Location Gateway API – More Info

1. Introduction

This document provides additional information on our Location Gateway XML API.

As you will have read on the website section for our Location Gateway service, we have agreements and connections in place with Vodafone, O2, Orange and T-Mobile (this includes Virgin Mobile) in the UK. You have one connection to our Location Gateway an XML API over https - this enables you to send us a mobile number (MSISDN) and we respond with the relevant location information. Note: we expect to have support for locating handsets on the 3 network by end 3Q11.

2. Levels of Access

We offer three levels of access to our Location Gateway Service:

RANDOM Evaluation

This gives you access to all functionality of our service except live handset locations – you will be returned random locations.

LIVE Evaluation

This gives you access to all functionality of our service including live handset locations for normally up to 10 specific numbers that we white list.

FULL Contract

This level is required to launch and operate live services using our Location Gateway. Services may only go live once they have been approved by the relevant network operators.

Our service includes consultation advice on compliance with the Code or Practice for use of Location Services and obtaining relevant service approval by the network operators.

3. Functionality

The Location Gateway provides a simple application-programming interface (API) using XML standards to enable dynamic access to cross network handset location feed. Your application simply sends the mobile telephone number to the Location Gateway which responds in real-time with the following information provided by the relevant network:

- X,Y co-ordinates (in GB National Grid format or GPS / WGS84 format)
- area of accuracy (expressed as a radius in metres)
- date/time

The Location Gateway also supports other shapes such as circular arcs as supplied by Vodafone for their 2G network. We also normalise these shapes to a circle as well. The customer decides which shapes they want to use.

Value Added Context

The Location Gateway response also provides the following value added context corresponding to the handset location:

- landmark or district, town & county
- full postcode and postcode area

Ported Number Handling

In addition the Location Gateway includes functionality to manage the increasing number of network-ported mobile numbers in the UK. Specifically this functionality:

- Detects if a phone number has been ported.
- Determines the new home network for the ported number.
- Stores the updated home network information.

Access to Mobile Centric Content

The Location Gateway also provides dynamic access to extensive mobile-centric content, providing a list of relevant merchants/services ordered by proximity to the location of a mobile handset or to a defined origin point. Content can be tailored to create services that match your target market requirements. For a full list of the content available go to www.mcproton.com/api/v2/terms_list.xml .

4. FAQ Section

How accurate is the location data currently available from UK mobile networks?

The location data from the operators is based on transmission cells, and therefore location accuracy is dependent on the size of the cell in which a subscriber is located. Typically in areas of high population density cells are small as they are engineered primarily for capacity, as opposed to coverage, and therefore location accuracy based on cell id is good. Accuracy reduces as population density reduces, as cells become larger, being engineered more for coverage than capacity.

In Mobile Commerce's experience the following is an approximate guide to location accuracy:

- Dense urban areas – around 300 metres.
- Semi-urban – between 600 metres and 1.2km.
- Rural – between 1km and 10km.

Location Gateway API – More Info

Mobile Commerce supplies location as an x,y co-ordinate pair plus an accuracy value, we also return the following value added context:

- Landmark or district + town + county
- Postcode + postcode area

How long does it take to connect to Mobile Commerce's Location Platform?

Integrating with Mobile Commerce's platform via the Location Finder API typically takes 2 to 3 days. Connection is via the http protocol, and data is returned as an XML-formatted document. Code examples are provided for Visual Basic and Java.

Mobile Commerce supplies a web-based evaluation tool for customers to try out the capabilities of the API, and development-level access for writing and testing code against simulated location feeds.

What sort of response times should I expect for a location request?

If the target phone is in use on the network, a location response will be returned in around 3 seconds. If the phone is on the network but not active, expect around 5 seconds. If the phone is switched off, or is not in a coverage area, the response may be up to 15 seconds and will contain an error code indicating that the phone could not be located.

Do I need to get services approved?

Yes - before launching any service (active or passive) you must get approval from each mobile network operator. Mobile Commerce manages this process for you, and has been working closely with all the network operators to develop a set of guidelines which will provide standards for best practice regarding management of location privacy.

Do I need to get consent from a subscriber before requesting location?

The mobile network operators make a distinction between two types of services – 'Active' and 'Passive'.

An **Active** service is where the end user makes a request for information based on their location.

A **Passive** service is where a third party makes a request for information based on an end users location – e.g. tracking type services.

For passive services the end users permission must be obtained before requesting a subscriber's location. For active services it may be sufficient to state clearly in relevant promotional material that the service requires use of location.

Location Gateway API – More Info

Can I find handsets in a specific area?

No. You may only request the location of one specific handset per location request. To find handsets in a specific area, you will need to look up the current location of each handset in a list, and make your own spatial comparisons.

Can I get alerts when a handset comes into a specific area?

No. The mobile network operators do not offer the ability to track handsets and issue alerts based on the handset location. Location is available on request only.

What if a handset has been ported from one mobile network operator to another?

The Location Gateway includes value-added functionality to manage the increasing number of network-ported mobile numbers in the UK. Specifically this functionality:

- Detects if a phone number has been ported.
- Determines the new home network for the ported number.
- Stores the updated home network information.

This functionality assists in maintaining a high ratio of successful location requests through the Location gateway.

- End of Document -