

mobilecommerce



Monetised Mobile Search
Version 2.0

© 2010 Mobile Commerce Ltd. All Rights Reserved

Filename: Mobile Search API v2.0.doc
Author: Phil Preece
Owner:
Status: version 2.0

Introduction

Revision Control

Version 1.0 – Initial document release [10/Oct/2006]

Version 2.0 – [10/Feb/2010]

Version 2.1 – [7/May/2010] Additional paging functionality

Table of Contents

Introduction	2
Revision Control	2
Table of Contents	2
Overview	3
Background	3
Purpose	3
References	3
Provisioning	4
Version 1.0 Customers	4
Commercial arrangements for use of the API	4
Search Request	5
API Parameters	5
Search Response	7
<Channel>	7
<category>	7
<mc:adSource>	8
<Query>	8
<ad:advertisement>	9
<Item>	9
<media:Content>	9
Error Handling	10
Status Codes	10
Parameter Errors	10
Support	10
Appendix A - Examples	11
Combined Search Results	11
Next Page of Results	12
Specify a Known Region	12
Request JSON from Mobile Device	12
Appendix B - Contractual Obligations for Use of Search Results	13
Partner's obligations	13
Validity Period for Search Results	13
Search Results may Differ by Requestor	13
API Access levels	13

Overview

Background

The monetised mobile search API enables application providers to monetise their own mobile assets through the incorporation of advertiser paid listings.

The API will return an ordered list of paying advertisers based on the search criteria specified through the mobile application and provides options to incorporate additional search content.

The API is based on OpenSearch 1.1, an industry standard for the return of search results in a format derived from RSS 2.0.

The API uses an unencrypted link, with all requests issued to an HTTP server on port 80.

The API returns content from the following data sources:

- Sponsored mobile listings
- Mobile web listings
- Web listings
- Images
- Spelling and related search suggestions

Version 2 is a major update to the version 1 API currently in use. Both the request parameters and response format differ though both are based on OpenSearch. The main reasons for the upgrade are:

- Use of 'Term Correction' – if the original search term returns no sponsored listings, expression matching algorithms attempt to modify the sponsored search to a similar term that returns appropriate results.
- Incorporation of additional data feeds - further data sources may be included in the future.
- Ability to return both XML and JSON format results.
- More efficient data handling – reduces response times and increases throughput.
- More consistent with OpenSearch.

Purpose

The purpose of this document is to describe the protocol by which application providers may access and utilise the Mobile Search API.

References

[OpenSearch]: OpenSearch community <http://www.opensearch.org/>

[RSS]: RSS 2.0 at Harvard Law <http://cyber.law.harvard.edu/rss/rss.html>

[MediaRSS]: Media RSS Module <http://video.search.yahoo.com/mrss>

Provisioning

The example requests within the document use the path [servername.tba/search/api/v2](#). The actual hostname will be provided during the provisioning process.

Version 1.0 Customers

- A new UID will be issued during the provisioning process.
- The following changes have been made to the request parameters over Version 1.0 (further details follow in subsequent sections):
 - A format specifier in the url path to request either XML or JSON formatted results.
 - Additional parameters to specify the number of results for each data source (ad.count, mob.count, web.count and img.count).
 - Additional parameters to specify the geographical region (region).
 - Additional parameter to request spelling corrections and related search terms (rel).
- The following changes have been made to the response format over Version 1.0:
 - Adverts are returned in different elements (<ad:advertisement>) to the search results (<item>).
 - Additional result types for web and image results. Image results contain an additional (<media:Content>) element.
 - Use of tokens to support use of spelling suggestions and caching of search results (<Query>).
 - Feedback on the network operator for the request and the classification of the input search term (adSource, category).

Commercial arrangements for use of the API

Test Access

To request set-up for test access simply send an email request to the contact listed below and include:

- your company details
- range of IP addresses you will submit requests from
- whether you require this for UK, US or both territories.

We will then set you up for test access and issue you with a UID with access restricted to your IP addresses.

Live Access

To move from test access to live access you will need to sign our standard agreement and confirm the mobile sites/applications by territory (UK and/or US) that will be using our Monetised Search API as well as confirming the range of IP addresses you will submit requests from.

A summary of the contractual obligations in our standard agreement are summarised in 'Appendix B – Contractual Obligations for Use of Search Results'.

Contact Details

Bryan Stockwell, Business Development Director
bryan.stockwell@mobilecommerce.co.uk
[+44\(0\)1285 883052](tel:+44(0)1285883052)

Search Request

API Parameters

In it's simplest form, a sample search request would be:

```
http://servername.tba/search/api/v2/service.svc/rss/?uid=660010&st=sport&ad.count=5&ua=MOT-V500&gip=1.1.1.1
```

Further examples of search requests and responses may be found in 'Appendix A – Examples'.

The following OpenSearch URL template syntax indicates the complete syntax for the specification of search requests (? Indicates an optional parameter, although some of these become mandatory depending upon context as described below):

```
<Url type="text/xml"
  xmlns:m="http://a9.com/-/opensearch/extensions/mobile/1.0/"
  xmlns:mc="http://www.mobilecommerce.co.uk/search/queryextensions"
  template="http://servername.tba/search/api/v2/{mc:format}/
  ?uid={mc:uid}&filter={mc:filter?}&test={mc:test?} &region={mc:region?}
  &st={searchTerms}&page={startPage?}&tok={mc:token?}
  &ad.count={mc:adcount?}
  &mob.count={mc:mobcount?}&web.count={mc:webcount?}&img.count={mc:imgcount?}
  &rel={mc:rel?}
  &cip={mc:cip?}&gip={mc:gip?}&xftp={mc:xftp?}&ua={m:userAgent?}" />
```

Note:

- All parameter names are case-insensitive.
- All parameter values must be url-encoded.

The supported parameters (as defined in the URL template) are:

Configuration

May be fixed for each application.

Parameter	Usage	Description
mc:format	Mandatory	rss = results returned in XML format. json = JSON format.
mc:uid	Mandatory	The user identifier as provided by Mobile Commerce during the registration process.
mc:filter	Optional, Default=clean	clean = avoid adult results. any = include adult results.
mc:test	Optional, Default=0	1 = No impact on search reporting or advertiser revenues. 0 = For live operation.
mc:region	Optional, Default=GB	The region to which the application is targeted. Used to optimise the relevance of search results. Currently supported regions are GB and US.

Search Results

Specify the composition of the result set for a search term:

searchTerms	Mandatory	The search term(s) requested by an application user.
mc:adcount	Optional, default=1	Number of sponsored listings to return. Valid range is 1 to 50.
mc:mobcount mc:webcount mc:imgcount	Optional, default=0	Number of mobile/web/image listings to return. Valid range is -1 to 50. Only one count may be set to -1. This indicates that all available sponsored listings should be returned prior to returning these results. The mc:token then becomes mandatory where startPage > 1.
mc:rel	Optional, Default=0	1 = Request spelling corrections and related search terms. 0 = Disabled.
startPage	Optional, Default=1	The page number of the search results.
mc:token	Optional but Mandatory if mob.count, web.count or img.count = -1, or When using a spelling correction.	This assists in ensuring the correct linear result sequence is returned in an efficient manner, or profiling the accuracy of spelling suggestions. See section 'Query' below.

Device Information

Accurate device parameters must be passed in with the request. This will increase the probability of appropriate sponsored listings being returned and ensure subsequent clicks will be revenue generating.

For search requests originating from an **application server**:

mc:gip	Mandatory	The IP address of the gateway from which the mobile device issues the request (the HTTP_REMOTE_ADDR).
mc:xfip	Optional	When the handset request reaches the gateway via one or more proxy servers, HTTP_X_FORWARDED_FOR contains multiple IP addresses in csv format. All values must be included on the request if present.
m:userAgent	Mandatory	The user-agent of the originating handset (HTTP_USER_AGENT).

For search requests originating directly from a **mobile device** the device data above will be available within the HTTP request so may be omitted. The following parameter is then mandatory:

mc:cip	Mandatory	The IP address of the customer's application server. This is used to validate the UID.
--------	-----------	--

Search Response

The UTF-8 encoded XML response comprises the following:

1. An RSS compliant document. Default namespace.
2. OpenSearch extensions. Namespace *openSearch*.
3. OpenSearch draft extensions for adverts. Namespace *ad*.
4. Media RSS extensions. Namespace *media*.
5. MobileCommerce extensions. Namespace *mc*.

<Channel>

The RSS document forms the basis of the search response. The following child elements may be included in the <channel> element:

Key	Usage	Description
Title	Mandatory	Fixed (for info only) – Description of the API
Link	Mandatory	Fixed (for info only) – Mobile Commerce web site
Description	Mandatory	Description of the requested search query
openSearch:totalResults	Mandatory	The number of search results available for the current search request, not including sponsored listings.
openSearch:startIndex	Mandatory	Position of the first entry in the result set.
openSearch:itemsPerPage	Mandatory	The requested number of search results.
Query	Mandatory	Describes specific syntax for subsequent searches related to the original search (see below).
Item	Optional	A separate element for each mobile/web/image search result (see below).
ad:advertisement	Optional	A separate element for each sponsored listing (see below).

<category>

The RSS category provides a categorisation taxonomy for search terms. There are 2 domains which are used as the basis for term correction of sponsored listings:

mcrating

May be one of the following values:

1. Sensitive. No term correction is applied to terms which may be considered illegal or of a sensitive nature.
2. Adult. Term correction is not applied if the adult filter is set to return censored results.
3. Uncategorised. No term correction.
4. General. Standard term correction.

mctaxonomy

If the mcrating is not Uncategorised then the mctaxonomy domain classifies the search term into a hierarchical structure: Intent - Subject - Taxonomy.

<mc:adSource>

Provides feedback on the advert pool from which adverts were requested.:

Key	Usage	Description
market	Mandatory	The geographic market.
pool	Mandatory	Adverts are targeted to specific network operators

<Query>

The Query element describes the parameters required for specific types of search request.

1. **Spelling Suggestions.** If a spelling suggestion is available a Query element of role "suggestion" will be included within the results. The mc:token parameter value must be passed in on the subsequent search request.

For example a search for 'cinima' may add the following element.

```
<Query role="suggestion" searchTerms="cinema" mc:token="n-3824985354_q-iE1dhB5UNOYu5jD4ZV7CNAAAAA@@" />
```

The subsequent request would be:

```
http://servername.tba/search/api/v2/service.svc/rss/?uid=660010&st=cinema&ad.count=5&ua=MOT-V500&gip=1.1.1.1&xfip=&tok= n-3824985354_q-iE1dhB5UNOYu5jD4ZV7CNAAAAA@@"
```

2. **Related Searches.** If a spelling suggestion is available for the searchTerms on the initial request then a Query element of role "suggestion" will be added.

For example a search for 'cricket' may add the following element.

```
<Query role="related" searchTerms="cricket score" />
```

3. **Paging.** Each set of search results will return a search token to be used if the caller requests the next page of results for the same search term. This is to hold the search context for the original query and will assist caching and retrieval of results.

For example, a search for the first page of results for 'sport' will include a token as follows:

```
<Query role="mc:context" searchTerms="sport" mc:token="PQTd00" />
```

The subsequent request would be:

```
http://servername.tba/search/api/v2/service.svc/rss/?uid=660010&st=sport&ad.count=5&ua=MOT-V500&gip=1.1.1.1&xfip=&page=2&tok= PQTd00
```

When building paging links, always include the most recent mc:token in the subsequent request.

<ad:advertisement>

Describes each sponsored listing. The following sub-elements may be included:

Key	Usage	Description
ad:title	Mandatory	The title of the advert.
ad:subTitle	Optional	The subtitle of the advert.
ad:displayUrl	Optional	A descriptive form of the advert link, not necessarily a valid url.
Link	Mandatory	The url containing the advert content

<Item>

Describes each mobile, web or image search result. The following sub-elements may be included:

Key	Usage	Description
Title	Mandatory	The title of the search result
Link	Mandatory	The url containing the search result content
description	Optional	Further details of the search result or used within error handling to communicate the error message
mc:resultType	Mandatory	'M' – Mobile 'W' – Web 'I' – Images 'E' – Error (see Error Handling below)
mc:displayUrl	Optional	The host name for the search result url
media:content	Optional	For the description of image results only (see below).

<media:Content>

For describing an image the Yahoo media extensions are utilised. A full description may be found in [MediaRSS].

This extension is added to image search results. It will be added to sponsored listings if a sponsored feed which supports images is incorporated in future. All media content returned by the API is currently returned in the following format:

Key	Usage	Description
url	Mandatory	Direct url to the full-size image.
fileSize	Optional	Number of bytes of the image.
type	Optional	standard MIME type of the image
height	Optional	The image height in pixels
width	Optional	The image width in pixels

The <media:Content> element also contains a <thumbnail> element:

Key	Usage	Description
url	Mandatory	Direct url to the thumbnail image.
height	Optional	The thumbnail height in pixels
width	Optional	The thumbnail width in pixels

Error Handling

Status Codes

In addition to http status codes raised due to transient server conditions, the system may return the following:

200 (OK)	No errors
500 (Internal Server Error)	A catch-all error in case the API should fail to handle the request.

Parameter Errors

If the request results in an error handled by the API a 200 status code is returned, but the error detail will be included within the response.

```
<rss version="2.0">
<channel>
<link>http://www.mobilecommerce.co.uk</link>
<description>Error description</description>
<openSearch:totalResults>1</openSearch:totalResults>
<item>
<description>All mandatory parameters must be included on the search request.
Missing parameter: [uid].</description>
<mc:resultType>E</mc:resultType>
</item>
</channel>
</rss>
```

Support

If you have any questions during integration of the API or when using in your own services please contact our support department:

01285 883062 - Office Hours - 09:00 – 1730 Monday – Friday

Outside Office hours you can either leave a message on the above number or send an e-mail to support@mobilecommerce.co.uk . We will contact you as soon as possible.

If for any reason the API is not operational we will advise via e-mail to the address you supply when contracting to the service.

Appendix A - Examples

Note that in order to view the raw xml document in IE, ensure feed reading view is turned off. This option can be found in Tools -> Internet Options -> Content -> Feeds -> Settings.

Combined Search Results

Search for sport requesting 5 sponsored listings, 2 mobile web, 2 transcoded web, and 3 images.

<http://servername.tba/search/api/v2/service.svc/rss/?uid=660010&filter=any&st=sport&ad.count=5&mob.count=2&web.count=2&img.count=3&rel=1&ua=MOT-V500&gip=1.1.1.1&xfip=2.2.2.2,3.3.3.3>

```
<rss version="2.0" <!--namespace declarations omitted for brevity -->
<channel>
  <title>Search API</title>
  <link>http://www.mobilecommerce.co.uk</link>
  <description>Search results for "sport"</description>
  <category domain="mcrating">general</category>
  <category domain="mctaxonomy">sport / sport - general / sport</category>
  <openSearch:totalResults>55538463</openSearch:totalResults>
  <openSearch:startIndex>1</openSearch:startIndex>
  <openSearch:itemsPerPage>7</openSearch:itemsPerPage>
  <openSearch:Query role="mc:context" searchTerms="sport" mc:token="PQTdO0" />
  <openSearch:Query role="related" searchTerms="bbc sport" />
  <mc:adSource>
  <mc:market>UK</mc:market>
  <mc:pool>orange</mc:pool>
  </mc:adSource>
  <ad:advertisement>
    <ad:title>Sponsored Sport 1</ad:title>
    <ad:subTitle></ad:subTitle>
    <ad:displayUrl>ad.sport.com</ad:displayUrl>
    <link> http://www.mcproton.com/w/cp/57922f4b-22ec-43b7-8c73-d0e192da4996/A/1 </link>
  </ad:advertisement>
  <!--... up to 4 more sponsored listings ...-->
  <item>
    <title>Mobile Sports 1</title>
    <link>http://www.mcproton.com/w/cp/57922f4b-22ec-43b7-8c73-d0e192da4996/M/1</link>
    <description/>
    <mc:resultType>M</mc:resultType>
    <mc:displayUrl>mobile.sport.com</mc:displayUrl>
  </item>
  <!--... up to 1 more mobile listing ...-->
  <item>
    <title>Web Sports 1</title>
    <link> http://www.mcproton.com/w/cp/57922f4b-22ec-43b7-8c73-d0e192da4996/W/1 </link>
    <description>sport on the web</description>
    <mc:resultType>W</mc:resultType>
    <mc:displayUrl>web.sport.com</mc:displayUrl>
  </item>
  <!--... up to 1 more web listing ...-->
```

```
<item>
  <title>Image Sport 1</title>
  <link> http://www.mcproton.com/w/cp/57922f4b-22ec-43b7-8c73-d0e192da4996/l/1</link>
  <description>sport on mobile</description>
  <mc:resultType>l</mc:resultType>
  <mc:displayUrl>sport.images</mc:displayUrl>
  <media:content>
    url="http://sport.images/sport.jpg"
    fileSize="24700" type="image/jpeg" height="200" width="300"
    <media:thumbnail url="http://thm-a01.yimg.com/image/fba2" width="130" height="130" />
  </media:content>
</item>
<!--... up to 2 more image listings ...-->
</channel>
</rss>
```

Next Page of Results

Search for sport requesting 5 sponsored listings and 10 mobile web results. As this is a continuation of the original search, ensure the token is picked up from<Query role="mc:context">.

```
http://servername.tba/search/api/v2/service.svc/rss/?&UID=660010&filter=any&st=sport&ad.count=5&mob.count=2&web.count=2&img.count=3&rel=1&ua=MOT-V500&gip=1.1.1.1&xfip=2.2.2.2,3.3.3.3&page=2&tok=PQTdO0
```

Specify a Known Region

Search results will also target the specified region US.

```
http://servername.tba/search/api/v2/service.svc/rss/?uid=1&filter=any&region=US&st=sport&ad.count=10&mob.count=5&ua=MOT-V500&gip=1.1.1.1&xfip=2.2.2.2,3.3.3.3
```

Request JSON from Mobile Device

Issue a request for JSON results directly from a device.

```
http://api.mcproton.com/search/api/v2/service.svc/jsn/?uid=660010&filter=any&st=sport&ad.count=1&mob.count=1&cip=1.1.1.1
```

```
{ "channel": { "link": "http://www.mobilecommerce.co.uk",
  "description": "Search results for \"sport\"",
  "lastBuildDate": "Thu, 11 Feb 2010 12:57:27 +00:00",
  "category": [ { "domain": {}, "Value": "general" }, { "domain": {}, "Value": "sport / sport - general / sport" } ],
  "totalResults": 2147483647, "startIndex": 1, "itemsPerPage": 1,
  "Query": [ { "role": "request", "searchTerms": "sport" },
  { "role": "mccontext", "searchTerms": "sport", "token": "PQTdO0" }, { "adSource": { "market": "UK", "pool": "other" } },
  "advertisement": [ { "title": "Gameloft: up to 50% off on Mobile Games", "subTitle": "50% Off on Mob Games.", "displayUrl": "www.gameloft.co.uk", "link": "http://www.mcproton.com/w/cp/77b2e446-77d0-4684-bafe-8e0511663961/A/1" } ],
  "item": [ { "title": "BBC Sport", "link": "http://www.mcproton.com/w/cp/77b2e446-77d0-4684-bafe-8e0511663961/W/2", "description": "BBC Sport offers sporting new stories and...", "resultType": "W", "displayUrl": "news.bbc.co.uk" } ],
  "version": "2.0", "Rating": {} }
```

Appendix B - Contractual Obligations for Use of Search Results

Any application developer (Partner) using this API must be aware of the following contractual obligations with regard to use of the Monetised Mobile Search API in Commercial Mode:

Partner's obligations

To only submit Search Requests generated by End Users and not by any automatic means.

Search Results must not be cached - thereby ensuring that the integrity of the dynamic bidding process for advertiser paid listings is maintained.

To not disparage or interfere with the Search Results in any way or offer incentives of any kind or in any way encourage end users of the mobile service to click on the Advertiser Links.

To not allow any implementations including, without limitation any pop-ups or other such devices to cover or distract from the Search Results.

To not modify any aspect of the Search Results (including the data contained in them) and at all times position the highest ranking advertiser paid listings as the first results from the top of any results page, such paid listings to be displayed in their order of ranking delivered in the Search Results.

Partner should also be aware of the following points with regard to validity period of any Search Results and that Search Results may differ by requestor:

Validity Period for Search Results

After a period of 15 minutes, selection of any advertiser listing in the Search Results will no longer result in revenue generation.

After a period of 24 hours, the advertiser's content will no longer be available through the search URL returned in the Search Results.

Search Results may Differ by Requestor

Where identical Search Requests are made by end users on different networks (e.g. from a Vodafone handset and from an O2 handset) then it is possible that the Search Results may not be identical. There are two factors which may cause this – i) advertiser bidding is done by keyword by network operator, e.g. for the keyword 'Ringtone' each advertiser must bid separately for 'Ringtone' on Vodafone, O2, T-Mobile etc. and ii) it is a dynamic bidding process.

API Access levels

Level of Access	Agreements Required	Comments
Test Mode	None	Suitable for development and demonstration. On all requests, no revenue share will be generated from paid-for listings.
Live Mode	Full Contract	For production use. Paid-for listings generate revenue share, and all partner obligations must be met except on individual requests where TEST=1 is used.

End of Document