

LOCATIONS Model and Services 3.3

Document Status

status: Request for Comment (valid values are < Request for Comment, Preliminary Review, Public Review, Architectural Review, Final Review, Published, Deprecated)

This version: **Assembla**.com. Files Tag = CUFX\_3.3\_RFC\_Active

Previous Version: **Assembla**.com. Files Tag = CUFX\_3.2\_RFC\_Archive

Change Log

|  |  |  |
| --- | --- | --- |
| **Version** | **Date** | **Changes** |
| **0.0.1** |  | * Initial Creation |
| **0.0.2** |  | * Changed to include enhancements observations of working group |
| **3.0** | **10/29/2013** | * Switch to use X-HTTP-METHOD-OVERRIDE standard rather than subMethod non-Standard method for overriding request types. * Create a locationMessage wrapper for every message to increase ability for infrastructure to serialize the data * Versioning and format change with release CUFX 3.0 |
| **3.0** | **12/13/2013** | * Update examples X-API-Version to >=3.0.0 |
| **3.0** | **12/15/2013** | * Edit changes |
| **3.1** | **07/17/2015** | * Updated to release 3.1 |
| **3.2** | **05/10/2016** | * Updated to release 3.2 |
| **3.3** | **02/15/2017** | * Updated to release 3.3 |
|  |  |  |

Overview of Specification

The Locations specification describes the services and data structures used as part of an offering to allow a user to search for physical locations, such as ATMs and branches. A typical example application in which this service would be used is a mobile ATM locator. In this example, a user would use his device’s GPS coordinates to locate the nearest ATM’s that are served by his financial institution.

This specification describes the data structures and services for the described locator service.

Any known Errors in the document

|  |  |
| --- | --- |
| **Error Description** | Status of Error |
|  |  |

Table of Contents

Document Status 1

Change Log 1

Overview of Specification 1

Any known Errors in the document 2

Table of Contents 2

Document Conventions 2

Definitions related to the specification 2

DATA ELEMENTS 3

DATA ELEMENT: LOCATIONMESSAGE 3

DATA ELEMENT: LOCATION 3

DATA ELEMENT: LOCATIONLIST 4

DATA ELEMENT: LOCATIONFILTER 4

DATA ELEMENT: MESSAGECONTEXT 4

Location Services 5

SERVICE DEFINITIONS 5

SERVICE MESSAGE: GETLOCATIONS 5

Bibliography 7

# Document Conventions

List any document conventions such as what bold and italics mean and how the document is intended to be read.

“Within this specification, the key words "MUST", "MUST NOT", "REQUIRED", "SHALL", "SHALL NOT", "SHOULD", "SHOULD NOT", "RECOMMENDED", "MAY", and "OPTIONAL" are to be interpreted as described in W3 Working Group (W3C)]. However, for readability, these words do not appear in all uppercase letters in this specification.

At times, this specification recommends good practice for authors and user agents. These recommendations are not normative and conformance with this specification does not depend on their realization. These recommendations contain the expression "We recommend ...", "This specification recommends ...", or some similar wording.”

All formatting in this document utilize Word Styles.

All Citations must utilize Word Citations to automatically show at the end of the document.

All updates after the initial creation must be performed using Tracking Changes turn on and Accepted by the Architecture committee.

# Definitions related to the specification

**LOCATION**

A physical location that provides banking services to a member. A location can include, but is not limited to, the following:

* ATM owned by the financial institution
* Branch owned by the financial institution
* Shared ATM serving as part of a network (e.g. COOP) used by the financial institution.
* Shared branch serving as part of a shared branching network (e.g. COOP) used by the financial institution.

**NETWORK**

A network for shared ATM’s or for shared branches. Examples of these types of networks are COOP, NYCE, MoneyPass, and Star.

# DATA ELEMENTS

The important complex, container, and enumeration elements making up the CUFX Location service are described below. The full element specifications may be found in **Location.xsd, LocationMessage.xsd**, and **LocationFilter.xsd.** Common elements can be found in **Common.xsd**.

### DATA ELEMENT: LOCATIONMESSAGE

The LocationMessage object, for which the definition can be found in **LocationMessage.xsd,** is a wrapper object that contains a Location for transmission.

**Attributes**

* ***messageContext*** – The CUFX MessageContext for this object. The MessageContext object identifies the sender and provides some level of security or processing information for any given CUFX request.
* ***locationFilter*** – Any LocationFilter object being transmitted in this LocationMessage.
* ***locationList*** – Any LocationList object (*i.e.*, list of zero or more Location objects) being transmitted in this LocationMessage.

### DATA ELEMENT: LOCATION

The Location object, for which the definition can be found in **Location.xsd**, defines the physical location of a banking service (e.g., ATM or branch). Some of the fields are based on a common element and are used across more than one specification. These common elements can be found in **Contact.xsd** and **Common.xsd**.

**Attributes**

* ***locationId*** – The unique identifier of this Location object
* ***name*** – An optional name of the location (e.g., Briargate Branch)
* ***distance*** – The distance between the location and the address that was passed into the location filter used to search for these locations. If no location filter was used, this value would be zero.
* ***type*** - The type of location (e.g., ATM, Branch).
* ***address*** - The address of the ATM or branch. This may be just a latitude and longitude coordinate.
* ***phone*** - The phone number for the location.
* ***mapUrl*** - A map URL that links to a map displaying the location.
* ***network*** – The network of the ATM or Shared Branch (e.g., COOP, NYCE, MoneyPass, Star, etc.).
* ***depositTaking*** - Indicates whether the location accepts deposits.
* ***locationsHoursList*** - Contains the hours for the location.
* ***servicesList*** - The services or features of the location. For example, a branch could have a service of a coin counter, or an ATM could have a feature that it is check deposit taking ATM.
* ***additionalDataList*** - Additional data not taken into account in the other data elements.

### DATA ELEMENT: LOCATIONLIST

Contains a list of locations usually ordered with the closest location first.

### DATA ELEMENT: LOCATIONFILTER

The LocationFilter object, which the definition can be found in **LocationFilter.xsd**, is used to query for locations near an address (which could also just be GPS coordinates), for a given type (e.g., ATM).

**Attributes**

* ***locationId*** – The unique identifier for the location. The LocationId can be used when attempting to retrieve a single location.
* ***type*** – The type of location (e.g., ATM, Branch).
* ***searchFromAddress*** – The address to search for nearby locations.
* ***depositTaking*** – Indicates whether to include only deposit taking locations in the results.
* ***maxNumberOfResults*** - Maximum number of results to include in the response.
* ***maxDistance*** – Maximum distance (e.g., 25 miles) to search for locations from the searchFromAddress.

### DATA ELEMENT: MESSAGECONTEXT

Like many of the other CUFX service, a MessageContext object must be passed for each request. Refer to the Security Services documentation for more information.

# Location Services

## SERVICE DEFINITIONS

The location data model currently support read operations. Create, update, and delete operations for locations are currently beyond the scope of the CUFX locations services.

### SERVICE MESSAGE: GETLOCATIONS

When provided a locationFilter containing:

* filter elements such as the type of location that the user is trying to retrieve (e.g., ATM, SharedBranch),
* the address from which to search from (the address could be a street address, or the latitude and longitude coordinates obtained from a GPS),
* and the number of results to return,

the GetLocations service returns a list of locations.

|  |  |
| --- | --- |
| **INPUTS** | cufx:locationMessage (which includes)   * [**cufx:MessageContext**](file:///\\files2\users\CMarjaniemi\Projects\CUFX\MessageContext.html) * [**cufx:Location**](file:///\\files2\users\CMarjaniemi\Projects\CUFX\Generated%20HTML%20Docs\Loan.html)**Filter** |
| **OUTPUTS** | A [**cufx:LocationsList**](https://doc.teamlab.com/OfficeWeb/apps/documenteditor/main/Location.html) which contains a collection of [**cufx:Location**](https://doc.teamlab.com/OfficeWeb/apps/documenteditor/main/Location.html) objects that meet the given search criteria. |
| **RETURN VALUES** | Status 200 if no errors were found. |
| **SIDE EFFECTS** | No data is being manipulated, only a lookup is being performed. |
| **DEPENDENCIES** | None. |
| **CUFX REST LINK** | https://api.dataprovider.com/locations/ |

REST-JSON Example

The following example illustrates how to return the top 50 within 25 miles of a given postal code (e.g., “80920”).

**REQUEST:**

Headers:

**<security related header parameters... see Security Services>**

Accept: application/json

Accept-Charset: utf-8

Accept-Language: en-us (IANA – language codes)(W3C, HTTP Protocols)

Content-type: application/json; charset=utf-8

**X-HTTP-Method-Override: GET**

00-Version: >=3.3.0

**POST h**ttps://api.dataprovider.com/locations

{

“locationMessage”:{

"messageContext" : <SeeMessageContext.xsd>,

"locationFilter": {

"searchFromAddress" : {

"address" : {

"postalCode" : [ "78704" ]

}

},

"depositTakingSpecified": true,

"maxNumberOfResults": 50,

"maxDistance": {

"unit": "mi",

"value": 25.0

}

}

}

**RESPONSE:**

Headers:

Status Code: 200 Ok

Content-type: application/json; charset=utf-8

Content-Language: en-us

{

"locationList": [

{

"locationId": "12345",

"name": "Briargate ATM",

"distance": {

"unit": "mi",

"value": 0.4

},

"type": "ATM",

"typeSpecified": true,

"address": {

"line1": "6140 Austin Bluffs Pkwy",

"city": "Colorado Springs",

"stateProvince": "CO",

"postalCode": "80920",

"coordinate": {

"latitude": 38.8234323,

"longitude": -104.2995991

}

},

"network": "COOP",

"depositTaking": true,

"depositTakingSpecified": true

},

{

"locationId": "23456",

"name": "Glendale Branch",

"distance": {

"unit": "mi",

"value": 1.2

},

"type": "Branch",

"typeSpecified": true,

"address": {

"line1": "123 Terrace Cove",

"city": "Colorado Springs",

"stateProvince": "CO",

"postalCode": "80920",

"coordinate": {

"latitude": 38.8987098,

"longitude": -104.7651091

}

},

"network": "COOP",

"depositTaking": true,

"depositTakingSpecified": true

}

]

}

The following example illustrates how to return the top 25 ATM locations within 25 miles of a given GPS location.

**REQUEST:**

Headers:

**<security related header parameters... see Security Services>**

Accept: application/json

Accept-Charset: utf-8

Accept-Language: en-us (IANA – language codes)(W3C, HTTP Protocols)

Content-type: application/json; charset=utf-8

**X-HTTP-Method-Override: GET**

X-API-Version: >=3.3.0

**POST h**ttps://api.dataprovider.com/locations

{

“locationMessage”:{

"messageContext" : <SeeMessageContext.xsd>,

"type": "ATM",

"searchFromAddress": {

"coordinate": {

"latitude": 38.8256561,

"longitude": -104.6995991

}

},

"depositTaking": true,

"depositTakingSpecified": true,

"maxNumberOfResults": 50,

"maxDistance": {

"unit": "mi",

"value": 25.0

}

}

}

**RESPONSE:**

Headers:

Status Code: 200 Ok

Content-type: application/json; charset=utf-8

Content-Language: en-us

{

"location": [

{

"locationId": "12345",

"name": "Briargate ATM",

"distance": {

"unit": "mi",

"value": 0.4

},

"type": "ATM",

"typeSpecified": true,

"address": {

"line1": "6140 Austin Bluffs Pkwy",

"city": "Colorado Springs",

"stateProvince": "CO",

"postalCode": "80920",

"coordinate": {

"latitude": 38.8234323,

"longitude": -104.2995991

}

},

"network": "COOP",

"depositTaking": true,

"depositTakingSpecified": true

}

]

}

# Bibliography

W3C. (n.d.). *Key words for use in RFCs to Indicate Requirement Levels [RFC2119].* Retrieved Sept. 8th, 2011, from W3C.