONFIG["beaconManufacturer"]

List of allowed values for Beacon Manufacturers.

e)   IBRD_CONFIG["beaconRegType"]

List of allowed values for the type of beacon during registration. The first three values: EPIRB, ELT, PLB are used in IBRD. The other values: Test, Orbitography, National Use, SSAS are not used.

f)   IBRD_CONFIG["beacon_type"]

List of allowed values for beacon encoding type. Primarily used during decoding of the beacon Hex ID during registration or lookups.

g)   IBRD_CONFIG["carrier"] - Deprecated

List of allowed values for mobile phone carriers. This table is not used in IBRD but was imported from a legacy system and retained for data integrity purposes only.

h)   IBRD_CONFIG["confirmationStatus"] - Deprecated

List of allowed values for the email confirmation status. This is a legacy list of configuration values and is not used in the current version of IBRD. It has been retained for legacy data integrity purposes only.

i)   IBRD_CONFIG["countries"]

List of allowed values for the country list for mailing addresses. This list is distinct from the list of maritime identifiers (MIDs), which are listed separately in their own configuration object, called IBRD_CONFIG["midInfo"].

j)   IBRD_CONFIG["countTypeDom"] - Deprecated

This object is not used in IBRD and only contains imported values from the legacy IBRD.

k)   IBRD_CONFIG["ELTVehiculeType"]

List of vehicle types available for selection in drop down for ELT beacons. Note that the object is spelled "ELTVehiculeType" while the key pairs are spelled "ELTVehicleType".
IBRD_CONFIG["emailTemplateKey"]
List of types of email templates available for use by IBRD when sending communications out to users.

l)   IBRD_CONFIG["emailTemplateLanguages"]

Contains a relationship between email Template and culture (language) and the appropriate email subject line and content to be selected when IBRD sends communications to users.

Email contents are often populated with variables enclosed by square brackets so the appropriate information can be inserted by the system when communication is sent.

m)   IBRD_CONFIG["EPIRBVehiculeType"]

List of vehicle types available for selection in drop down for EPRIB beacons. Note that the object is spelled "EPIRBVehiculeType" while the key pairs are spelled EPIRBVehicleType". Users select the EPIRB vehicle type by first selecting an EPIRBVehicleTypeGroup. This changes the EPIRBVehicleType and EPIRBVehicleTypeDescription fields displayed to the user on the front end.

n)   IBRD_CONFIG["languages"]

Defines the supported languages in the IBRD public user interface.

o)   IBRD_CONFIG["midInfo"]

This object contains the list of maritime identification digits (MIDs) available for use in IBRD. Because of the large number of defined MIDs, and because they are available for lookup in other

documentation, only one example is shown in this document to demonstrate the structure of the object.

  p) IBRD_CONFIG["passwordQuestionsEnglish"]

List of selectable security questions for the password reset functionality in English.

  q) IBRD_CONFIG["passwordQuestionsFrench"]

List of selectable security questions for the password reset functionality in French.

  r) IBRD_CONFIG["passwordQuestionsGreece"]

List of selectable security questions for the password reset functionality in Greek.

  s) IBRD_CONFIG["passwordQuestionsJapanese"]

List of selectable security questions for the password reset functionality in Japanese.

  t) IBRD_CONFIG["passwordQuestionsRussian"]

List of selectable security questions for the password reset functionality in Russian.

  u) IBRD_CONFIG["passwordQuestionsSpanish"]

List of selectable security questions for the password reset functionality in Spanish.

  v) IBRD_CONFIG["phoneType"]

List of allowed values for phone number types.

  w) IBRD_CONFIG["PLBVehiculeType"]

List of vehicle types available for selection in drop down for PLB beacons. Note that the object is spelled "PLBVehiculeType" while the key pairs are spelled PLBVehiculeType".

  x) IBRD_CONFIG["radioCallSign"]

This object contains the list of radio call signs available for use in IBRD. Because of the large number of radio call signs, and because they are available for lookup in other documentation, only one example is shown in this document to demonstrate the structure of the object.

  y) IBRD_CONFIG["radioEquipment"]

List of allowed values for radio equipment.

  z) IBRD_CONFIG["roles"]

Outlines all possible user roles available in IBRD for logged-in users.

  aa) IBRD_CONFIG["specialStatus"]

Lists allowed values for the beacon Special Status field, selectable by users once a beacon has been registered in IBRD.

  bb) IBRD_CONFIG["systemConfig"] - Deprecated

The system config table is a legacy table imported from the previous version of the IBRD. This table is not used in IBRD. Where necessary, values for sensitive information have been redacted from this document. None of these values are used in current IBRD functionality.

  cc) IBRD_CONFIG["usageMoreInfo"]

List of allowed values for the "specific usage" field during beacon registration.

  dd) IBRD_CONFIG["page"]

This object defines the list of content-managed webpages in IBRD. These are general information pages such as 'Contact Us', Help pages and the homepage.

      ee)   IBRD_CONFIG["pageContent"]

This object defines the list of content-managed webpages in IBRD. These are general information pages such as 'Contact Us', Help pages and the homepage. The pageContent object links the page to its localized content and publishing state.

4.2   Database "userimport_prod"

4.2.1   Purpose

The "userimport_prod" database holds IBRD user profile (account) information. User profiles are linked to one or more beacons from the "ibrd_prod" database.

This database contains only one type of document as described in the document layout below.

4.2.2   Document Layout

Field Name	Type	Description
_id	string	A unique identifier string contained by every document. For beacon documents, the format of the _id field is "beacon_<HexID>". For configuration or support documents, the name indicates the document's purpose (e.g. IBRD_CONFIG)
_rev	string	The revision token (rev token) identifier. Each document revision is given a unique revision token, created automatically each time a document is added or updated using the API. The rev token starts with a "1-" followed by a unique hash string generated automatically. Each revision increments this digit and adds a unique hash string.
ownerName	string	User Account owner name
phone1Num	string	Phone number 1
phone1Type	string	Phone number 1 type (see IBRD_CONFIG["phoneType"])
phone2Num	string	Phone number 2
phone2Type	string	Phone number 2 type (see IBRD_CONFIG["phoneType"])

phone3Num	string	Phone number 3
phone3Type	string	Phone number 3 type (see IBRD_CONFIG["phoneType"])
phone4Num	string	Phone number 4
phone4Type	string	Phone number 4 type (see IBRD_CONFIG["phoneType"])
address	string	Street address
mailCode	string	Postal Code
city	string	City
province	string	Province, State or Region
mailCountry	string	Country
emailAddress	string	Email address
medicalInfo	string	Any relevant medical information such as medications or conditions
challengeQuestion	string	Password reset challenge question
challengeResponse	string	Password reset challenge answer
operatorLanguage	string	Preferred language of verbal communication
phone1TypeOther	string	Phone number type if user selected 'Other' from the drop down and entered a custom value
phone2TypeOther	string	Phone number type if user selected 'Other' from the drop down and entered a custom value
phone3TypeOther	string	Phone number type if user selected 'Other' from the drop down and entered a custom value
phone4TypeOther	string	Phone number type if user selected 'Other' from the drop down and entered a custom value
roleId	string	Legacy data field, imported from previous data source, not used
type	string	Legacy data field, imported from previous data source, not used
password	string	Legacy data field, imported from previous data source, not used
salt	string	Legacy data field, imported from previous data source, not used

- END OF SECTION 4 -

5.   JAVASCRIPT, NODE.JS AND JAVASCRIPT EXPRESS BACKGROUND

The IBRD web-application has been built using JavaScript. Typically, JavaScript operates within a web browser, but using the Node.js runtime allows JavaScript to be executed server-side; or in this case, as a collection of compute-on-demand functions running on AWS Lambda.

The JavaScript Express framework is used to facilitate ease of development within Node.js. These three components are further explained below.

JavaScript:

- JavaScript is a versatile programming language primarily used for client-side web development.
- It runs in web browsers and allows dynamic interactions with web pages.
- Developers write JavaScript code to create interactive user interfaces, handle events, and manipulate the Document Object Model (DOM).

Node.js:

- Node.js is an open-source and cross-platform runtime environment for executing JavaScript code outside of a web browser.
- It allows developers to run JavaScript on servers, enabling server-side programming.
- Key features of Node.js include:
  - **V8 JavaScript Engine:** Node.js uses the same engine that powers Google Chrome, providing high performance.
  - **Asynchronous I/O:** Node.js handles asynchronous operations efficiently, making it suitable for handling multiple concurrent connections.
  - **Single-Process Model:** Node.js operates in a single process, avoiding the overhead of managing threads.
  - **Event-Driven Architecture:** Node.js leverages an event-driven, non-blocking model for handling requests.

JavaScript Express (Express.js):

- Express.js is a framework built for Node.js.
- It sits on top of Node.js's web server functionality, adding features and tools to streamline server-side development.
- Key points about Express.js:
  - **Routing**: Express simplifies route handling, allowing developers to define endpoints for different URLs and HTTP methods.
  - **Middleware**: Express uses middleware for tasks like authentication, logging, and error handling.

- o **Modularity**: Express encourages breaking down applications into smaller components (routes, controllers) for better organization.
- o **Template Engines**: Although not included in Express itself, it integrates seamlessly with template engines like EJS and Pug.
- o **Community and Ecosystem**: Express has an active community and abundant resources.

In summary:

- **JavaScript** is the language used for both client-side and server-side development.
- **Node.js** provides the runtime environment for executing server-side JavaScript code.
- **Express.js** is a framework that simplifies building web applications using Node.js principles and tools.

END OF SECTION 5 -

6.   MAIN APPLICATION STRUCTURE

6.1   IBRD Deployment Structure

The deployment process for IBRD leverages GitHub for source control, AWS Amplify for continuous deployment, AWS Lambda for executing the serverless Node.js JavaScript application code, and AWS S3 for storing static web assets. IBM Cloud provides the database, based on the open source CouchDB platform.

6.1.1   Deployment Process Overview:

The deployment process described herein ensures seamless integration between development, staging, and production environments while maintaining code integrity and scalability.

1.   Source Control Management with GitHub:

- The web application codebase and static web assets are hosted on GitHub repositories, allowing for version control, collaboration, and code review.
- Branches are used to manage different development stages, such as development, staging, and production.

2.   Continuous Deployment with AWS Amplify:

- AWS Amplify monitors the GitHub repository for changes in the specified branches.
- AWS Amplify automatically triggers build and deployment pipelines upon code commits, ensuring rapid feedback loops and continuous integration.
- Environment variables, build commands, and deployment configurations are set up within the AWS Amplify console to streamline the deployment process.

3.   Serverless Execution with AWS Lambda:

- AWS Lambda is used to execute serverless Node.js JavaScript application code, providing scalable and cost-effective backend processing.
- Lambda functions are defined to handle specific tasks or endpoints, such as API requests, data processing, or background tasks.
- Lambda functions integrate seamlessly with other AWS services, such as API Gateway for creating representational state transfer (RESTful) APIs. RESTful API's provide a standardized and scalable approach to building web services that are interoperable, flexible and easy to maintain.

4. Static Assets Storage with AWS S3:

- Static web assets, including HTML, CSS, JavaScript files, images, and other resources, are managed in GitHub and deployed to AWS S3 buckets.
- Access control policies and permissions restrict unauthorized access to S3 buckets and objects.

5. Deployment Workflow:

a. Developers push code changes to GitHub repositories, following best practices for branching and commit messages.

b. AWS Amplify detects new commits and triggers build and deployment pipelines.

c. AWS Amplify builds the application, runs tests, and deploys the updated code to the specified environment (e.g. staging, production).

d. AWS Lambda functions execute backend logic as defined in the application code, handling incoming requests and processing data.

e. Static web assets are served from AWS S3 buckets, providing fast and reliable content delivery to end-users.

By following the deployment process outlined above, IBRD developers streamline the deployment of web applications using GitHub, AWS Amplify, Lambda, and S3. This approach enables teams to iterate quickly, maintain code quality, and deliver reliable software to end-users with minimal downtime and maximum scalability.

6.2   Software Development/Deployment Folder Structure

Figure 6-1 below shows the major folders and subfolder within the software development folder.
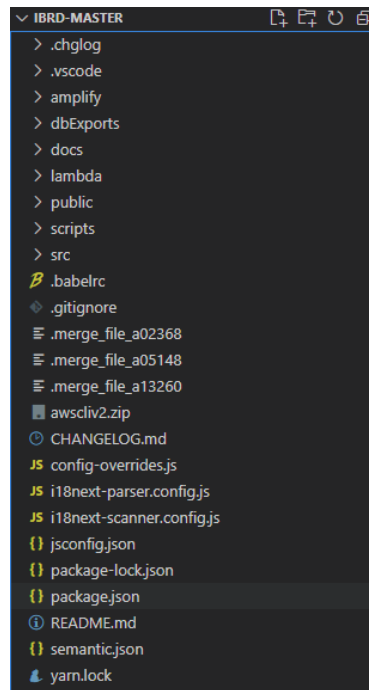
Figure 6.1: Software Folder Structure

A brief description of the major folder and subfolder contents is given as follows for the structure shown above in Figure 6.1:

Folders for Application Logic
- /amplify: Contains server side JavaScript and application logic files to be hosted through AWS Amplify and executed on demand as Lambda functions.
  - /backend/function : The main lambda for server side application logic, most logic is encapsulated within IBRDAPI function which uses traditionnal server routes as endpoint for differents actions such as decode, TACs query and POCs.

Folders for the Front-End Interface
- /src: Contains front end files such as HTML, CSS and client-side JavaScript to be hosted in AWS S3. The code should be build using "npm run build" from the main application folder but the current approach is through Continuous Integration on Amazon servers based on hooks within the GitHub repository.

Public Files
- /public: Contains image assets that are non-critical and available for public viewing, such as images for the top navigation. HTML page containers and various assets such as favicons and images logos.

Miscellaneous Folders
- /dbExports: A folder used to hold database exports from previous system used during the development phases of IBRD.

- /docs: A folder used to hold copies of administrative documentation used during the development phases of IBRD. These are for reference and not code or assets used by the IBRD application.

- /lambda: Deprecated and replaced by the contents of the /amplify folder. Contains older versions of server side JavaScript and application logic files. Kept for reference.

- /scripts: Folder used to hold various one-off scripts for data modification and testing during development phases of IBRD, or special-purpose maintenance tasks

- END OF SECTION 6 -

7.   MAIN APPLICATION MODULE MAPPINGS

The following table maps the front-end pages and general functions in the IBRD system to the underlying JavaScript (.js) and subfolder as applicable associated with the page or function.   The table provides a generalized mapping of pages and functions relative to the resources that they use. Other views of the software modules and their interdependencies can be generated with industry standard tools such as Visual Studio Code.

 "Data Providers" are analogous to "Beacon Owners" with similar effect on the historical names of class (and hence files).

Wherever pages or functions are virtually the same under different user scenarios, the page is only mentioned once. For example, all users who have the capability to update an existing record (Data Providers, National Data Providers and Database Administrators) will see essentially the same page and hence this functionality only appears once in the following table. However, relative to the various user types, the interface differs somewhat more significantly when viewing a beacon, resulting in perhaps a different help page etc. and hence these functions appear in multiple rows as applicable.

Table 7.1

Module Mappings refer to src/App.js

Other ones at the top with 'import' are loaded with initial package
Loadable sections are code splitting points

Page / Function	JavaScript Module	URI Path
Data Providers		
Homepage	./pages/home/home.js	/
Agreement / Disclaimer	./components/userDisclaimer	/user-disclaimer
New Beacon	./pages/registerBeacon/newBeacon.js	/newBeacon
reviewBeacon	./pages/registerBeacon/beacon/beaconReviewDetails.js	/ reviewBeacoR
Register User	./pages/registerUser/registerUserForm.js	/registerUser
Register User Consent	./pages/registerUser/registerUserConsent.js	/registerUserConsent
Dashboard	./pages/dashboard/dashboard	/dashboard/:tab?

Page / Function		JavaScript Module	URI Path
Contact		./pages/contact/contact	/contact
ContactUsComplete		./pages/contact/contactComplete	/contact/complete
Point of contacts		./pages/pocAll/pocAll	/contacts-details-all
Decode		./pages/beaconDecode/beaconDecode	/decode
RegisterActivity		./pages/registerActivity/registerActivityPage	/registerActivity
Register Activity User		./pages/associatedUser/associatedUserPage	/registerAssociatedUser
Register Activity Vehicle		./pages/registerVehicle/registerVehiclePage	/registerVehicle
Forgot Password		./pages/forgotPassword/forgotPassword	/forgot-password/:token?
Tac Frontend		./pages/dashboard/admin/tacFrontend	/approved-tac
Faq		./pages/faq/faq	/faq/:id?
Database Administrator			
Admin Tac Management		./pages/dashboard/admin/tacManagement	/tac-management
Admin Import Instructions		./pages/dashboard/admin/ImportInstructions	/import-instructions
Admin Beacon Manufacturer		./pages/dashboard/admin/beaconManufacturer	/beacon-manufacturer
Reports	./pages/report/report	/report/:id?	
Admin Beacon Homing Device		./pages/dashboard/admin/beaconHomingDevice	/beacon-homing-device
Admin Users		./pages/dashboard/admin/users	/users
MID Info	./pages/dashboard/admin/midInfo	/mid-info	
Page Content Editor		./pages/dashboard/admin/pageContentEditor	/page-content
Point Of Contacts	./pages/dashboard/pointOfContacts	/point-of-contacts	

- END OF SECTION 7 -

8.   SOFTWARE MODIFICATIONS

The following sections detail the requirements and methodology for making software modifications to the IBRD application.

8.1   IDE Installation

An integrated development environment (IDE) provides the means to view and modify source code as well as build new application packages. A key feature of an IDE is ability to set breakpoints, stepping through and otherwise "debugging" the code. Microsoft Visual Studio Code was used to modify the JavaScript and XML files and is available for free at https://code.visualstudio.com/ for Windows, Mac and Linux.

8.2   GitHub Account

IBRD code is hosted in GitHub at https://github.com. A GitHub account is required for access to the repository which in turn requires an email address. Multi-factor authentication is highly recommended.

8.3   AWS And IBM Cloud Account

COSPAS-SARSAT Secreteriat can provide login credentials to AWS and IBM Cloud through identity and access management, without sharing root account credentials. This will allow developers to access the cloud computing resources needed to operate and modify IBRD.

- END OF SECTION 8 -

9. IBRD SYSTEM SETUP

9.1 Provisioning a Cloudant Database Instance via IBM Cloud UI

Prerequisites

Before you begin, ensure you have the following:

An **IBM Cloud account** with appropriate permissions.
Access to the **IBM Cloud UI.**
Steps

1. Log in to IBM Cloud

   a) Open your web browser and navigate to the IBM Cloud login page.

   b) Sign in using your IBM Cloud credentials.

2. Create a Cloudant Service

   a) From the IBM Cloud Dashboard, click on "Create Resource".
   b) Search for "Cloudant" in the search bar.
   c) Select "Cloudant" from the available services.
   d) Choose a service name (e.g., "my-cloudant-instance").
   e) Select the region where you want to provision the service (e.g., "Dallas").
   f) Choose the "Standard" plan (or any other plan that suits your needs).
   g) Click "Create" to provision the Cloudant instance.
3. Access Your Cloudant Service

   a) Once the provisioning is complete, go back to the IBM Cloud Dashboard.
   b) Click on your newly created Cloudant service instance.
   c) Retrieve the URL, username, and password from the service details page.
4. Configure Backend to give access to newly Cloudant Instance

   a) Configure IBRDAPI to access Newly cloudant instance.
      a. Find IBRD_CONFIG.js at the source of the project and configure with the URL, username, and password in "./amplify/backend/function/IBRDAPI/src"
   b) Configure Client with the URL, username, and password in "./public/ibrd.config.js"

9.2 Provisioning AWS Amplify client and backend Hosting

Note: This process was built using Node.js version 16.16.0. Please ensure that you have the correct version installed to avoid any potential compatibility issues.

Step 1: Clone the GitHub Repository

First, you need to clone the repository from GitHub. You can do this by running the following command in your terminal:

git clone https://github.com/OFITC/ibrd.git

Step 2: Install Dependencies

Navigate to the root directory of the cloned repository and install the necessary dependencies. If you're using npm, you can do this with the following command:

npm install

Step 3: Install AWS Amplify CLI

Next, you need to install the AWS Amplify CLI. You can do this globally with the following command:

npm install -g @aws-amplify/cli

Step 4: Initialize Amplify with Existing Configuration

With the existing YAML configuration file in the Amplify folder, Amplify will automatically set up the necessary resources such as **Lambda functions**, **API Gateway**, **S3 buckets**, **Cloudwatch** and **CloudFront** for distribution when you initialize the project.

To initialize the project, run the following command in the root directory of your project:

amplify init

This command will initialize Amplify and set up the resources based on your existing configuration. You'll be prompted to answer several questions to configure your Amplify project.

Remember, any changes to the configuration file will require you to push the updates to the cloud using the amplify push command.

Step 5: Connect to AWS Account

The Amplify CLI needs to be connected to your AWS account. During the initialization process in the previous step, you'll be prompted to enter your AWS credentials.

Step 6 Create Multiple Environments:

To create distinct environments (e.g., development, QA, production), you can use the Amplify CLI. Here's how:

Run the following command to add a new environment:

amplify env add

You'll be prompted to provide a name for each environment (e.g., dev, QA, prod). Configure the backend environment accordingly.

* Automatic Environment Switching:
Whenever you create a new environment, you automatically switch to it.
To check your current environment, use:

amplify status

- END OF SECTION 9 -

ANNEX A - LIST OF ABBREVIATIONS AND ACRONYMS

COSPAS	Space system for the rescue of vessels in distress (Russian Federation)
COTS	Commercial off the shelf
C/S	Cospas-Sarsat
ELT	Emergency Locator Transmitter
EPIRB	Emergency Position Indicating Radio Beacon
FAX	Facsimile
FAQ	Frequently asked question
IBRD	International 406 MHz Beacon Registration Database
ICAO	International Civil Aviation Organization
ID	Identification
IMO	International Maritime Organization
IP	Internet protocol
ITU	International Telecommunication Union
MARS	Maritime mobile access and retrieval system (ITU database)
MCC	Cospas-Sarsat Mission Control Centre
MHz	Megahertz
MMSI	Maritime Mobile Station Identity
POC	Point of contact
PLB	Personal Locator Beacon
RCC	Rescue Coordination Centre
SAR	Search and Rescue
SARSAT	Search and Rescue Satellite Aided Tracking system (Canada, France, USA)
SBM	Shore-based maintenance
SQL	Structured query language
TAC	Type approval certificate
15 Hex ID	15 hexadecimal character identification

- END OF ANNEX A –

ANNEX B – LIST OF IBRD_CONFIG VALUES

Document Layout – "IBRD_CONFIG"

The special IBRD_CONFIG document in the "ibrd_prod" database contains configuration items and content strings used the IBRD API's and website. Like other documents, it is a JSON object that can be referenced by web pages or API code. Configuration items include enumeration lists for fields when registering a beacon, password reset questions (not answers) and web page content in multiple languages.

As this document is a collection of JSON objects used for various purposes, each with a distinct structure, the following sections will describe the information in terms of JSON expressions. IBRD_CONFIG["maintenance"]

This is a flag that determines whether the system is in maintenance mode. Normally set to a value of "false". When the string is modified to say "true", the IBRD system will be placed in maintenance mode.

```
"maintenance": "false",
```
IBRD_CONFIG["beaconActivationMethod"]

List of allowed values for the Beacon Activation Method field for EPRIB beacons.

```
  "beaconActivationMethod":                          [
    {
      "BeaconActivationMethod":                  "CAT1",
      "BeaconActivationMethodDescription": "Category 1 (Automatic
or                                            manual)"
    },
    {
      "BeaconActivationMethod":                  "CAT2",
      "BeaconActivationMethodDescription":  "Category  2  (Manual
only)"
    },
    {
      "BeaconActivationMethod":                  "CAT0",
      "BeaconActivationMethodDescription":  "(no  data  provided)"
    }
  ]
```
IBRD_CONFIG["beaconHomingDevices"]

List of allowed values for the Beacon Homing Device frequencies for beacons.

```
"beaconHomingDevices":                              [
    {
      "BeaconHomingDeviceType":                      "1",
      "BeaconHomingDeviceDescription":      "121.5      MHz"
    },
```

```json
  {
    "BeaconHomingDeviceType":                              "S",
    "BeaconHomingDeviceDescription":                    "SART"
  },
  {
    "BeaconHomingDeviceType":                              "O",
    "BeaconHomingDeviceDescription":                   "Other"
  },
  {
    "BeaconHomingDeviceType":                              "N",
    "BeaconHomingDeviceDescription":                    "None"
  }
],
```

IBRD_CONFIG["beaconManufacturer"]

List of allowed values for Beacon Manufacturers.

```json
"beaconManufacturer":                                    [
  {
    "BeaconManufacturerKey":                            "82",
    "BeaconManufacturerName":     "ACK    Technologies    Inc."
  },
  {
    "BeaconManufacturerKey":                             "1",
    "BeaconManufacturerName":     "ACR    Electronics    Inc."
  },
  {
    "BeaconManufacturerKey":                             "2",
    "BeaconManufacturerName":            "ADI        Limited"
  },
  {
    "BeaconManufacturerKey":                             "3",
    "BeaconManufacturerName":         "Air        Precision"
  },
  {
    "BeaconManufacturerKey":                             "4",
    "BeaconManufacturerName":          "Alden         Marine"
  },
  {
    "BeaconManufacturerKey":                             "5",
    "BeaconManufacturerName":  "Alenia  Marconi  Systems  Ltd"
  },
  {
    "BeaconManufacturerKey":                             "6",
    "BeaconManufacturerName": "AlliedSignal  Aerospace  Canada"
  },
  {
```

```
      "BeaconManufacturerKey":                        "74",
      "BeaconManufacturerName":      "Ameri-King    Corporation"
    },
    {
      "BeaconManufacturerKey":                        "57",
      "BeaconManufacturerName":          "AMS           Ltd"
    },
    {
      "BeaconManufacturerKey":                         "7",
      "BeaconManufacturerName": "Artex  Aircraft  Supplies  Inc."
    },
    {
      "BeaconManufacturerKey":                         "8",
      "BeaconManufacturerName":      "Aviation    and    Marine
Technologies,                                          Inc."
    },
    {
      "BeaconManufacturerKey":                        "59",
      "BeaconManufacturerName": "BAE  Systems  -  Ocean  Systems"
    },
    {
      "BeaconManufacturerKey":                         "9",
      "BeaconManufacturerName":  "BAE   Systems   Australia   Ltd"
    },
    {
      "BeaconManufacturerKey":                        "72",
      "BeaconManufacturerName": "BAE  Systems  Integrated  System
Technologies"
    },
    {
      "BeaconManufacturerKey":                        "65",
      "BeaconManufacturerName": "Becker  Electronics  Taiwan  Ltd"
    },
    {
      "BeaconManufacturerKey":                        "11",
      "BeaconManufacturerName":    "Becker   Flugfunkwerk   GmbH"
    },
    {
      "BeaconManufacturerKey":                        "12",
      "BeaconManufacturerName":    "Bitova    Electronic    Co."
    },
    {
      "BeaconManufacturerKey":                        "85",
      "BeaconManufacturerName":                    "Breitling"
    },
    {
      "BeaconManufacturerKey":                        "13",
```

```json
      "BeaconManufacturerName":    "British   Aerospace   Australia"
    },
    {
      "BeaconManufacturerKey":                          "14",
      "BeaconManufacturerName": "Caledonian Airborne Systems Ltd"
    },
    {
      "BeaconManufacturerKey":                          "15",
      "BeaconManufacturerName":              "CEIS           TM"
    },
    {
      "BeaconManufacturerKey":                          "75",
      "BeaconManufacturerName":  "Cobham   Tracking   and   Locating
Ltd."
    },
    {
      "BeaconManufacturerKey":                          "76",
      "BeaconManufacturerName":   "Digital   Angel   Corporation"
    },
    {
      "BeaconManufacturerKey":                          "16",
      "BeaconManufacturerName":        "DME         Corporation"
    },
    {
      "BeaconManufacturerKey":                          "17",
      "BeaconManufacturerName": "DRS  Data  and  Imaging  Systems"
    },
    {
      "BeaconManufacturerKey":                          "56",
      "BeaconManufacturerName":     "EADS     Deutschland     GmbH"
    },
    {
      "BeaconManufacturerKey":                          "18",
      "BeaconManufacturerName":            "ELTA           SA"
    },
    {
      "BeaconManufacturerKey":                          "66",
      "BeaconManufacturerName":  "Emergency   Beacon   Corporation
(EBC)"
    },
    {
      "BeaconManufacturerKey":                          "19",
      "BeaconManufacturerName":    "EMS    Technologies    Canada"
    },
    {
      "BeaconManufacturerKey":                          "20",
      "BeaconManufacturerName":  "ENA   Telecomunicaciones   S.A."
```

```
  },
  {
    "BeaconManufacturerKey":                         "58",
    "BeaconManufacturerName":      "Fernau     Avionics     Ltd"
  },
  {
    "BeaconManufacturerKey":                         "21",
    "BeaconManufacturerName":              "FUSE            ISDE"
  },
  {
    "BeaconManufacturerKey":                         "22",
    "BeaconManufacturerName": "GEC-Marconi  Radar  and  Defence
Systems"
  },
  {
    "BeaconManufacturerKey":                         "62",
    "BeaconManufacturerName": "General  Dynamics  C4  Systems"
  },
  {
    "BeaconManufacturerKey":                         "23",
    "BeaconManufacturerName":    "Honeywell   Aerospace   Canada"
  },
  {
    "BeaconManufacturerKey":                         "24",
    "BeaconManufacturerName":     "Japan    Radio    Co.    Ltd"
  },
  {
    "BeaconManufacturerKey":                         "25",
    "BeaconManufacturerName":    "Jotron    Electronics    A.S."
  },
  {
    "BeaconManufacturerKey":                         "73",
    "BeaconManufacturerName":                      "KANNAD"
  },
  {
    "BeaconManufacturerKey":                         "77",
    "BeaconManufacturerName":       "KDC        TechSolutions"
  },
  {
    "BeaconManufacturerKey":                         "67",
    "BeaconManufacturerName":      "Kelvin     Hughes     Ltd"
  },
  {
    "BeaconManufacturerKey":                         "55",
    "BeaconManufacturerName": "Kinetic Technology International
Pty.                                                    Ltd"
  },
```

```
  {
    "BeaconManufacturerKey":                        "71",
    "BeaconManufacturerName":        "Kolgrim-Don        Ltd"
  },
  {
    "BeaconManufacturerKey":                        "26",
    "BeaconManufacturerName":     "Litton    Special    Devices"
  },
  {
    "BeaconManufacturerKey":                        "27",
    "BeaconManufacturerName":        "Lokata        Ltd"
  },
  {
    "BeaconManufacturerKey":                        "41",
    "BeaconManufacturerName":      "Martec       Serpe-Iesm"
  },
  {
    "BeaconManufacturerKey":                        "28",
    "BeaconManufacturerName":       "McMurdo        Ltd"
  },
  {
    "BeaconManufacturerKey":                        "78",
    "BeaconManufacturerName": "McMurdo, Division of Signature
Industries                                        Ltd."
  },
  {
    "BeaconManufacturerKey":                        "29",
    "BeaconManufacturerName":   "Microwave   Monolithics   Inc."
  },
  {
    "BeaconManufacturerKey":                        "86",
    "BeaconManufacturerName":      "Mobit     Telecom     Ltd."
  },
  {
    "BeaconManufacturerKey":                        "30",
    "BeaconManufacturerName":      "MPR      Teltech      Ltd"
  },
  {
    "BeaconManufacturerKey":                        "68",
    "BeaconManufacturerName":      "Musson     Marine     Ltd"
  },
  {
    "BeaconManufacturerKey":                        "31",
    "BeaconManufacturerName":       "Musson-Exim       Co."
  },
  {
    "BeaconManufacturerKey":                        "32",
```

```
      "BeaconManufacturerName":        "Musson-Morsviaz-Servis"
    },
    {
      "BeaconManufacturerKey":                        "69",
      "BeaconManufacturerName":          "navtec        GmbH"
    },
    {
      "BeaconManufacturerKey":                        "33",
      "BeaconManufacturerName":  "NEC   Radio   &   Electronics   Ltd"
    },
    {
      "BeaconManufacturerKey":                        "34",
      "BeaconManufacturerName":  "Northern   Airborne   Technology
Ltd"
    },
    {
      "BeaconManufacturerKey":                        "35",
      "BeaconManufacturerName":   "Nova   Marine   Systems   Ltd"
    },
    {
      "BeaconManufacturerKey":                        "83",
      "BeaconManufacturerName":      "Ocean      Signal      Ltd"
    },
    {
      "BeaconManufacturerKey":                        "36",
      "BeaconManufacturerName":      "Pro-Find      Safety      Inc"
    },
    {
      "BeaconManufacturerKey":                        "37",
      "BeaconManufacturerName":    "Samyang    Radio    Co.    Ltd"
    },
    {
      "BeaconManufacturerKey":                        "38",
      "BeaconManufacturerName":  "Samyung Electronic Company Ltd"
    },
    {
      "BeaconManufacturerKey":                        "39",
      "BeaconManufacturerName":      "Saracom      Co.      Ltd"
    },
    {
      "BeaconManufacturerKey":                        "79",
      "BeaconManufacturerName":    "SARBE    Products    Signature
Industries                                              Ltd."
    },
    {
      "BeaconManufacturerKey":                        "80",
      "BeaconManufacturerName":    "Sartech    Engineering    Ltd"
```

```
    },
    {
      "BeaconManufacturerKey":                        "81",
      "BeaconManufacturerName": "Sea Air and Land Communications
Ltd                                                  (SALCOM)"
    },
    {
      "BeaconManufacturerKey":                        "40",
      "BeaconManufacturerName":        "Seimac          Limited"
    },
    {
      "BeaconManufacturerKey":                        "43",
      "BeaconManufacturerName": "Signature  Industries  Limited"
    },
    {
      "BeaconManufacturerKey":                        "44",
      "BeaconManufacturerName":                        "Skanti"
    },
    {
      "BeaconManufacturerKey":                        "45",
      "BeaconManufacturerName":                        "Socata"
    },
    {
      "BeaconManufacturerKey":                        "84",
      "BeaconManufacturerName":       "SRC       Co.,       Ltd"
    },
    {
      "BeaconManufacturerKey":                        "47",
      "BeaconManufacturerName": "Standard  Communications  Pty.
Ltd"
    },
    {
      "BeaconManufacturerKey":                        "46",
      "BeaconManufacturerName":  "State   Designer's   Bureau   of
Radiocommunication"
    },
    {
      "BeaconManufacturerKey":                        "48",
      "BeaconManufacturerName":   "Tadiran   Spectralink   Ltd"
    },
    {
      "BeaconManufacturerKey":                        "49",
      "BeaconManufacturerName":    "Taiyo   Musen   Co.   Ltd"
    },
    {
      "BeaconManufacturerKey":                        "50",
      "BeaconManufacturerName":       "Techtest       Limited"
```

```
    },
    {
      "BeaconManufacturerKey":                              "51",
      "BeaconManufacturerName":   "Thales   Underwater   Systems
Limited"
    },
    {
      "BeaconManufacturerKey":                              "53",
      "BeaconManufacturerName": "Toyo Communication Equipment Co.
Ltd"
    },
    {
      "BeaconManufacturerKey":                              "10",
      "BeaconManufacturerName": "Ultra Electronics Ocean Systems"
    },
    {
      "BeaconManufacturerKey":                              "70",
      "BeaconManufacturerName":             "URANIS          Ltd"
    },
    {
      "BeaconManufacturerKey":                              "54",
      "BeaconManufacturerName":  "Yaroslavsky  Radio  Engineering
Works"
    },
    {
      "BeaconManufacturerKey":                              "87",
      "BeaconManufacturerName":             "ECA          Group"
    }
  ],
```

IBRD_CONFIG["beaconRegType"]

List of allowed values for the type of beacon during registration. The first three values: EPIRB, ELT, PLB are used in IBRD. The other values: Test, Orbitography, National Use, SSAS are not used.

```
"beaconRegType":                                             [
    {
      "BeaconRegType":                                    "0",
      "BeaconRegName":                                 "EPIRB"
    },
    {
      "BeaconRegType":                                    "1",
      "BeaconRegName":                                   "ELT"
    },
    {
      "BeaconRegType":                                    "2",
```

```
    "BeaconRegName":                                        "PLB"
  },
  {
    "BeaconRegType":                                        "7",
    "BeaconRegName":                                     "Test"
  },
  {
    "BeaconRegType":                                        "8",
    "BeaconRegName":                            "Orbitography"
  },
  {
    "BeaconRegType":                                        "9",
    "BeaconRegName":                    "National              Use"
  },
  {
    "BeaconRegType":                                        "3",
    "BeaconRegName":                                     "SSAS"
  }
],
```

IBRD_CONFIG["beacon_type"]

List of allowed values for beacon encoding type. Primarily used during decoding of the beacon Hex ID during registration or lookups.

```
"beaconType":                                                    [
  {
    "BeaconType":     "ELT    24    BIT     ADDRESS    (STD)",
    "ProtocolFlag":                                        "0",
    "ProtocolCode":                                        "3"
  },
  {
    "BeaconType":       "ELT      A/C      OPERATOR    (STD)",
    "ProtocolFlag":                                        "0",
    "ProtocolCode":                                        "5"
  },
  {
    "BeaconType":            "ELT           AVIATION         USE",
    "ProtocolFlag":                                        "1",
    "ProtocolCode":                                        "1"
  },
  {
    "BeaconType":         "ELT        SERIAL      (NATIONAL)",
    "ProtocolFlag":                                        "0",
    "ProtocolCode":                                        "8"
  },
  {
```

```
    "BeaconType":          "ELT        SERIAL        (STANDARD)",
    "ProtocolFlag":                                        "0",
    "ProtocolCode":                                        "4"
},
{
    "BeaconType":     "ELT     SERIAL     A/C     24BIT     ADDRESS",
    "ProtocolFlag":                                        "1",
    "ProtocolCode":                                        "11"
},
{
    "BeaconType":        "ELT        SERIAL        A/C        OPERATOR",
    "ProtocolFlag":                                        "1",
    "ProtocolCode":                                        "9"
},
{
    "BeaconType":          "ELT        SERIAL        AVIATION",
    "ProtocolFlag":                                        "1",
    "ProtocolCode":                                        "8"
},
{
    "BeaconType":         "EPIRB         MARITIME         USER",
    "ProtocolFlag":                                        "1",
    "ProtocolCode":                                        "2"
},
{
    "BeaconType":         "EPIRB         MMSI        (STANDARD)",
    "ProtocolFlag":                                        "0",
    "ProtocolCode":                                        "2"
},
{
    "BeaconType":        "EPIRB        RADIO        CALL        SIGN",
    "ProtocolFlag":                                        "1",
    "ProtocolCode":                                        "6"
},
{
    "BeaconType":         "EPIRB        SERIAL        (NATIONAL)",
    "ProtocolFlag":                                        "0",
    "ProtocolCode":                                        "10"
},
{
    "BeaconType":         "EPIRB        SERIAL        (STANDARD)",
    "ProtocolFlag":                                        "0",
    "ProtocolCode":                                        "6"
},
{
    "BeaconType":        "EPIRB        SERIAL        CATEGORY        I",
    "ProtocolFlag":                                        "1",
```

```
    "ProtocolCode":                                     "10"
  },
  {
    "BeaconType":       "EPIRB     SERIAL     CATEGORY     II",
    "ProtocolFlag":                                     "1",
    "ProtocolCode":                                     "12"
  },
  {
    "BeaconType":             "NATIONAL             USER",
    "ProtocolFlag":                                     "1",
    "ProtocolCode":                                      "4"
  },
  {
    "BeaconType":                           "ORBITOGRAPHY",
    "ProtocolFlag":                                     "1",
    "ProtocolCode":                                      "0"
  },
  {
    "BeaconType":         "ORBITOGRAPHY       (RESERVED)",
    "ProtocolFlag":                                     "0",
    "ProtocolCode":                                      "0"
  },
  {
    "BeaconType":               "PLB             SERIAL",
    "ProtocolFlag":                                     "1",
    "ProtocolCode":                                     "14"
  },
  {
    "BeaconType":        "PLB       SERIAL      (NATIONAL)",
    "ProtocolFlag":                                     "0",
    "ProtocolCode":                                     "11"
  },
  {
    "BeaconType":        "PLB       SERIAL      (STANDARD)",
    "ProtocolFlag":                                     "0",
    "ProtocolCode":                                      "7"
  },
  {
    "BeaconType":                                   "Test",
    "ProtocolFlag":                                     "1",
    "ProtocolCode":                                      "7"
  },
  {
    "BeaconType":              "TEST           (NATIONAL)",
    "ProtocolFlag":                                     "0",
    "ProtocolCode":                                     "15"
  },
```

```
  {
    "BeaconType":          "TEST        SERIAL        (STANDARD)",
    "ProtocolFlag":                                         "0",
    "ProtocolCode":                                        "14"
  }
],
```

IBRD_CONFIG["carrier"] - Deprecated

List of allowed values for mobile phone carriers. This table is not used in IBRD but was imported from a legacy system and retained for data integrity purposes only.

```
"carrier":                                                            [
    {
      "carrierkey":                                            "1",
      "name":                                             "Aircel",
      "region":                                            "India",
      "email":                              "[NUMBER]@aircel.co.in"
    },
    {
      "carrierkey":                                            "2",
      "name":                                             "Airtel",
      "region":               "Andhra          Pradesh,India",
      "email":                              "[NUMBER]@airtelap.com"
    },
    {
      "carrierkey":                                            "3",
      "name":                                             "Airtel",
      "region":                               "Karnataka,India",
      "email":                              "[NUMBER]@airtelkk.com"
    },
    {
      "carrierkey":                                            "4",
      "name":        "Alaska       Communications       Systems",
      "region":                                             "USA",
      "email":                        "[NUMBER]@msg.acsalaska.com"
    },
    {
      "carrierkey":                                            "5",
      "name":  "Alltel  Wireless (presently  merging  with Verizon
Wireless[1])",
      "region":                                             "USA",
      "email":                      "[NUMBER]@message.Alltel.com"
    },
    {
      "carrierkey":                                            "6",
      "name":                                                "AQL",
```

```
    "region":                                      "UK",
    "email":                     "[NUMBER]@text.aql.com"
  },
  {
    "carrierkey":                                   "7",
    "name":                  "AT&T              Wireless",
    "region":                                     "USA",
    "email":                   "[NUMBER]@txt.att.net"
  },
  {
    "carrierkey":                                   "8",
    "name": "AT&T grandfathered customers (originally AT&T, then
Cingular, now AT&T Wireless). Officially offline since June 10,
2010,     under     AT&T     ticket    CM20100610_10186966.",
    "region":                                     "USA",
    "email":                   "[NUMBER]@mmode.com"
  },
  {
    "carrierkey":                                   "9",
    "name":      "AT&T    Mobility (formerly    Cingular)",
    "region":                                     "USA",
    "email":                   "[NUMBER]@mms.att.net"
  },
  {
    "carrierkey":                                  "10",
    "name":             "AT&T Enterprise         Paging",
    "region":                                     "USA",
    "email":                   "[NUMBER]@page.att.net"
  },
  {
    "carrierkey":                                  "11",
    "name":     "AT&T Global   Smart   Messaging   Suite",
    "region":                                     "USA",
    "email":            "[NUMBER]@sms.smartmessagingsuite.com"
  },
  {
    "carrierkey":                                  "12",
    "name":       "Bell Mobility    &    Solo    Mobile",
    "region":                                  "Canada",
    "email":                    "[NUMBER]@txt.bell.ca"
  },
  {
    "carrierkey":                                  "13",
    "name":            "Bluesky        Communications",
    "region":              "American        Samoa,USA",
    "email":                   "[NUMBER]@psms.bluesky.as"
  },
```

```json
{
  "carrierkey":                                    "14",
  "name":                  "Boost                  Mobile",
  "region":                                       "USA",
  "email":                  "[NUMBER]@myboostmobile.com"
},
{
  "carrierkey":                                    "15",
  "name":        "Bouygues        Télécom        (company)",
  "region":                                     "France",
  "email":               "[NUMBER]@mms.bouyguestelecom.fr"
},
{
  "carrierkey":                                    "16",
  "name":              "Loop (BPL                  Mobile)",
  "region":                                "Mumbai,India",
  "email":                      "[NUMBER]@bplmobile.com"
},
{
  "carrierkey":                                    "17",
  "name":            "Cellular            One (Dobson)",
  "region":                                       "USA",
  "email":                  "[NUMBER]@mobile.celloneusa.com"
},
{
  "carrierkey":                                    "18",
  "name":                "Cellular                  South",
  "region":                                       "USA",
  "email":                      "[NUMBER]@csouth1.com"
},
{
  "carrierkey":                                    "19",
  "name":               "Centennial            Wireless",
  "region": "USA,Puerto Rico, and the U.S. Virgin Islands",
  "email":                      "[NUMBER]@cwemail.com"
},
{
  "carrierkey":                                    "20",
  "name":              "Cincinnati                Bell",
  "region":                       "Cincinnati,Ohio, USA",
  "email":                        "[NUMBER]@gocbw.com"
},
{
  "carrierkey":                                    "21",
  "name":                      "Cingular (Postpaid)",
  "region":                                       "USA",
  "email":                  "[NUMBER]@cingular.com"
```

```
    },
    {
      "carrierkey":                                    "22",
      "name":                     "Cingular (GoPhone prepaid)",
      "region":                                       "USA",
      "email":                   "[NUMBER]@cingulartext.com"
    },
    {
      "carrierkey":                                    "23",
      "name":                                       "Claro",
      "region":                                     "Brasil",
      "email":               "[NUMBER]@clarotorpedo.com.br"
    },
    {
      "carrierkey":                                    "24",
      "name":                                       "Claro",
      "region":                                   "Nicaragua",
      "email":                "[NUMBER]@ideasclaro-ca.com"
    },
    {
      "carrierkey":                                    "25",
      "name":                                       "Claro",
      "region":               "Puerto                Rico",
      "email":                      "[NUMBER]@vtexto.com"
    },
    {
      "carrierkey":                                    "26",
      "name":                                      "Comcel",
      "region":                                   "Colombia",
      "email":                 "[NUMBER]@comcel.com.co"
    },
    {
      "carrierkey":                                    "27",
      "name":                                     "Cricket",
      "region":                                       "USA",
      "email":                "[NUMBER]@sms.mycricket.com"
    },
    {
      "carrierkey":                                    "28",
      "name":                 "CTI           Móvil (Now Claro)",
      "region":                                   "Argentina",
      "email":               "[NUMBER]@sms.ctimovil.com.ar"
    },
    {
      "carrierkey":                                    "29",
      "name":                                       "Emtel",
      "region":                                   "Mauritius",
```

```
      "email":                          "[NUMBER]@emtelworld.net"
    },
    {
      "carrierkey":                                          "30",
      "name":                                            "Fido",
      "region":                                        "Canada",
      "email":                              "[NUMBER]@fido.ca"
    },
    {
      "carrierkey":                                          "31",
      "name":                    "Freebie                    SMS",
      "region":                                        "Europe",
      "email":                    "[NUMBER]@smssturen.com"
    },
    {
      "carrierkey":                                          "32",
      "name":          "General        Communications        Inc.",
      "region":                                  "Alaska,USA",
      "email":                    "[NUMBER]@mobile.gci.net"
    },
    {
      "carrierkey":                                          "33",
      "name":                        "Globalstar (satellite)",
      "region":                                              "",
      "email":                "[NUMBER]@msg.globalstarusa.com"
    },
    {
      "carrierkey":                                          "34",
      "name":                                          "Globul",
      "region":                                        "Bulgaria",
      "email":                      "[NUMBER]@sms.globul.bg"
    },
    {
      "carrierkey":                                          "35",
      "name":            "Golden          State          Cellular",
      "region":                                "California,USA",
      "email":                        "[NUMBER]@gscsms.com"
    },
    {
      "carrierkey":                                          "36",
      "name":                                            "Helio",
      "region":                                              "",
      "email":                      "[NUMBER]@myhelio.com"
    },
    {
      "carrierkey":                                          "37",
      "name":                                              "ICE",
```

```
    "region":                        "Costa                        Rica",
    "email":                              "[NUMBER]@ice.cr"
},
{
    "carrierkey":                                         "38",
    "name":                                         "Iridium",
    "region":                                              "",
    "email":                         "[NUMBER]@msg.iridium.com"
},
{
    "carrierkey":                                         "39",
    "name":              "i           wireless         (T-Mobile)",
    "region":                                              "",
    "email":                          "[NUMBER].iws@iwspcs.net"
},
{
    "carrierkey":                                         "40",
    "name":            "i-wireless          (Sprint         PCS)",
    "region":                                              "",
    "email":                      "[NUMBER]@iwirelesshometext.com"
},
{
    "carrierkey":                                         "41",
    "name":                   "Koodo                   Mobile",
    "region":                                        "Canada",
    "email":                         "[NUMBER]@msg.telus.com"
},
{
    "carrierkey":                                         "42",
    "name":                    "Mero                   Mobile",
    "region":                                         "Nepal",
    "email":                      "[NUMBER]@sms.spicenepal.com"
},
{
    "carrierkey":                                         "43",
    "name":                                         "MetroPCS",
    "region":                                           "USA",
    "email":                         "[NUMBER]@mymetropcs.com"
},
{
    "carrierkey":                                         "44",
    "name":                                         "Movicom",
    "region":                                              "",
    "email":                      "[NUMBER]@movimensaje.com.ar"
},
{
    "carrierkey":                                         "45",
```

```json
    "name":                                        "Mobiltel",
    "region":                                      "Bulgaria",
    "email":                           "[NUMBER]@sms.mtel.net"
  },
  {
    "carrierkey":                                      "46",
    "name":                                         "Mobitel",
    "region":                    "Sri                    Lanka",
    "email":                        "[NUMBER]@sms.mobitel.lk"
  },
  {
    "carrierkey":                                      "47",
    "name":                                        "Movistar",
    "region":                                       "Colombia",
    "email":                     "[NUMBER]@movistar.com.co"
  },
  {
    "carrierkey":                                      "48",
    "name":                                             "MTN",
    "region":                        "South              Africa",
    "email":                           "[NUMBER]@sms.co.za"
  },
  {
    "carrierkey":                                      "49",
    "name":                       "MTS            Mobility",
    "region":                                        "Canada",
    "email":                "[NUMBER]@text.mtsmobility.com"
  },
  {
    "carrierkey":                                      "50",
    "name":                                          "Nextel",
    "region":                                           "USA",
    "email":                "[NUMBER]@messaging.nextel.com"
  },
  {
    "carrierkey":                                      "51",
    "name":                                          "Nextel",
    "region":                                        "México",
    "email":                    "[NUMBER]@msgnextel.com.mx"
  },
  {
    "carrierkey":                                      "52",
    "name":                                          "Nextel",
    "region":                                       "Argentina",
    "email":                    "[NUMBER]@nextel.net.ar"
  },
  {
```

```
      "carrierkey":                                 "53",
      "name":                                 "Orange",
      "region":                               "France",
      "email":                     "[NUMBER]@orange.fr"
   },
   {
      "carrierkey":                                 "54",
      "name":                                 "Orange",
      "region":                                   "UK",
      "email":                    "[NUMBER]@orange.net"
   },
   {
      "carrierkey":                                 "55",
      "name":                                 "Orange",
      "region":                               "Poland",
      "email":                     "[NUMBER]@orange.pl"
   },
   {
      "carrierkey":                                 "56",
      "name": "PagePlus Cellular Mobile Virtual Network Operator
-           Using            Verizon            Service",
      "region":                                  "USA",
      "email":                     "[NUMBER]@vtext.com"
   },
   {
      "carrierkey":                                 "57",
      "name":                "Pioneer            Cellular",
      "region":                                  "USA",
      "email":                     "[NUMBER]@zsend.com"
   },
   {
      "carrierkey":                                 "58",
      "name":                               "Personal",
      "region":                              "Argentina",
      "email":           "[NUMBER]@alertas.personal.com.ar"
   },
   {
      "carrierkey":                                 "59",
      "name":                                   "Plus",
      "region":                               "Poland",
      "email":                "+[NUMBER]@text.plusgsm.pl"
   },
   {
      "carrierkey":                                 "60",
      "name":                "Pocket            Wireless",
      "region":                                  "USA",
      "email":               "[NUMBER]@sms.pocket.com"
```

```
    },
    {
      "carrierkey":                              "61",
      "name":                      "PC            Telecom",
      "region":                                "Canada",
      "email":                      "[NUMBER]@mobiletxt.ca"
    },
    {
      "carrierkey":                              "62",
      "name":                  "Qwest            Wireless",
      "region":                                   "USA",
      "email":                      "[NUMBER]@qwestmp.com"
    },
    {
      "carrierkey":                              "63",
      "name":                  "Rogers            Wireless",
      "region":                                "Canada",
      "email":                      "[NUMBER]@pcs.rogers.com"
    },
    {
      "carrierkey":                              "64",
      "name":                                "SaskTel",
      "region":                                "Canada",
      "email":                      "[NUMBER]@sms.sasktel.com"
    },
    {
      "carrierkey":                              "65",
      "name":          "Setar Mobile      email      (Aruba)",
      "region":                                 "Aruba",
      "email":                           "[NUMBER]@mas.aw"
    },
    {
      "carrierkey":                              "66",
      "name": "Starhub Enterprise Messaging Solution (powered by
Soprano)",
      "region":                              "Singapore",
      "email":            "[NUMBER]@starhub-enterprisemessaing.com"
    },
    {
      "carrierkey":                              "67",
      "name":        "South        Central        Communications",
      "region":                                   "USA",
      "email":                      "[NUMBER]@rinasms.com"
    },
    {
      "carrierkey":                              "68",
      "name":                   "Sprint                (PCS)",
```

```json
    "region":                                      "USA",
    "email":                  "[NUMBER]@messaging.sprintpcs.com"
  },
  {
    "carrierkey":                                  "69",
    "name":                 "Sprint            (Nextel)",
    "region":                                      "USA",
    "email":                      "[NUMBER]@page.nextel.com"
  },
  {
    "carrierkey":                                  "70",
    "name":                 "Straight             Talk",
    "region":                                      "USA",
    "email":                          "[NUMBER]@vtext.com"
  },
  {
    "carrierkey":                                  "71",
    "name":                                     "Suncom",
    "region":                                        "",
    "email":                    "[NUMBER]@tms.suncom.com"
  },
  {
    "carrierkey":                                  "72",
    "name":             "Sunrise        Communications",
    "region":                              "Switzerland",
    "email":                    "[NUMBER]@gsm.sunrise.ch"
  },
  {
    "carrierkey":                                  "73",
    "name":                "Syringa            Wireless",
    "region":                                      "USA",
    "email":                        "[NUMBER]@rinasms.com"
  },
  {
    "carrierkey":                                  "74",
    "name":                                   "T-Mobile",
    "region":                                      "USA",
    "email":                       "[NUMBER]@tmomail.net"
  },
  {
    "carrierkey":                                  "75",
    "name":                                   "T-Mobile",
    "region":                                  "Austria",
    "email":                  "[NUMBER]@sms.t-mobile.at"
  },
  {
    "carrierkey":                                  "76",
```

```
      "name":                                       "T-Mobile",
      "region":                                      "Croatia",
      "email":                       "[NUMBER]@sms.t-mobile.hr"
    },
    {
      "carrierkey":                                       "77",
      "name":                    "Telus             Mobility",
      "region":                                       "Canada",
      "email":                        "[NUMBER]@msg.telus.com"
    },
    {
      "carrierkey":                                       "78",
      "name":                                     "TellusTalk",
      "region":                                       "Europe",
      "email":                             "[NUMBER]@esms.nu"
    },
    {
      "carrierkey":                                       "79",
      "name":                "Tigo (Formerly             Ola)",
      "region":                                     "Colombia",
      "email":                      "[NUMBER]@sms.tigo.com.co"
    },
    {
      "carrierkey":                                       "80",
      "name":                         "TracFone (prepaid)",
      "region": "USA,Puerto Rico, and the U.S. Virgin Islands",
      "email":                     "[NUMBER]@mmst5.tracfone.com"
    },
    {
      "carrierkey":                                       "81",
      "name":                                      "Txtlocal",
      "region":                                           "UK",
      "email":                        "[NUMBER]@txtlocal.co.uk"
    },
    {
      "carrierkey":                                       "82",
      "name":                                        "Unicel",
      "region":                                          "USA",
      "email":                           "[NUMBER]@utext.com"
    },
    {
      "carrierkey":                                       "83",
      "name":                    "US             Cellular",
      "region":                                          "USA",
      "email":                        "[NUMBER]@email.uscc.net"
    },
    {
```

```json
    "carrierkey":                                    "84",
    "name":                     "Verizon              Wireless",
    "region":                                        "USA",
    "email":                           "[NUMBER]@vtext.com"
},
{
    "carrierkey":                                    "85",
    "name":                                       "Viaero",
    "region":                                        "USA",
    "email":                       "[NUMBER]@viaerosms.com"
},
{
    "carrierkey":                                    "86",
    "name":                                      "Vivacom",
    "region":                                    "Bulgaria",
    "email":                   "[NUMBER]@sms.vivacom.bg"
},
{
    "carrierkey":                                    "87",
    "name":                                         "Vivo",
    "region":                                      "Brasil",
    "email":               "[NUMBER]@torpedoemail.com.br"
},
{
    "carrierkey":                                    "88",
    "name":                     "Virgin               Mobile",
    "region":                                     "Canada",
    "email":                        "[NUMBER]@vmobile.ca"
},
{
    "carrierkey":                                    "89",
    "name":                     "Virgin               Mobile",
    "region":                                        "USA",
    "email":                         "[NUMBER]@vmobl.com"
},
{
    "carrierkey":                                    "90",
    "name":                                      "Vodacom",
    "region":                   "South                Africa",
    "email":                        "[NUMBER]@voda.co.za"
},
{
    "carrierkey":                                    "91",
    "name":                                       "Spikko",
    "region":                                     "Israel",
    "email":                      "[NUMBER]@SpikkoSMS.com"
},
```

```json
{
  "carrierkey":                                    "92",
  "name":                                    "Swisscom",
  "region":                                "Switzerland",
  "email":                        "[NUMBER]@swisscom.com"
},
{
  "carrierkey":                                    "93",
  "name":                                        "Salt",
  "region":                                "Switzerland",
  "email":                            "[NUMBER]@salt.ch"
},
{
  "carrierkey":                                    "94",
  "name":                                     "Sunrise",
  "region":                                "Switzerland",
  "email":                         "[NUMBER]@sunrise.ch"
},
{
  "carrierkey":                                   "100",
  "name":                                    "Proximus",
  "region":                                    "Belgium",
  "email":         "[NUMBER]@proximus.be""carrier":        [
{
  "carrierkey":                                     "1",
  "name":                                      "Aircel",
  "region":                                      "India",
  "email":                       "[NUMBER]@aircel.co.in"
},
{
  "carrierkey":                                     "2",
  "name":                                      "Airtel",
  "region":               "Andhra           Pradesh,India",
  "email":                       "[NUMBER]@airtelap.com"
},
{
  "carrierkey":                                     "3",
  "name":                                      "Airtel",
  "region":                            "Karnataka,India",
  "email":                       "[NUMBER]@airtelkk.com"
},
{
  "carrierkey":                                     "4",
  "name":          "Alaska      Communications     Systems",
  "region":                                        "USA",
  "email":                   "[NUMBER]@msg.acsalaska.com"
},
```

```
    {
      "carrierkey":                                    "5",
      "name":  "Alltel  Wireless (presently  merging  with Verizon
Wireless[1])",
      "region":                                        "USA",
      "email":                      "[NUMBER]@message.Alltel.com"
    },
    {
      "carrierkey":                                    "6",
      "name":                                          "AQL",
      "region":                                        "UK",
      "email":                           "[NUMBER]@text.aql.com"
    },
    {
      "carrierkey":                                    "7",
      "name":                  "AT&T                 Wireless",
      "region":                                        "USA",
      "email":                            "[NUMBER]@txt.att.net"
    },
    {
      "carrierkey":                                    "8",
      "name": "AT&T grandfathered customers (originally AT&T, then
Cingular, now AT&T  Wireless). Officially  offline  since June 10,
2010,     under     AT&T     ticket     CM20100610_10186966.",
      "region":                                        "USA",
      "email":                           "[NUMBER]@mmode.com"
    },
    {
      "carrierkey":                                    "9",
      "name":      "AT&T     Mobility (formerly   Cingular)",
      "region":                                        "USA",
      "email":                            "[NUMBER]@mms.att.net"
    },
    {
      "carrierkey":                                    "10",
      "name":                "AT&T Enterprise          Paging",
      "region":                                        "USA",
      "email":                           "[NUMBER]@page.att.net"
    },
    {
      "carrierkey":                                    "11",
      "name":     "AT&T Global    Smart    Messaging    Suite",
      "region":                                        "USA",
      "email":              "[NUMBER]@sms.smartmessagingsuite.com"
    },
    {
      "carrierkey":                                    "12",
```

```
    "name":          "Bell Mobility      &       Solo        Mobile",
    "region":                                              "Canada",
    "email":                                 "[NUMBER]@txt.bell.ca"
  },
  {
    "carrierkey":                                              "13",
    "name":                "Bluesky           Communications",
    "region":                 "American                 Samoa,USA",
    "email":                          "[NUMBER]@psms.bluesky.as"
  },
  {
    "carrierkey":                                              "14",
    "name":                 "Boost                   Mobile",
    "region":                                                "USA",
    "email":                     "[NUMBER]@myboostmobile.com"
  },
  {
    "carrierkey":                                              "15",
    "name":          "Bouygues       Télécom      (company)",
    "region":                                             "France",
    "email":                  "[NUMBER]@mms.bouyguestelecom.fr"
  },
  {
    "carrierkey":                                              "16",
    "name":              "Loop (BPL               Mobile)",
    "region":                                       "Mumbai,India",
    "email":                      "[NUMBER]@bplmobile.com"
  },
  {
    "carrierkey":                                              "17",
    "name":              "Cellular           One (Dobson)",
    "region":                                                "USA",
    "email":                     "[NUMBER]@mobile.celloneusa.com"
  },
  {
    "carrierkey":                                              "18",
    "name":                 "Cellular                 South",
    "region":                                                "USA",
    "email":                          "[NUMBER]@csouth1.com"
  },
  {
    "carrierkey":                                              "19",
    "name":                "Centennial               Wireless",
    "region":  "USA,Puerto Rico, and the U.S. Virgin Islands",
    "email":                          "[NUMBER]@cwemail.com"
  },
  {
```

```
      "carrierkey":                                      "20",
      "name":                      "Cincinnati                  Bell",
      "region":                          "Cincinnati,Ohio, USA",
      "email":                              "[NUMBER]@gocbw.com"
   },
   {
      "carrierkey":                                      "21",
      "name":                          "Cingular (Postpaid)",
      "region":                                          "USA",
      "email":                          "[NUMBER]@cingular.com"
   },
   {
      "carrierkey":                                      "22",
      "name":                    "Cingular (GoPhone prepaid)",
      "region":                                          "USA",
      "email":                      "[NUMBER]@cingulartext.com"
   },
   {
      "carrierkey":                                      "23",
      "name":                                          "Claro",
      "region":                                        "Brasil",
      "email":                    "[NUMBER]@clarotorpedo.com.br"
   },
   {
      "carrierkey":                                      "24",
      "name":                                          "Claro",
      "region":                                      "Nicaragua",
      "email":                      "[NUMBER]@ideasclaro-ca.com"
   },
   {
      "carrierkey":                                      "25",
      "name":                                          "Claro",
      "region":                      "Puerto                  Rico",
      "email":                          "[NUMBER]@vtexto.com"
   },
   {
      "carrierkey":                                      "26",
      "name":                                        "Comcel",
      "region":                                      "Colombia",
      "email":                        "[NUMBER]@comcel.com.co"
   },
   {
      "carrierkey":                                      "27",
      "name":                                        "Cricket",
      "region":                                          "USA",
      "email":                      "[NUMBER]@sms.mycricket.com"
   },
```

```json
  {
    "carrierkey":                              "28",
    "name":                "CTI          Móvil (Now Claro)",
    "region":                              "Argentina",
    "email":                    "[NUMBER]@sms.ctimovil.com.ar"
  },
  {
    "carrierkey":                              "29",
    "name":                                    "Emtel",
    "region":                                "Mauritius",
    "email":                        "[NUMBER]@emtelworld.net"
  },
  {
    "carrierkey":                              "30",
    "name":                                    "Fido",
    "region":                                  "Canada",
    "email":                            "[NUMBER]@fido.ca"
  },
  {
    "carrierkey":                              "31",
    "name":                "Freebie              SMS",
    "region":                                  "Europe",
    "email":                      "[NUMBER]@smssturen.com"
  },
  {
    "carrierkey":                              "32",
    "name":         "General      Communications      Inc.",
    "region":                              "Alaska,USA",
    "email":                      "[NUMBER]@mobile.gci.net"
  },
  {
    "carrierkey":                              "33",
    "name":                        "Globalstar (satellite)",
    "region":                                      "",
    "email":                  "[NUMBER]@msg.globalstarusa.com"
  },
  {
    "carrierkey":                              "34",
    "name":                                    "Globul",
    "region":                                "Bulgaria",
    "email":                      "[NUMBER]@sms.globul.bg"
  },
  {
    "carrierkey":                              "35",
    "name":            "Golden       State       Cellular",
    "region":                            "California,USA",
    "email":                        "[NUMBER]@gscsms.com"
```

```
  },
  {
    "carrierkey":                                         "36",
    "name":                                          "Helio",
    "region":                                             "",
    "email":                          "[NUMBER]@myhelio.com"
  },
  {
    "carrierkey":                                         "37",
    "name":                                            "ICE",
    "region":                     "Costa                Rica",
    "email":                            "[NUMBER]@ice.cr"
  },
  {
    "carrierkey":                                         "38",
    "name":                                        "Iridium",
    "region":                                             "",
    "email":                   "[NUMBER]@msg.iridium.com"
  },
  {
    "carrierkey":                                         "39",
    "name":            "i        wireless        (T-Mobile)",
    "region":                                             "",
    "email":                     "[NUMBER].iws@iwspcs.net"
  },
  {
    "carrierkey":                                         "40",
    "name":          "i-wireless         (Sprint        PCS)",
    "region":                                             "",
    "email":                  "[NUMBER]@iwirelesshometext.com"
  },
  {
    "carrierkey":                                         "41",
    "name":                     "Koodo                Mobile",
    "region":                                       "Canada",
    "email":                       "[NUMBER]@msg.telus.com"
  },
  {
    "carrierkey":                                         "42",
    "name":                     "Mero                 Mobile",
    "region":                                        "Nepal",
    "email":                    "[NUMBER]@sms.spicenepal.com"
  },
  {
    "carrierkey":                                         "43",
    "name":                                       "MetroPCS",
    "region":                                          "USA",
```

```json
    "email":                              "[NUMBER]@mymetropcs.com"
  },
  {
    "carrierkey":                              "44",
    "name":                              "Movicom",
    "region":                              "",
    "email":                      "[NUMBER]@movimensaje.com.ar"
  },
  {
    "carrierkey":                              "45",
    "name":                              "Mobiltel",
    "region":                              "Bulgaria",
    "email":                      "[NUMBER]@sms.mtel.net"
  },
  {
    "carrierkey":                              "46",
    "name":                              "Mobitel",
    "region":              "Sri                    Lanka",
    "email":                      "[NUMBER]@sms.mobitel.lk"
  },
  {
    "carrierkey":                              "47",
    "name":                              "Movistar",
    "region":                              "Colombia",
    "email":                      "[NUMBER]@movistar.com.co"
  },
  {
    "carrierkey":                              "48",
    "name":                              "MTN",
    "region":              "South                    Africa",
    "email":                      "[NUMBER]@sms.co.za"
  },
  {
    "carrierkey":                              "49",
    "name":              "MTS              Mobility",
    "region":                              "Canada",
    "email":                      "[NUMBER]@text.mtsmobility.com"
  },
  {
    "carrierkey":                              "50",
    "name":                              "Nextel",
    "region":                              "USA",
    "email":                      "[NUMBER]@messaging.nextel.com"
  },
  {
    "carrierkey":                              "51",
    "name":                              "Nextel",
```

```json
    "region":                                     "México",
    "email":                      "[NUMBER]@msgnextel.com.mx"
  },
  {
    "carrierkey":                                      "52",
    "name":                                        "Nextel",
    "region":                                   "Argentina",
    "email":                         "[NUMBER]@nextel.net.ar"
  },
  {
    "carrierkey":                                      "53",
    "name":                                        "Orange",
    "region":                                      "France",
    "email":                           "[NUMBER]@orange.fr"
  },
  {
    "carrierkey":                                      "54",
    "name":                                        "Orange",
    "region":                                          "UK",
    "email":                          "[NUMBER]@orange.net"
  },
  {
    "carrierkey":                                      "55",
    "name":                                        "Orange",
    "region":                                      "Poland",
    "email":                           "[NUMBER]@orange.pl"
  },
  {
    "carrierkey":                                      "56",
    "name": "PagePlus Cellular Mobile Virtual Network Operator
-          Using            Verizon               Service",
    "region":                                         "USA",
    "email":                            "[NUMBER]@vtext.com"
  },
  {
    "carrierkey":                                      "57",
    "name":                     "Pioneer           Cellular",
    "region":                                         "USA",
    "email":                            "[NUMBER]@zsend.com"
  },
  {
    "carrierkey":                                      "58",
    "name":                                      "Personal",
    "region":                                   "Argentina",
    "email":             "[NUMBER]@alertas.personal.com.ar"
  },
  {
```

```
      "carrierkey":                                        "59",
      "name":                                           "Plus",
      "region":                                       "Poland",
      "email":                       "+[NUMBER]@text.plusgsm.pl"
   },
   {
      "carrierkey":                                        "60",
      "name":                        "Pocket            Wireless",
      "region":                                          "USA",
      "email":                       "[NUMBER]@sms.pocket.com"
   },
   {
      "carrierkey":                                        "61",
      "name":                   "PC                   Telecom",
      "region":                                       "Canada",
      "email":                        "[NUMBER]@mobiletxt.ca"
   },
   {
      "carrierkey":                                        "62",
      "name":                    "Qwest              Wireless",
      "region":                                          "USA",
      "email":                         "[NUMBER]@qwestmp.com"
   },
   {
      "carrierkey":                                        "63",
      "name":                    "Rogers             Wireless",
      "region":                                       "Canada",
      "email":                      "[NUMBER]@pcs.rogers.com"
   },
   {
      "carrierkey":                                        "64",
      "name":                                        "SaskTel",
      "region":                                       "Canada",
      "email":                      "[NUMBER]@sms.sasktel.com"
   },
   {
      "carrierkey":                                        "65",
      "name":           "Setar Mobile       email       (Aruba)",
      "region":                                         "Aruba",
      "email":                              "[NUMBER]@mas.aw"
   },
   {
      "carrierkey":                                        "66",
      "name": "Starhub Enterprise Messaging Solution (powered by
Soprano)",
      "region":                                     "Singapore",
      "email":          "[NUMBER]@starhub-enterprisemessaing.com"
```

```
  },
  {
    "carrierkey":                                "67",
    "name":        "South      Central      Communications",
    "region":                                    "USA",
    "email":                         "[NUMBER]@rinasms.com"
  },
  {
    "carrierkey":                                "68",
    "name":                   "Sprint            (PCS)",
    "region":                                    "USA",
    "email":            "[NUMBER]@messaging.sprintpcs.com"
  },
  {
    "carrierkey":                                "69",
    "name":               "Sprint          (Nextel)",
    "region":                                    "USA",
    "email":                     "[NUMBER]@page.nextel.com"
  },
  {
    "carrierkey":                                "70",
    "name":                  "Straight            Talk",
    "region":                                    "USA",
    "email":                          "[NUMBER]@vtext.com"
  },
  {
    "carrierkey":                                "71",
    "name":                                  "Suncom",
    "region":                                      "",
    "email":                    "[NUMBER]@tms.suncom.com"
  },
  {
    "carrierkey":                                "72",
    "name":            "Sunrise         Communications",
    "region":                              "Switzerland",
    "email":                     "[NUMBER]@gsm.sunrise.ch"
  },
  {
    "carrierkey":                                "73",
    "name":               "Syringa            Wireless",
    "region":                                    "USA",
    "email":                         "[NUMBER]@rinasms.com"
  },
  {
    "carrierkey":                                "74",
    "name":                                "T-Mobile",
    "region":                                    "USA",
```

```json
    "email":                                    "[NUMBER]@tmomail.net"
  },
  {
    "carrierkey":                                              "75",
    "name":                                             "T-Mobile",
    "region":                                              "Austria",
    "email":                            "[NUMBER]@sms.t-mobile.at"
  },
  {
    "carrierkey":                                              "76",
    "name":                                             "T-Mobile",
    "region":                                              "Croatia",
    "email":                            "[NUMBER]@sms.t-mobile.hr"
  },
  {
    "carrierkey":                                              "77",
    "name":                     "Telus                 Mobility",
    "region":                                              "Canada",
    "email":                              "[NUMBER]@msg.telus.com"
  },
  {
    "carrierkey":                                              "78",
    "name":                                           "TellusTalk",
    "region":                                               "Europe",
    "email":                                   "[NUMBER]@esms.nu"
  },
  {
    "carrierkey":                                              "79",
    "name":                    "Tigo (Formerly            Ola)",
    "region":                                             "Colombia",
    "email":                            "[NUMBER]@sms.tigo.com.co"
  },
  {
    "carrierkey":                                              "80",
    "name":                              "TracFone (prepaid)",
    "region":  "USA,Puerto Rico,  and  the  U.S.  Virgin  Islands",
    "email":                       "[NUMBER]@mmst5.tracfone.com"
  },
  {
    "carrierkey":                                              "81",
    "name":                                             "Txtlocal",
    "region":                                                  "UK",
    "email":                             "[NUMBER]@txtlocal.co.uk"
  },
  {
    "carrierkey":                                              "82",
    "name":                                               "Unicel",
```

```json
      "region":                                       "USA",
      "email":                        "[NUMBER]@utext.com"
    },
    {
      "carrierkey":                                   "83",
      "name":                     "US            Cellular",
      "region":                                       "USA",
      "email":                  "[NUMBER]@email.uscc.net"
    },
    {
      "carrierkey":                                   "84",
      "name":                  "Verizon         Wireless",
      "region":                                       "USA",
      "email":                        "[NUMBER]@vtext.com"
    },
    {
      "carrierkey":                                   "85",
      "name":                                     "Viaero",
      "region":                                       "USA",
      "email":                    "[NUMBER]@viaerosms.com"
    },
    {
      "carrierkey":                                   "86",
      "name":                                    "Vivacom",
      "region":                                   "Bulgaria",
      "email":                  "[NUMBER]@sms.vivacom.bg"
    },
    {
      "carrierkey":                                   "87",
      "name":                                       "Vivo",
      "region":                                     "Brasil",
      "email":              "[NUMBER]@torpedoemail.com.br"
    },
    {
      "carrierkey":                                   "88",
      "name":                     "Virgin           Mobile",
      "region":                                    "Canada",
      "email":                     "[NUMBER]@vmobile.ca"
    },
    {
      "carrierkey":                                   "89",
      "name":                     "Virgin           Mobile",
      "region":                                       "USA",
      "email":                      "[NUMBER]@vmobl.com"
    },
    {
      "carrierkey":                                   "90",
```

```
      "name":                                          "Vodacom",
      "region":                      "South                Africa",
      "email":                           "[NUMBER]@voda.co.za"
   },
   {
      "carrierkey":                                        "91",
      "name":                                          "Spikko",
      "region":                                         "Israel",
      "email":                        "[NUMBER]@SpikkoSMS.com"
   },
   {
      "carrierkey":                                        "92",
      "name":                                        "Swisscom",
      "region":                                     "Switzerland",
      "email":                         "[NUMBER]@swisscom.com"
   },
   {
      "carrierkey":                                        "93",
      "name":                                            "Salt",
      "region":                                     "Switzerland",
      "email":                             "[NUMBER]@salt.ch"
   },
   {
      "carrierkey":                                        "94",
      "name":                                         "Sunrise",
      "region":                                     "Switzerland",
      "email":                          "[NUMBER]@sunrise.ch"
   },
   {
      "carrierkey":                                       "100",
      "name":                                        "Proximus",
      "region":                                        "Belgium",
      "email":                        "[NUMBER]@proximus.be"
   }
],

   }
],
```

IBRD_CONFIG[“confirmationStatus”] - Deprecated

List of allowed values for the email confirmation status. This is a legacy list of configuration values and is not used in the current version of IBRD. It has been retained for legacy data integrity purposes only.

```
"confirmationStatus":                                                [
  {
    "ConfirmationStatus":                                   "CHGE",
    "ConfirmationStatusDescription":                      "Change"
  },
  {
    "ConfirmationStatus":                                   "CFRM",
    "ConfirmationStatusDescription":                   "Confirmed"
  },
  {
    "ConfirmationStatus":                                   "SENT",
    "ConfirmationStatusDescription":                        "Sent"
  },
  {
    "ConfirmationStatus":                                   "UDEL",
    "ConfirmationStatusDescription":                 "Undelivered"
  }
],
```

IBRD_CONFIG["countries"]

List of allowed values for the country list for mailing addresses. This list is distinct from the list of maritime identifiers (MIDs), which are listed separately in their own configuration object, called IBRD_CONFIG["midInfo"].

```
"countries":                                                         [
  {
    "MailCountry":                                   "Afghanistan"
  },
  {
    "MailCountry":                                       "Albania"
  },
  {
    "MailCountry":                                      "Alderney"
  },
  {
    "MailCountry":                                       "Algeria"
  },
  {
    "MailCountry":                                       "Andorra"
  },
  {
    "MailCountry":                                        "Angola"
  },
  {
    "MailCountry":                                      "Anguilla"
  },
```

```json
{
  "MailCountry":                    "Antigua        and        Barbuda"
},
{
  "MailCountry":                                          "Argentina"
},
{
  "MailCountry":                                            "Armenia"
},
{
  "MailCountry":                                              "Aruba"
},
{
  "MailCountry":                                          "Ascension"
},
{
  "MailCountry":                                          "Australia"
},
{
  "MailCountry":                                            "Austria"
},
{
  "MailCountry":                                         "Azerbaijan"
},
{
  "MailCountry":                                            "Bahamas"
},
{
  "MailCountry":                                            "Bahrain"
},
{
  "MailCountry":                        "Baker            Island"
},
{
  "MailCountry":                                         "Bangladesh"
},
{
  "MailCountry":                                           "Barbados"
},
{
  "MailCountry":                                            "Belarus"
},
{
  "MailCountry":                                            "Belgium"
},
{
  "MailCountry":                                             "Belize"
```

```json
    },
    {
      "MailCountry":                                "Benin"
    },
    {
      "MailCountry":                               "Bermuda"
    },
    {
      "MailCountry":                                "Bhutan"
    },
    {
      "MailCountry":                               "Bolivia"
    },
    {
      "MailCountry":                    "Bosnia-Herzegovina"
    },
    {
      "MailCountry":                              "Botswana"
    },
    {
      "MailCountry":                                "Brazil"
    },
    {
      "MailCountry":        "British      Virgin      Islands"
    },
    {
      "MailCountry":            "Brunei         Darussalam"
    },
    {
      "MailCountry":                              "Bulgaria"
    },
    {
      "MailCountry":                "Burkina          Faso"
    },
    {
      "MailCountry":                                 "Burma"
    },
    {
      "MailCountry":                               "Burundi"
    },
    {
      "MailCountry":                              "Cambodia"
    },
    {
      "MailCountry":                              "Cameroon"
    },
    {
```

```
    "MailCountry":                                  "Canada"
  },
  {
    "MailCountry":                    "Cape                   Verde"
  },
  {
    "MailCountry":                   "Cayman              Islands"
  },
  {
    "MailCountry":        "Central        African        Republic"
  },
  {
    "MailCountry":                                    "Chad"
  },
  {
    "MailCountry":                   "Channel              Islands"
  },
  {
    "MailCountry":                                     "Chile"
  },
  {
    "MailCountry":                                     "China"
  },
  {
    "MailCountry":     "Christiansted,    US    Virgin    Islands"
  },
  {
    "MailCountry":                                     "Chuuk"
  },
  {
    "MailCountry":                                   "Colombia"
  },
  {
    "MailCountry":                                   "Comoros"
  },
  {
    "MailCountry": "Congo, Democratic Republic of the Kinshasa"
  },
  {
    "MailCountry":   "Congo,  Republic  of  the  (Brazzaville)"
  },
  {
    "MailCountry":                    "Costa                 Rica"
  },
  {
    "MailCountry":                                    "Croatia"
  },
```

```
{
  "MailCountry":                                    "Cuba"
},
{
  "MailCountry":                                    "Cyprus"
},
{
  "MailCountry":                  "Czech              Republic"
},
{
  "MailCountry":                                    "Denmark"
},
{
  "MailCountry":                                    "Djibouti"
},
{
  "MailCountry":                                    "Dominica"
},
{
  "MailCountry":                  "Dominican          Republic"
},
{
  "MailCountry":    "Eastern    Island,    Midway    Islands"
},
{
  "MailCountry":        "Ebeye,        Marshall      Islands"
},
{
  "MailCountry":                                    "Ecuador"
},
{
  "MailCountry":                                    "Egypt"
},
{
  "MailCountry":                  "El                Salvador"
},
{
  "MailCountry":                                    "England"
},
{
  "MailCountry":                "Equatorial          Guinea"
},
{
  "MailCountry":                                    "Eritrea"
},
{
  "MailCountry":                                    "Estonia"
```

```json
        },
        {
          "MailCountry":                                    "Ethiopia"
        },
        {
          "MailCountry":               "Falkland           Islands"
        },
        {
          "MailCountry":               "Faroe             Islands"
        },
        {
          "MailCountry":                                       "Fiji"
        },
        {
          "MailCountry":                                    "Finland"
        },
        {
          "MailCountry":                                     "France"
        },
        {
          "MailCountry":     "Frederiksted,   US   Virgin   Islands"
        },
        {
          "MailCountry":               "French           Guiana"
        },
        {
          "MailCountry":             "French           Polynesia"
        },
        {
          "MailCountry":                                      "Gabon"
        },
        {
          "MailCountry":                                     "Gambia"
        },
        {
          "MailCountry":          "Georgia,        Republic        of"
        },
        {
          "MailCountry":                                    "Germany"
        },
        {
          "MailCountry":                                      "Ghana"
        },
        {
          "MailCountry":                                  "Gibraltar"
        },
        {
```

```
      "MailCountry":                    "Great                  Britain"
    },
    {
      "MailCountry":   "Great   Britain   and   Northern   Ireland"
    },
    {
      "MailCountry":                                        "Greece"
    },
    {
      "MailCountry":                                     "Greenland"
    },
    {
      "MailCountry":                                       "Grenada"
    },
    {
      "MailCountry":                                    "Guadeloupe"
    },
    {
      "MailCountry":                                          "Guam"
    },
    {
      "MailCountry":                                     "Guatemala"
    },
    {
      "MailCountry":                                      "Guernsey"
    },
    {
      "MailCountry":                                        "Guinea"
    },
    {
      "MailCountry":                                 "Guinea-Bissau"
    },
    {
      "MailCountry":                                        "Guyana"
    },
    {
      "MailCountry":                                         "Haiti"
    },
    {
      "MailCountry":                                      "Honduras"
    },
    {
      "MailCountry":                      "Hong                  Kong"
    },
    {
      "MailCountry":                   "Howland              Island"
    },
```

```
{
  "MailCountry":                                        "Hungary"
},
{
  "MailCountry":                                        "Iceland"
},
{
  "MailCountry":                                          "India"
},
{
  "MailCountry":                                      "Indonesia"
},
{
  "MailCountry":                                           "Iran"
},
{
  "MailCountry":                                           "Iraq"
},
{
  "MailCountry":                                        "Ireland"
},
{
  "MailCountry":              "Isle            of            Man"
},
{
  "MailCountry":                                         "Israel"
},
{
  "MailCountry":                                          "Italy"
},
{
  "MailCountry":                    "Ivory                 Coast"
},
{
  "MailCountry":                                        "Jamaica"
},
{
  "MailCountry":                                          "Japan"
},
{
  "MailCountry":                   "Jarvis               Island"
},
{
  "MailCountry":                                        "Jeersey"
},
{
  "MailCountry":                                         "Jersey"
```

```
  },
  {
    "MailCountry":                    "Johnston                Island"
  },
  {
    "MailCountry":                                        "Jordan"
  },
  {
    "MailCountry":                                    "Kazakhstan"
  },
  {
    "MailCountry":                                          "Kenya"
  },
  {
    "MailCountry":                    "Kingman                  Reef"
  },
  {
    "MailCountry":      "Kingshill,    US    Virgin    Islands"
  },
  {
    "MailCountry":                                      "Kiribati"
  },
  {
    "MailCountry":                                          "Koror"
  },
  {
    "MailCountry":              "Kosrae,          Micronesia"
  },
  {
    "MailCountry":                                        "Kuwait"
  },
  {
    "MailCountry":      "Kwajalein,    Marshall    Islands"
  },
  {
    "MailCountry":                                    "Kyrgyzstan"
  },
  {
    "MailCountry":                                          "Laos"
  },
  {
    "MailCountry":                                        "Latvia"
  },
  {
    "MailCountry":                                      "Lebanon"
  },
  {
```

```
  "MailCountry":                              "Lesotho"
},
{
  "MailCountry":                              "Liberia"
},
{
  "MailCountry":                                "Libya"
},
{
  "MailCountry":                        "Liechtenstein"
},
{
  "MailCountry":                            "Lithuania"
},
{
  "MailCountry":                           "Luxembourg"
},
{
  "MailCountry":                                "Macao"
},
{
  "MailCountry":  "Macedonia,  Former  Yugoslav  Republic  of"
},
{
  "MailCountry":                           "Madagascar"
},
{
  "MailCountry":       "Majuro,      Marshall     Islands"
},
{
  "MailCountry":                               "Malawi"
},
{
  "MailCountry":                             "Malaysia"
},
{
  "MailCountry":                             "Maldives"
},
{
  "MailCountry":                                 "Mali"
},
{
  "MailCountry":                                "Malta"
},
{
  "MailCountry":    "Manua   Islands,   American   Samoa"
},
```

```
{
  "MailCountry":                    "Marshall            Islands"
},
{
  "MailCountry":                                    "Martinique"
},
{
  "MailCountry":                                    "Mauritania"
},
{
  "MailCountry":                                     "Mauritius"
},
{
  "MailCountry":                                        "Mexico"
},
{
  "MailCountry":    "Micronesia,    Federated    States    of"
},
{
  "MailCountry":                    "Midway            Islands"
},
{
  "MailCountry":                                       "Moldova"
},
{
  "MailCountry":                                      "Mongolia"
},
{
  "MailCountry":                                    "Montserrat"
},
{
  "MailCountry":                                       "Morocco"
},
{
  "MailCountry":                                    "Mozambique"
},
{
  "MailCountry":                                       "Namibia"
},
{
  "MailCountry":                                         "Nauru"
},
{
  "MailCountry":                    "Navassa            Island"
},
{
  "MailCountry":                                         "Nepal"
```

```
  },
  {
    "MailCountry":                          "Netherlands"
  },
  {
    "MailCountry":          "Netherlands        Antilles"
  },
  {
    "MailCountry":              "New          Caledonia"
  },
  {
    "MailCountry":              "New           Zealand"
  },
  {
    "MailCountry":                           "Nicaragua"
  },
  {
    "MailCountry":                               "Niger"
  },
  {
    "MailCountry":                             "Nigeria"
  },
  {
    "MailCountry":              "North            Korea"
  },
  {
    "MailCountry":          "Northern          Ireland"
  },
  {
    "MailCountry": "Northern Mariana Islands, Commonwealth of"
  },
  {
    "MailCountry":                              "Norway"
  },
  {
    "MailCountry":                                "Oman"
  },
  {
    "MailCountry":      "Pago     Pago,     American    Samoa"
  },
  {
    "MailCountry":                            "Pakistan"
  },
  {
    "MailCountry":                               "Palau"
  },
  {
```

```json
    "MailCountry":                        "Palmyra                Island"
  },
  {
    "MailCountry":                                            "Panama"
  },
  {
    "MailCountry":             "Papua            New            Guinea"
  },
  {
    "MailCountry":                                           "Paraguay"
  },
  {
    "MailCountry":                                              "Peru"
  },
  {
    "MailCountry":                                          "Philippines"
  },
  {
    "MailCountry":                "Pitcairn                Island"
  },
  {
    "MailCountry":            "Pohnpei,         Micronesia"
  },
  {
    "MailCountry":                                            "Poland"
  },
  {
    "MailCountry":                                           "Portugal"
  },
  {
    "MailCountry":                     "Puerto                Rico"
  },
  {
    "MailCountry":                                             "Qatar"
  },
  {
    "MailCountry":                                            "Reunion"
  },
  {
    "MailCountry":                                            "Romania"
  },
  {
    "MailCountry":     "Rota,    Northern    Mariana    Islands"
  },
  {
    "MailCountry":                                            "Russia"
  },
```

```json
{
  "MailCountry":                                    "Rwanda"
},
{
  "MailCountry":                  "Saint           Christopher"
},
{
  "MailCountry":    "Saint    Croix,    US    Virgin    Islands"
},
{
  "MailCountry":                  "Saint            Eustatius"
},
{
  "MailCountry":                   "Saint               Helena"
},
{
  "MailCountry":    "Saint    John,    US    Virgin    Islands"
},
{
  "MailCountry":                   "Saint                Lucia"
},
{
  "MailCountry":     "Saint    Pierre    and    Miquelon"
},
{
  "MailCountry":    "Saint    Thomas,    US    Virgin    Islands"
},
{
  "MailCountry":    "Saint    Vincent    and    the    Grenadines"
},
{
  "MailCountry":    "Saipan,    Northern    Mariana    Islands"
},
{
  "MailCountry":                   "Samoa,              American"
},
{
  "MailCountry":                    "San                 Marino"
},
{
  "MailCountry":      "Sand    Island,    Midway    Islands"
},
{
  "MailCountry":      "Sao    Tome    and    Principe"
},
{
  "MailCountry":                                      "Sark"
```

```
  },
  {
    "MailCountry":          "Sark,          Channel          Islands"
  },
  {
    "MailCountry":                    "Saudi                    Arabia"
  },
  {
    "MailCountry":                                        "Scotland"
  },
  {
    "MailCountry":                                         "Senegal"
  },
  {
    "MailCountry":                                      "Seychelles"
  },
  {
    "MailCountry":                    "Sierra                    Leone"
  },
  {
    "MailCountry":                                       "Singapore"
  },
  {
    "MailCountry":                    "Slovak                    Republic"
  },
  {
    "MailCountry":                                        "Slovenia"
  },
  {
    "MailCountry":                    "Solomon                    Island"
  },
  {
    "MailCountry":                    "Solomon                    Islands"
  },
  {
    "MailCountry":                                         "Somalia"
  },
  {
    "MailCountry":                    "South                    Africa"
  },
  {
    "MailCountry":                    "South                    Korea"
  },
  {
    "MailCountry":                                           "Spain"
  },
  {
```

```json
    "MailCountry":                          "Sri                Lanka"
  },
  {
    "MailCountry":        "St        Christopher        and        Nevis"
  },
  {
    "MailCountry":        "St        Pierre        and        Miquelon"
  },
  {
    "MailCountry":      "St      Vincent      and      the      Grenadines"
  },
  {
    "MailCountry":                                            "Sudan"
  },
  {
    "MailCountry":                                            "Suriname"
  },
  {
    "MailCountry":      "Swain's      Island,      American      Samoa"
  },
  {
    "MailCountry":                                            "Swaziland"
  },
  {
    "MailCountry":                                            "Sweden"
  },
  {
    "MailCountry":                                            "Switzerland"
  },
  {
    "MailCountry":        "Syrian        Arab        Republic"
  },
  {
    "MailCountry":                                            "Taiwan"
  },
  {
    "MailCountry":                                            "Tajikistan"
  },
  {
    "MailCountry":                                            "Tanzania"
  },
  {
    "MailCountry":                                            "Thailand"
  },
  {
    "MailCountry":    "Tinian,    Northern    Mariana    Islands"
  },
```

```
{
    "MailCountry":                                              "Togo"
},
{
    "MailCountry":                                             "Tonga"
},
{
    "MailCountry":           "Trinidad        and        Tobago"
},
{
    "MailCountry":             "Tristan        da        Cunha"
},
{
    "MailCountry":                                              "Truk"
},
{
    "MailCountry":                                           "Tunisia"
},
{
    "MailCountry":                                            "Turkey"
},
{
    "MailCountry":                                      "Turkmenistan"
},
{
    "MailCountry":        "Turks       and       Caicos       Islands"
},
{
    "MailCountry":      "Tutuila        Island,        American        Samoa"
},
{
    "MailCountry":                                            "Tuvalu"
},
{
    "MailCountry":                                            "Uganda"
},
{
    "MailCountry":                                           "Ukraine"
},
{
    "MailCountry":           "United        Arab        Emirates"
},
{
    "MailCountry":         "United        Nations,        New        York"
},
{
    "MailCountry":                                           "Uruguay"
```

```json
  },
  {
    "MailCountry":                                    "USA"
  },
  {
    "MailCountry":                             "Uzbekistan"
  },
  {
    "MailCountry":                                "Vanuatu"
  },
  {
    "MailCountry":              "Vatican              City"
  },
  {
    "MailCountry":                              "Venezuela"
  },
  {
    "MailCountry":                                "Vietnam"
  },
  {
    "MailCountry":        "Virgin        Islands        US"
  },
  {
    "MailCountry":               "Wake               Island"
  },
  {
    "MailCountry":                                  "Wales"
  },
  {
    "MailCountry":     "Wallis    and    Futuna    Islands"
  },
  {
    "MailCountry":              "Western              Samoa"
  },
  {
    "MailCountry":             "Yap,             Micronesia"
  },
  {
    "MailCountry":                                  "Yemen"
  },
  {
    "MailCountry":                             "Yugoslavia"
  },
  {
    "MailCountry":                                 "Zambia"
  },
  {
```

```
    "MailCountry":                                          "Zimbabwe"
  },
  {
    "MailCountry":                                            "Monaco"
  },
  {
    "MailCountry":                                            "Serbia"
  },
  {
    "MailCountry":                                        "Montenegro"
  }
],
```

IBRD_CONFIG["countTypeDom"] - Deprecated

This object is not used in IBRD and only contains imported values from the legacy IBRD.

```
  "countTypeDom":                                                      [
    {
      "CountTypeKey":                                             "1",
      "CountType":                    "New            Registration",
      "SpecialStatusCategory":                                "NULL",
      "ConfirmationRequestCategory":                          "NULL"
    },
    {
      "CountTypeKey":                                             "2",
      "CountType":        "Existing      Registration    Modified",
      "SpecialStatusCategory":                                "NULL",
      "ConfirmationRequestCategory":                          "NULL"
    },
    {
      "CountTypeKey":                                             "3",
      "CountType":                                             "Lost",
      "SpecialStatusCategory":                                "Lost",
      "ConfirmationRequestCategory":                          "NULL"
    },
    {
      "CountTypeKey":                                             "4",
      "CountType":                                           "Stolen",
      "SpecialStatusCategory":                              "Stolen",
      "ConfirmationRequestCategory":                          "NULL"
    },
    {
      "CountTypeKey":                                             "5",
      "CountType":                                             "Sold",
      "SpecialStatusCategory":                                "Sold",
      "ConfirmationRequestCategory":                          "NULL"
```

```json
  },
  {
    "CountTypeKey":                                    "6",
    "CountType":                                "Replaced",
    "SpecialStatusCategory":                    "Replaced",
    "ConfirmationRequestCategory":                  "NULL"
  },
  {
    "CountTypeKey":                                    "7",
    "CountType":                               "Destroyed",
    "SpecialStatusCategory":                   "Destroyed",
    "ConfirmationRequestCategory":                  "NULL"
  },
  {
    "CountTypeKey":                                    "8",
    "CountType":                             "OutOfService",
    "SpecialStatusCategory":                 "OutOfService",
    "ConfirmationRequestCategory":                  "NULL"
  },
  {
    "CountTypeKey":                                    "9",
    "CountType":                                 "Normal",
    "SpecialStatusCategory":                     "Normal",
    "ConfirmationRequestCategory":                  "NULL"
  },
  {
    "CountTypeKey":                                   "10",
    "CountType":                  "Confirmation         Sent",
    "SpecialStatusCategory":                        "NULL",
    "ConfirmationRequestCategory":                  "NULL"
  },
  {
    "CountTypeKey":                                   "11",
    "CountType":              "Confirmation      Undelivered",
    "SpecialStatusCategory":                        "NULL",
    "ConfirmationRequestCategory":                  "NULL"
  },
  {
    "CountTypeKey":                                   "12",
    "CountType":   "Confirmation   Confirmed   with   Changes",
    "SpecialStatusCategory":                        "NULL",
    "ConfirmationRequestCategory":                  "NULL"
  },
  {
    "CountTypeKey":                                   "13",
    "CountType":                 "Confirmation      Confirmed",
    "SpecialStatusCategory":                        "NULL",
```

```
      "ConfirmationRequestCategory":                          "NULL"
    },
    {
      "CountTypeKey":                                          "14",
      "CountType":                 "Registration        Activated",
      "SpecialStatusCategory":                               "NULL",
      "ConfirmationRequestCategory":                          "NULL"
    },
    {
      "CountTypeKey":                                          "15",
      "CountType":                 "Registration      Deactivated",
      "SpecialStatusCategory":                               "NULL",
      "ConfirmationRequestCategory":                          "NULL"
    }
  ],
```

IBRD_CONFIG["ELTVehiculeType"]

List of vehicle types available for selection in drop down for ELT beacons. Note that the object is spelled "ELTVehiculeType" while the key pairs are spelled "ELTVehicleType".

```
  "ELTVehiculeType":                                             [
    {
      "ELTVehicleType":                            "Helicopter"
    },
    {
      "ELTVehicleType":         "Multiple       Engine       Jet"
    },
    {
      "ELTVehicleType":       "Multiple     Engine     Propeller"
    },
    {
      "ELTVehicleType":                                 "Other"
    },
    {
      "ELTVehicleType":          "Single         Engine       Jet"
    },
    {
      "ELTVehicleType":        "Single       Engine     Propeller"
    }
  ],
```

IBRD_CONFIG["emailTemplateKey"]
List of types of email templates available for use by IBRD when sending communications out to users.

```json
"emailTemplateKey":                                              [
    {
      "emailtemplateKey":                                     "1",
      "variableName":                              "CONTACT_US"
    },
    {
      "emailtemplateKey":                                     "2",
      "variableName":                     "BEACON_REGISTRATION"
    },
    {
      "emailtemplateKey":                                     "3",
      "variableName":                          "PASSWORD_RESET"
    },
    {
      "emailtemplateKey":                                     "4",
      "variableName":                           "QUESTIONNAIRE"
    },
    {
      "emailtemplateKey":                                     "5",
      "variableName":                          "REMINDER_EMAIL"
    },
    {
      "emailtemplateKey":                                     "6",
      "variableName":                "REMINDER           SMS"
    },
    {
      "emailtemplateKey":                                     "7",
      "variableName":              "CONTACT_US_NOT_SUPPORTED"
    },
    {
      "emailtemplateKey":                                     "8",
      "variableName":                   "CONTACT_US_SUPPORTED"
    },
    {
      "emailtemplateKey":                                     "9",
      "variableName":                       "CONTACT_US_AUTO"
    },
    {
      "emailtemplateKey":                                    "10",
      "variableName":                     "USER_REGISTRATION"
    },
    {
      "emailtemplateKey":                                    "11",
      "variableName":              "USER_REGISTRATION_COMPLETION"
    },
    {
      "emailtemplateKey":                                    "12",
```

```
        "variableName":                "DELEGATE_BEACON_REGISTRATION"
    },
    {
      "emailtemplateKey":                                        "13",
      "variableName":    "DELEGATE_BEACON_REGISTRATION_COMPLETION"
    },
    {
      "emailtemplateKey":                                        "14",
      "variableName":                        "BEACON_MODIFICATION"
    },
    {
      "emailtemplateKey":                                        "15",
      "variableName":                              "BEACON_STATUS"
    },
    {
      "emailtemplateKey":                                        "16",
      "variableName":       "DELEGATE_BEACON_REGISTRATION_NEWUSER"
    },
    {
      "emailtemplateKey":                                        "17",
      "variableName":                    "ADMIN_UPDATED_USER_EMAIL"
    },
    {
      "emailtemplateKey":                                        "18",
      "variableName":                      "ADMIN_CREATED_NEW_USER"
    },
    {
      "emailtemplateKey":                                        "19",
      "variableName":                  "LEGACY_USER_RESET_PASSWORD"
    },
    {
      "emailtemplateKey":                                        "20",
      "variableName":              "ATTEMPT_REGISTER_EXISTED_BEACON"
    },
    {
      "emailtemplateKey":                                        "21",
      "variableName":            "BEACON_STATUS_SET_SOLD_VIA_EMAIL"
    },
    {
      "emailtemplateKey":                                        "22",
      "variableName":          "BEACON_STATUS_SET_SOLD_NOTIFY_USER"
    }
  ],
```

IBRD_CONFIG["emailTemplateLanguages"]

Contains a relationship between email Template and culture (language) and the appropriate email subject line and content to be selected when IBRD sends communications to users.

Because the content in the email templates is long-format, only one example is shown in this document to demonstrate the structure of the object. Email contents are often populated with variables enclosed by square brackets so the appropriate information can be inserted by the system when communication is sent.

```
"emailTemplateLanguages":                                        [
    {
        "emailtemplateKey":                                "2",
        "cultureKey":                                      "1",
        "subject":  "Beacon  [BCNID15]  registration  complete",
        "content": "<p>Dear  [OWNERNAME],</p>\n\n<p>Thank  you  for
providing your registration information. This information has been
shown to be a great benefit to SAR forces in responding to beacon
activations  and  significantly  reduces  their  response  time.
Periodic  confirmation  of  this  data  will  be  requested  every  two
years.</p>\n\n<p>Please  note  that  it  is  your  responsibility  to
verify the accuracy of your registration information. If you need
to make corrections, please login and make corrections directly in
the  system.  Our  policy  prohibits  us  from  making  corrections  to
registration       information       on       behalf       of       beacon
registrants.</p>\n\n<p>If  you  have  any  questions  regarding  your
registration,                              please                              <a
href=\"https://406registration.com/contact\">contact
us</a>.</p>\n\n<p>Sincerely,<br          />\nIBRD          Database
Administrator<br                                              />\n<a
href=\"mailto:DbAdmin@406Registration.com\">DbAdmin@406registrat
ion.com</a><br                                              />\n<a
href=\"http://www.406Registration.com\">www.406registration.com<
/a></p>\n\n<p> </p>\n\n<p><em>The       beacon       information
provided                    appears                    below:</em></p>\n\n<hr
/>\n<p>[BEACONINFO]</p>\n\n<p> </p>\n\n<p> </p>\n\n<p>
 </p>\n\n<p> </p>\n\n<p> </p>\n\n<p> </p>\n\
n<p> </p>\n\n<p> </p>\n\n<p> </p>\n\n<p> </p
>\n\n<p> </p>\n\n<p> </p>\n\n<p> </p>\n\n<p>&nbsp
;</p>\n\n<p> </p>\n\n<p> </p>\n\n<p> </p>\n\n<p>&
nbsp;</p>\n\n<p> </p>\n\n<p> </p>\n\n<p> </p>\n\n
<p> </p>\n\n<p> </p>\n\n<p> </p>\n\n<p> </p>
\n\n<p> </p>\n\n<p> </p>\n\n<p> </p>\n\n<p> 
</p>\n\n<p> </p>\n\n<p> </p>\n\n<p> </p>\n\n<p>&n
bsp;</p>\n\n<p> </p>\n\n<p> </p>\n\n<p> </p>\n\n<
p> </p>\n\n<p> </p>\n\n<p> </p>\n\n<p> </p>\
n\n<p> </p>\n\n<p> </p>\n\n<p> </p>\n\n<p> <
/p>\n\n<p> </p>\n\n<p> </p>\n\n<p> </p>\n\n<p>&nb
sp;</p>\n\n<p> </p>\n\n<p> </p>\n\n<p> </p>\n\n<p
```

```
> </p>\n\n<p> </p>\n\n<p> </p>\n\n<p> </p>\n
\n<p> </p>\n\n<p> </p>\n\n<p> </p>\n\n<p> </
p>\n"
      },
```

IBRD_CONFIG["EPIRBVehiculeType"]

List of vehicle types available for selection in drop down for EPRIB beacons. Note that the object is spelled "EPIRBVehiculeType" while the key pairs are spelled EPIRBVehicleType". Users select the EPIRB vehicle type by first selecting an EPIRBVehicleTypeGroup. This changes the EPIRBVehicleType and EPIRBVehicleTypeDescription fields displayed to the user on the front end.

```
"EPIRBVehiculeType":                                        [
    {
      "EPIRBVehicleType":         "NON-POWER      Life       Boat",
      "EPIRBVehicleTypeDescription":          "Life          Boat",
      "EPIRBVehicleTypeGroup":                        "Non-power"
    },
    {
      "EPIRBVehicleType":         "NON-POWER      Life       Raft",
      "EPIRBVehicleTypeDescription":          "Life          Raft",
      "EPIRBVehicleTypeGroup":                        "Non-power"
    },
    {
      "EPIRBVehicleType":            "NON-POWER        Other",
      "EPIRBVehicleTypeDescription":                   "Other",
      "EPIRBVehicleTypeGroup":                        "Non-power"
    },
    {
      "EPIRBVehicleType":              "POWER          Cargo",
      "EPIRBVehicleTypeDescription":                   "Cargo",
      "EPIRBVehicleTypeGroup":                          "Power"
    },
    {
      "EPIRBVehicleType":              "POWER          Fishing",
      "EPIRBVehicleTypeDescription":                   "Fishing",
      "EPIRBVehicleTypeGroup":                          "Power"
    },
    {
      "EPIRBVehicleType":              "POWER          Other",
      "EPIRBVehicleTypeDescription":                   "Other",
      "EPIRBVehicleTypeGroup":                          "Power"
    },
    {
      "EPIRBVehicleType":         "POWER     Pleasure      Craft",
      "EPIRBVehicleTypeDescription":     "Pleasure      Craft",
      "EPIRBVehicleTypeGroup":                          "Power"
```

```
    },
    {
      "EPIRBVehicleType":                      "POWER            Tanker",
      "EPIRBVehicleTypeDescription":                          "Tanker",
      "EPIRBVehicleTypeGroup":                                 "Power"
    },
    {
      "EPIRBVehicleType":                      "POWER              Tug",
      "EPIRBVehicleTypeDescription":                             "Tug",
      "EPIRBVehicleTypeGroup":                                 "Power"
    },
    {
      "EPIRBVehicleType":                                      "SAIL",
      "EPIRBVehicleTypeDescription":    "Number      of     Masts",
      "EPIRBVehicleTypeGroup":                                 "Sail"
    }
  ],
```

IBRD_CONFIG["languages"]
Defines the supported languages in the IBRD public user interface.

```
    "languages":                                                [
    {
      "cultureKey":                                           "1",
      "code":                                            "en-US",
      "nativeName":                                    "English",
      "sortOrder":                                         "1",
      "englishName":                                   "English"
    },
    {
      "cultureKey":                                           "2",
      "code":                                            "fr-CA",
      "nativeName":                                   "Français",
      "sortOrder":                                         "2",
      "englishName":                                    "French"
    },
    {
      "cultureKey":                                           "3",
      "code":                                            "es-MX",
      "nativeName":                      "Español              ",
      "sortOrder":                                         "3",
      "englishName":                                   "Spanish"
    },
    {
      "cultureKey":                                           "4",
      "code":                                            "ru-RU",
      "nativeName":                                   "Русский",
      "sortOrder":                                         "4",
```

```
      "englishName":                                "Russian"
    },
    {
      "cultureKey":                                      "5",
      "code":                                        "ja-JP",
      "nativeName":                                   "日本の",
      "sortOrder":                                       "5",
      "englishName":                              "Japanese"
    },
    {
      "cultureKey":                                      "6",
      "code":                                        "el-GR",
      "nativeName":                                "Ελληνικά",
      "sortOrder":                                       "6",
      "englishName":                                "Greece"
    }
  ],
```

IBRD_CONFIG["midInfo"]

This object contains the list of maritime identification digits (MIDs) available for use in IBRD. Because of the large number of defined MIDs, and because they are available for lookup in other documentation, only one example is shown in this document to demonstrate the structure of the object.

```
  "MIDInfo":                                             [
    {
      "Mid":                                         "316",
      "CountryName":                              "CANADA",
      "Supported":                                     "N",
      "ConfirmationRequired":                          "N",
      "SupportedTypes":                            "0,1,2",
      "NDPSupportedTypes":                         "0,1,2",
      "POCCrossRef":                                "1102",
      "POCELT":                                        "0",
      "POCEPIRB":                                      "0",
      "POCPLB":                                        "0",
      "POCSSAS":                                       "0",
      "REGCrossRef":                                "1624",
      "REGELT":                                        "0",
      "REGEPIRB":                                      "0",
      "REGPLB":                                        "0",
      "REGSSAS":                                       "0",
      "type":                                        "mid",
      "_id":                                     "mid_316"
    }
  ],
```

IBRD_CONFIG["passwordQuestionsEnglish"]

List of selectable security questions for the password reset functionality in English.

```
  "passwordQuestionsEnglish":                              [
    {
      "ChallengeQuestion": "What  is  the  name  of  your  favorite
movie?"
    },
    {
      "ChallengeQuestion": "What  is  the  name  of  your  favorite
teacher?"
    },
    {
      "ChallengeQuestion":  "What   is   the   name   of   your   pet?"
    },
    {
      "ChallengeQuestion": "What  is  your  favorite  sports  team?"
    },
    {
      "ChallengeQuestion": "What  is  your  mother's  maiden  name?"
    },
    {
      "ChallengeQuestion": "What   was   the   name   of   your   high
school?"
    },
    {
      "ChallengeQuestion":  "What   was   your   childhood   hero?"
    }
  ],
```

IBRD_CONFIG["passwordQuestionsFrench"]

List of selectable security questions for the password reset functionality in French.

```
  "passwordQuestionsFrench":                               [
    {
      "ChallengeQuestion":  "Quel   est   le   nom   de   votre   film
préféré?"
    },
    {
      "ChallengeQuestion": "Quel  est  le  nom  de  votre  professeur
préféré?"
    },
    {
      "ChallengeQuestion": "Quel  est  le  nom  de  votre  animal  de
compagnie?"
    },
    {
```

```json
      "ChallengeQuestion": "Quelle  est  votre  équipe  de  sports
favori?"
    },
    {
      "ChallengeQuestion": "Quel est le nom de jeune fille de votre
mère                                                            ?"
    },
    {
      "ChallengeQuestion": "Quel  était  le  nom  de  votre  lycée?"
    },
    {
      "ChallengeQuestion": "Quel  était  votre  héros  d'enfance?"
    }
  ],
```

IBRD_CONFIG["passwordQuestionsGreece"]

List of selectable security questions for the password reset functionality in Greek.

```json
  "passwordQuestionsGreece":                                        [
    {
      "ChallengeQuestion": "What  is  the  name  of  your  favorite
movie?"
    },
    {
      "ChallengeQuestion": "What  is  the  name  of  your  favorite
teacher?"
    },
    {
      "ChallengeQuestion":  "What  is  the  name  of  your  pet?"
    },
    {
      "ChallengeQuestion": "What  is  your  favorite  sports  team?"
    },
    {
      "ChallengeQuestion": "What  is  your  mother's  maiden  name?"
    },
    {
      "ChallengeQuestion":  "What  was  the  name  of  your  high
school?"
    },
    {
      "ChallengeQuestion":  "What  was  your  childhood  hero?"
    }
  ],
```

IBRD_CONFIG["passwordQuestionsJapanese"]

List of selectable security questions for the password reset functionality in Japanese.

```
"passwordQuestionsJapanese":                                    [
  {
    "ChallengeQuestion": "What is the name of your favorite
movie?"
  },
  {
    "ChallengeQuestion": "What is the name of your favorite
teacher?"
  },
  {
    "ChallengeQuestion": "What is the name of your pet?"
  },
  {
    "ChallengeQuestion": "What is your favorite sports team?"
  },
  {
    "ChallengeQuestion": "What is your mother's maiden name?"
  },
  {
    "ChallengeQuestion": "What was the name of your high
school?"
  },
  {
    "ChallengeQuestion": "What was your childhood hero?"
  }
],
```

IBRD_CONFIG["passwordQuestionsRussian"]

List of selectable security questions for the password reset functionality in Russian.

```
"passwordQuestionsRussian":                                    [
  {
    "ChallengeQuestion": "Название вашего любимого кино?"
  },
  {
    "ChallengeQuestion": "Как звали вашего любимого
преподавателя?"
  },
  {
    "ChallengeQuestion": "Имя вашего домашнего животного?"
  },
  {
    "ChallengeQuestion": "Имя вашей любимой спортивной команды?"
  },
  {
    "ChallengeQuestion": "Какова девичья фамилия вашей матери?"
```

```
    },
    {
      "ChallengeQuestion":    "Название    вашей    средней    школы?"
    },
    {
      "ChallengeQuestion":    "Кто    был    героем    вашего    детства?"
    }
  ],
```

IBRD_CONFIG["passwordQuestionsSpanish"]

List of selectable security questions for the password reset functionality in Spanish.

```
  "passwordQuestionsSpanish":                                            [
    {
      "ChallengeQuestion":  "¿Cuál    es    tu    película    favorita?"
    },
    {
      "ChallengeQuestion":    "¿Cómo    se    llama    tu    maestro(a)
favorito(a)?"
    },
    {
      "ChallengeQuestion":    "¿Cómo    se    llama    tu    mascota?"
    },
    {
      "ChallengeQuestion":    "¿Cuál    es    tu    equipo    favorito?"
    },
    {
      "ChallengeQuestion": "¿Cuál es el apellido paterno de tu
madre?"
    },
    {
      "ChallengeQuestion":    "¿Cómo    se    llama    tu    escuela
preparatoria?"
    },
    {
      "ChallengeQuestion": "¿Quién fue tu héroe de infancia?"
    }
  ],
```

IBRD_CONFIG["phoneType"]

List of allowed values for phone number types.
```
"phoneType":                                                           [
    {
      "PhoneType":                                              "CELL",
      "PhoneTypeDescription":                                  "Mobile"
    },
    {
      "PhoneType":                                               "FAX",
```

```
      "PhoneTypeDescription":                                    "Fax"
    },
    {
      "PhoneType":                                              "HOME",
      "PhoneTypeDescription":                                   "Home"
    },
    {
      "PhoneType":                                              "OTHR",
      "PhoneTypeDescription":                                  "Other"
    },
    {
      "PhoneType":                                              "WORK",
      "PhoneTypeDescription":                                   "Work"
    }
  ],
```

IBRD_CONFIG["PLBVehiculeType"]

List of vehicle types available for selection in drop down for PLB beacons. Note that the object is spelled "PLBVehiculeType" while the key pairs are spelled PLBVehicleType".

```
"PLBVehiculeType":                                                  [
    {
      "PLBVehicleType":                                    "Aircraft"
    },
    {
      "PLBVehicleType":                                        "Boat"
    },
    {
      "PLBVehicleType":                                  "Helicopter"
    },
    {
      "PLBVehicleType":                    "Land             Vehicle"
    },
    {
      "PLBVehicleType":                                        "None"
    },
    {
      "PLBVehicleType":                                       "Other"
    }
  ],
```

IBRD_CONFIG["radioCallSign"]

This object contains the list of radio call signs available for use in IBRD. Because of the large number of radio call signs, and because they are available for lookup in other documentation, only one example is shown in this document to demonstrate the structure of the object.

```
  "radioCallSign":                                                      [
    {
      "CallSignFirst":                                          "2AA",
      "CallSignLast":                                           "2AZ",
      "OrgName":                              "G             BRITAIN"
    }
],
```

IBRD_CONFIG["radioEquipment"]

List of allowed values for radio equipment.

```
"radioEquipment":                                                      [
    {
      "RadioEquipment":                                          "HF"
    },
    {
      "RadioEquipment":                                          "MF"
    },
    {
      "RadioEquipment":                                       "Other"
    },
    {
      "RadioEquipment":                                         "SSB"
    },
    {
      "RadioEquipment":                                         "VHF"
    }
  ],
```

IBRD_CONFIG["roles"]

Outlines all possible user roles available in IBRD for logged-in users.

```
  "roles":                                                             [
    {
      "RoleId":                                                   "1",
      "RoleName":            "NATIONAL        DATA       PROVIDER"
    },
    {
      "RoleId":                                                   "2",
      "RoleName":            "SHIP           SURVEYOR        USER"
    },
    {
      "RoleId":                                                   "3",
      "RoleName":                   "SYSTEM            MANAGER"
    },
    {
      "RoleId":                                                   "4",
      "RoleName":                   "SAR                      USER"
```

```
  },
  {
    "RoleId":                                        "0",
    "RoleName":            "SINGLE          BEACON          OWNER"
  },
  {
    "RoleId":                                        "5",
    "RoleName":                      "BLOCK              USER"
  },
  {
    "RoleId":                                        "7",
    "RoleName":                "MAINTENANCE          PROVIDER"
  }
],
```

IBRD_CONFIG["specialStatus"]

Lists allowed values for the beacon Special Status field, selectable by users once a beacon has been registered in IBRD.

```
  "specialStatus":                                            [
    {
      "SpecialStatus":                          "CANCELLED",
      "SpecialStatusDescription":        "UIN          Cancelled"
    },
    {
      "SpecialStatus":                          "OUTOFSERVICE",
      "SpecialStatusDescription":   "Out   of   Service/Destroyed"
    },
    {
      "SpecialStatus":                          "LOST",
      "SpecialStatusDescription":               "Lost"
    },
    {
      "SpecialStatus":                          "REPLACED",
      "SpecialStatusDescription":           "Replaced"
    },
    {
      "SpecialStatus":                          "SOLD",
      "SpecialStatusDescription":               "Sold"
    },
    {
      "SpecialStatus":                          "STOLEN",
      "SpecialStatusDescription":             "Stolen"
    },
    {
      "SpecialStatus":                          "ACTIVE",
      "SpecialStatusDescription":             "Active"
```

```
      },
      {
        "SpecialStatus":                      "RELEASETOMAINTENANCE",
        "SpecialStatusDescription":    "Release    To    Maintenance"
      }
  ],
```

IBRD_CONFIG["systemConfig"] - Deprecated

The system config table is a legacy table imported from the previous version of the IBRD. This table is not used in IBRD. Where necessary, values for sensitive information have been redacted from this document. None of these values are used in current IBRD functionality.

```
"systemConfig":                                                          [
      {
        "SystemCfgName":                            "SystemCfgName",
        "SystemCfgValue":                           "SystemCfgValue"
      },
      {
        "SystemCfgName":                                 "BanHours",
        "SystemCfgValue":                                       "2"
      },
      {
        "SystemCfgName":                             "errorPageKey",
        "SystemCfgValue":                                      "20"
      },
      {
        "SystemCfgName":                                "errorMail",
        "SystemCfgValue":                    "errors@adeointernet.com"
      },
      {
        "SystemCfgName":                              "noreplyMail",
        "SystemCfgValue":               "noreply@406registration.com"
      },
      {
        "SystemCfgName":                                 "smtpPort",
        "SystemCfgValue":                                  "******"
      },
      {
        "SystemCfgName":                             "smtpPassword",
        "SystemCfgValue":                      "*****************"
      },
      {
        "SystemCfgName":                                 "smtpUser",
        "SystemCfgValue":                 "admin@406registration.com"
      },
      {
        "SystemCfgName":                                     "_FTP",
```

```
      "SystemCfgValue":    "user:    **********              password:
************"
   },
   {
     "SystemCfgName":                                        "_DB",
     "SystemCfgValue": "user: ********    password: ********"
   },
   {
     "SystemCfgName":                                        "_SSH",
     "SystemCfgValue":    "Host:    *********         User:   ******
Password:                 *********Port:                       *****"
   },
   {
     "SystemCfgName":                             "ticketSystem",
     "SystemCfgValue":                                       "0"
   },
   {
     "SystemCfgName":                             "_namecheap",
     "SystemCfgValue":    "user:    ********   password:   *******"
   },
   {
     "SystemCfgName":           "_DNS          Made          easy",
     "SystemCfgValue": "user: **********    password: *********"
   },
   {
     "SystemCfgName":                             "ticketToken",
     "SystemCfgValue":        "cea8587608f624f5474fae63041e9b95"
   },
   {
     "SystemCfgName":                             "BanAttempts",
     "SystemCfgValue":                                       "5"
   },
   {
     "SystemCfgName":                       "PasswordResetPageKey",
     "SystemCfgValue":                                      "15"
   },
   {
     "SystemCfgName":                             "contactPageKey",
     "SystemCfgValue":                                       "4"
   },
   {
     "SystemCfgName":                      "PasswordResetPageKey2",
     "SystemCfgValue":                                      "16"
   },
   {
     "SystemCfgName":                       "systemMailFromName",
     "SystemCfgValue":                   "IBRD           System"
```

```
    },
    {
      "SystemCfgName":                              "DaysSendReminder",
      "SystemCfgValue":                                        "730"
    },
    {
      "SystemCfgName":                                   "homePageKey",
      "SystemCfgValue":                                          "1"
    },
    {
      "SystemCfgName":                                    "smtpServer",
      "SystemCfgValue":                              "406registration-
com.mail.protection.outlook.com"
    },
    {
      "SystemCfgName":                                    "systemMail",
      "SystemCfgValue":                    "admin@406registration.com"
    },
    {
      "SystemCfgName":                            "ConfirmationPageKey",
      "SystemCfgValue":                                         "18"
    },
    {
      "SystemCfgName":                                     "formEmail",
      "SystemCfgValue":              "406archive@406registration.com"
    }
  ],
```

IBRD_CONFIG["usageMoreInfo"]

List of allowed values for the "specific usage" field during beacon registration.

```
  "usageMoreInfo":                                                 [
    {
      "UsageMoreInfo":                                     "Fishing"
    },
    {
      "UsageMoreInfo":                                      "Hiking"
    },
    {
      "UsageMoreInfo":                                     "Hunting"
    },
    {
      "UsageMoreInfo":                                       "Other"
    }
  ],
```

IBRD_CONFIG["page"]

This object defines the list of content-managed webpages in IBRD. These are general information pages such as 'Contact Us', Help pages and the homepage.

```json
  "page":                                                        [
    {
      "pageKey":                                      "ContactUs",
      "pageName":                      "Contact                 Us"
    },
    {
      "pageKey":                          "CreateUserInstructions",
      "pageName":        "Create        User        Instructions"
    },
    {
      "pageKey":                      "CreateActivityInstructions",
      "pageName":                  "Activity          Instructions"
    },
    {
      "pageKey":        "CreateActivityParticipantsInstructions",
      "pageName":    "Activity    Participants    Instructions"
    },
    {
      "pageKey":               "CreateActivityVehicleInstructions",
      "pageName":        "Activity       Vehicle       Instructions"
    },
    {
      "pageKey":                                            "Faq",
      "pageName":            "Help             &            FAQ"
    },
    {
      "pageKey":                                        "FaqQ&A",
      "pageName":        "FAQ        Question        and        Answer"
    },
    {
      "pageKey":                                      "Homepage",
      "pageName":                "Homepage            Messaging"
    },
    {
      "pageKey":                              "GroupUserNotice",
      "pageName":        "Notice        to        Group        of        Users"
    }
  ],
```

IBRD_CONFIG["pageContent"]

This object defines the list of content-managed webpages in IBRD. These are general information pages such as 'Contact Us', Help pages and the homepage. The pageContent object links the page to its localized content and publishing state.

```json
"pageContent":                                                          [
    {
        "pageContentKey":                                       "zW5n1",
        "pageKey":                                         "ContactUs",
        "order":                                                      1,
        "isPublished":                                             true
    },
    {
        "pageContentKey":                                       "Lk7I6",
        "pageKey":                                            "FaqQ&A",
        "order":                                                      1,
        "isPublished":                                             true
    },
    {
        "pageContentKey":                                       "Zra0U",
        "pageKey":                                               "Faq",
        "order":                                                      1,
        "isPublished":                                             true
    },
    {
        "pageContentKey":                                       "BCIXy",
        "pageKey":                                            "FaqQ&A",
        "order":                                                      2,
        "isPublished":                                             true
    },
    {
        "pageContentKey":                                       "9HN-v",
        "pageKey":                                            "FaqQ&A",
        "order":                                                      3,
        "isPublished":                                             true
    },
    {
        "pageContentKey":                                       "Pl79K",
        "pageKey":                                            "FaqQ&A",
        "order":                                                      4,
        "isPublished":                                             true
    },
    {
        "pageContentKey":                                       "O64FR",
        "pageKey":                                            "FaqQ&A",
        "order":                                                      5,
        "isPublished":                                             true
    },
    {
        "pageContentKey":                                       "oAp8m",
        "pageKey":                                            "FaqQ&A",
        "order":                                                      6,
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```json
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  },
  {
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    "pageKey":                                              "FaqQ&A",
    "order":                                                      7,
    "isPublished":                                              true
  },
  {
    "pageContentKey":                                        "0scNC",
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    "order":                                                      8,
    "isPublished":                                              true
  },
  {
    "pageContentKey":                                        "8Dwnb",
    "pageKey":                                              "FaqQ&A",
    "order":                                                      9,
    "isPublished":                                              true
  },
  {
    "pageContentKey":                                        "npzWJ",
    "pageKey":                                "CreateUserInstructions",
    "order":                                                      1,
    "isPublished":                                              true
  },
  {
    "pageContentKey":                                        "l-jES",
    "pageKey":                                "CreateUserInstructions",
    "order":                                                      1,
    "isPublished":                                             false
  },
  {
    "pageContentKey":                                        "GYKNn",
    "pageKey":                            "CreateActivityInstructions",
    "order":                                                      1,
    "isPublished":                                              true
  },
  {
    "pageContentKey":                                        "PdjRx",
    "pageKey":                "CreateActivityParticipantsInstructions",
    "order":                                                      1,
    "isPublished":                                              true
  },
  {
    "pageContentKey":                                        "Db7Qx",
    "pageKey":                   "CreateActivityVehicleInstructions",
```

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      "order":                                                      1,
      "isPublished":                                             true
    },
    {
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      "pageKey":                                           "Homepage",
      "order":                                                      2,
      "isPublished":                                            false
    },
    {
      "pageContentKey":                                       "73C5U",
      "pageKey":                                           "Homepage",
      "order":                                                      1,
      "isPublished":                                            false
    },
    {
      "pageContentKey":                                       "DEeOJ",
      "pageKey":                                           "Homepage",
      "order":                                                      1,
      "isPublished":                                            false
    }
  ],
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- END OF ANNEX B -

- END OF DOCUMENT