



A2B Location-Based Search Engine Web-Based APIs

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Introduction

A2B (“A2B”) is a location-based search engine, available at <http://www.a2b.cc>, provided by Location, Location, Location BV. A2B returns search results based on proximity to a given geographical position. A2B enables searching both through the website interface and using web-based Application Programming Interfaces (APIs) to allow searches to be performed in non-browser software applications, such as positioning software. Examples of positioning software include GPS and mapping applications – in the case of GPS applications it is possible to take the user's position directly from NMEA messages transmitted by the GPS device and pass them to A2B using the Link Search API.

The A2B web APIs are available for the use of all external applications as long as their interface behaviour conforms to the conditions laid out in this document. Please see below for further details.

This document defines the APIs which can be used in software applications. A2B currently has two APIs available to external applications:

- (1) **Link Search API** - this API allows an application to submit a user's geographical position, in latitude and longitude format, along with username and password details, in order to return a list of search results in the proximity of the search position.
- (2) **Position Upload API** - this API allows an application to upload a user's geographical position, in latitude and longitude format, along with username and password, to the A2B website, in order to allow the user to take advantage of services offered on the A2B website, such as adding a link using their latest geographical position.

Conditions of Use

The A2B web-based APIs (“API” or “APIs”) described in this document are freely available for the use of external software applications developed by third parties (“application” or “applications”), at no charge, and are provided by Location, Location, Location BV. However, in using the APIs, the organisation or individual providing the software accessing the API and the direct user of the API agree to be bound by the following conditions.

1. Number of API connect attempts in a given time period

A copy of the application, running on a single user device, must not attempt to make a separate TCP/IP connection to any single one of the APIs more often than once in each 3-second period, nor must it access any single one of the APIs more often than 100 times in each 5-minute period.

2. HTTP GET variables

The application must not use any HTTP GET variables other than the ones specified in the API definitions described in this document.

3. Proxy application use

The application or applications accessing the A2B API must always use a unique A2B username and password combination for each unique end user or individual copy of the application accessing the API and the information provided by the API. This A2B username and password combination must be established by direct interaction of the end user with the A2B website. It is not permitted to provide services to other parties through a single secondary party, and the application making use of the API must always make a direct TCP/IP connection with the A2B URLs described in this document.

4. A2B name inclusion

The application or applications must include, either in the software itself or in the supporting documentation for the software, information stating that data obtained in using the API is supplied by A2B, and must include a link to the A2B website, <http://www.a2b.cc>. To obtain a suitable A2B logo for inclusion in the application, please send an email message to bizdev@a2b.cc.

5. Contact with A2B

As a matter of courtesy, you should inform A2B when you implement a software application which uses one of the A2B APIs, and provide details of the software application being used. If you wish, this can result in publicity for your application on the A2B website. Please use the bizdev@a2b.cc email address for communication.

6. Use of the APIs outside the scope of these conditions

Any use of the APIs outside of the scope of these conditions of use must be agreed in writing with Location, Location, Location BV. Any request for use of the APIs outside of the scope of these conditions of use should be directed initially by email to bizdev@a2b.cc.

7. Changes in the APIs

A2B reserves the right to make future changes to the definition of the APIs which may affect their current operation. Should changes be made to the APIs, A2B will provide a minimum of 30 calendar days advance notice, published on the A2B website at <http://www.a2b.cc>.

8. Changes to the conditions of use

A2B reserves the right to make changes to the conditions of use of the APIs. Should A2B wish to change the conditions of use of the APIs, A2B will provide a minimum of 5 calendar days advance notice, in the form of changes to the conditions of use published on the A2B website at <http://www.a2b.cc>.

A2B Link Search API

The A2B web-based search API allows software applications to search for web links nearest to defined geographical positions. The API returns the 10 nearest links to the search position specified in the HTTP GET used to access it.

The A2B web-based search API is located at:

<http://www.a2b.cc/setloc/rmtsearch.a2b>

The API makes use of the following HTTP GET variables:

- **username** - A2B user username. The user must have registered as a member of A2B on the A2B website at <http://www.a2b.cc>. It is recommended that software developers incorporate a section of their application where the user can enter their A2B username and password for inclusion with this API.
- **pass** - A2B user password. This is the password associated with the user's A2B username, and is presented in plain text. However, the password is stored encrypted in the A2B user database and there is no way of accessing it there.
- **lat** - Decimal latitude of the search position. This may normally be the latitude of the user's current position but can be based around a stored GPS waypoint or a mapping application, for example. A2B uses the WGS-84 datum for all positioning. Note that values are always between -90 and +90 and that positions North of the equator are positive whilst positions South of the equator are negative.
- **long** - Decimal longitude of the search position. As with latitude, A2B uses the WGS-84 datum for all positioning. Note that values are always between -180 and +180, and that positions East of the Prime (or Greenwich) Meridian are positive, whilst positions West of the Prime Meridian are negative.
- **alt** - Altitude in metres. This variable is optional and not currently used by A2B for any search function.
- **resnum** - Number of start result. If this value is set to 0 then A2B will return the 10 nearest search results starting from 0 (so 0-9). If this value is set to 10, A2B will return results 10 through 19, and so on.

If the username and password match the records stored in the A2B database, and there are no further problems such as missing latitude or longitude variables, then A2B will return search results in the following format:

OK\n

Result URL|Result title|Result distance in metres|Result bearing\n

- it will then repeat the Result line for each of the next 9 results.

If any problem is experienced, such as wrong username or password, A2B will return:

ERROR [reason]

An example of a successful use of the A2B Link Search API might be:

<http://www.a2b.cc/setloc/rmtsearch.a2b?username=peter&pass=pass1234&lat=53.25456&long=-3.23456&resnum=10>

In this case, the A2B username is peter, the password is pass1234, the user's latitude is 53.25456, the user's longitude is -3.23456 and the search returns results 10 through 19 from the database.

A2B Position Upload API

The A2B web-based position upload API is used to upload a user's geographical position to the A2B database. Further use can then be made of the position when the user accesses the A2B website using their A2B username and password.

An example of use of this API might be when the user chooses to add a site to the A2B search engine. After entering the URL of the website, the user is given the option of tying the position of the site they are adding to their latest recorded position. In this case, the latest recorded position is the one which has recently been uploaded using the Position Upload API.

The A2B web-based position upload API is located at:

http://www.a2b.cc/setloc/set_my_location.a2b

The API makes use of the following HTTP GET variables:

- **username** - A2B user username. The user must have registered as a member of A2B on the A2B website at <http://www.a2b.cc>. It is recommended that software developers incorporate a section of their application where the user can enter their A2B username and password for inclusion with this API.
- **pass** - A2B user password. This is the password associated with the user's A2B username, and is presented in plain text. However, the password is stored encrypted in the A2B user database and there is no way of accessing it there.
- **lat** - Decimal latitude of the user's position. A2B uses the WGS-84 datum for all positioning. Note that values are always between -90 and +90 and that positions North of the equator are positive whilst positions South of the equator are negative.
- **long** - Decimal longitude of the search position. As with latitude, A2B uses the WGS-84 datum for all positioning. Note that values are always between -180 and +180, and that positions East of the Prime (or Greenwich) Meridian are positive, whilst positions West of the Prime Meridian are negative.

If the username and password match the records stored in the A2B database, and there are no further problems such as missing latitude or longitude variables, then A2B will respond in the following format:

access granted

Submitting: lat=54.231, long=4.3245, alt=0

Location submitted

If any problem is experienced, such as incorrect username or password, A2B will respond in the following way:

access denied

An example of correct use of the API is the following:

[http://www.a2b.cc/setloc/set_my_location.a2b?username=peter&pass=pass1234&lat=54.231
&long=4.3245](http://www.a2b.cc/setloc/set_my_location.a2b?username=peter&pass=pass1234&lat=54.231&long=4.3245)

Further Information

If you require further information, please visit the A2B Forum at <http://forum.a2b.cc> or else email A2B using bizdev@a2b.cc

We wish you all possible success developing your A2B-capable application and hope to hear from you!