



## **ANTEI Geo Locator API 2.00**

### **User Manual**

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## Introduction

The ANTEI Geo Locator 2.00 API provides a secure, simple means of providing geographic data for your application. ANTEI Geo Locator is a free COM control which uses Google Map™ API and Microsoft® Bing™ Maps API to show and find geographic data.

ANTEI Geo Locator API is generally accessible to private and commercial users without any charges. It does not require any fee-based subscriptions or other fee-based restricted access paid to ANTEI Computers Ltd.

ANTEI Geo Locator API is a free component but in some cases Google Map™ API for Business should be used. For more information please visit <https://developers.google.com/maps/licensing> and <https://developers.google.com/maps/terms>. In order to use Microsoft® Bing™ Maps please obtain adequate Bing™ Maps key. More information can be found on <http://www.microsoft.com/maps/assets/docs/terms.aspx> and <http://msdn.microsoft.com/en-us/library/ff428642.aspx#bmtou>.

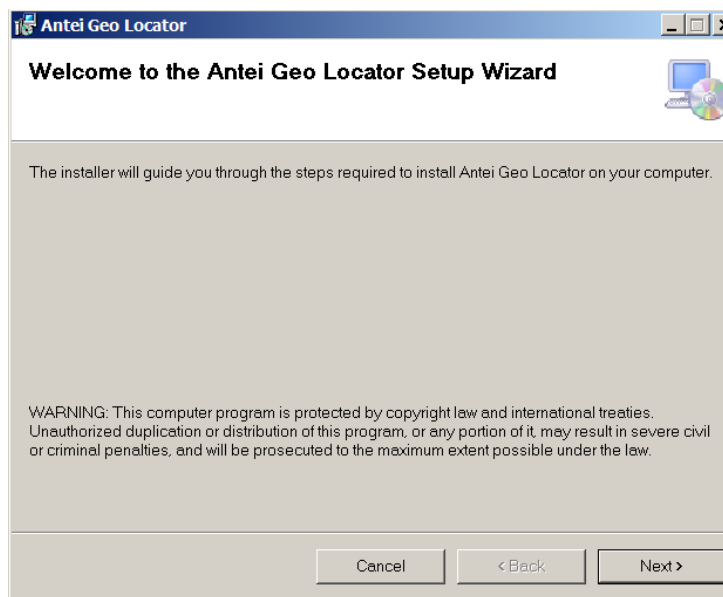
ANTEI Computers Ltd. cannot be held responsible if your application in any way breaches Google Maps™ or Microsoft® Bing™ Maps terms and conditions.

Should you have any questions please visit our website <http://www.antei-computers.com> or contact us by email: [office@antei-computers.com](mailto:office@antei-computers.com).

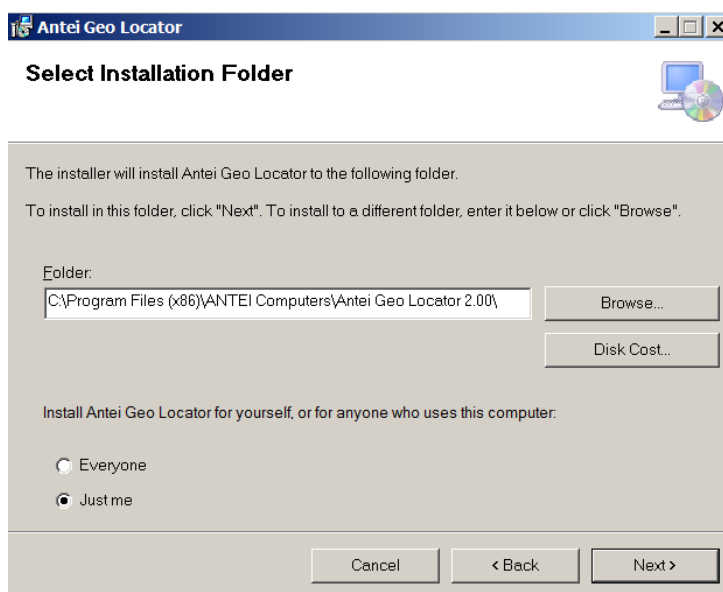
## Installation

Please, follow the steps to install the ANTEI Geo Locator 2.00.

1. If you have previous versions of ANTEI Geo Locator installed please remove it. In order to do this run setup.exe 1.00 and select Remove option or uninstall from *Control Panel, Programs and Features*.
2. Extract setup files from 'ANTEI Geo Locator 2.00.zip' file
3. Run Setupe.exe and press Next



4. Change or confirm destination folder, user option and press Next



5. Press Next

## 6. Confirm EULA Licence and press Next

To uninstall or repair ANTEI Geo Locator 2.00 please run installation wizard and select Remove or Repair option.

In case of failure please follow the steps:

1. Run Command Prompt as Administrator
2. Navigate to installation directory, by default it is "c:\Program Files\ANTEI Computers\Antei Address Locator 2.00\" or "c:\Program Files (x86)\ANTEI Computers\Antei Address Locator 2.00\"
3. Run the following command to register the dll:  
`<path_to_the_geo_locator>\dllreg.exe <path_to_the_geo_locator>\AnteiGeoLocator.dll`

E.g.

"c:\Program Files\ANTEI Computers\Antei Address Locator 2.00\dllreg.exe" "c:\Program Files\ANTEI Computers\Antei Address Locator 2.00\AnteiGeoLocator.dll"

4. Run the following command to unregister the dll:  
`<path_to_the_geo_locator>\dllunreg.exe <path_to_the_geo_locator>\AnteiGeoLocator.dll`

E.g.

"c:\Program Files\ANTEI Computers\Antei Address Locator 2.0.0\dllunreg.exe" "c:\Program Files\ANTEI Computers\Antei Address Locator 2.00\AnteiGeoLocator.dll"

## Finding Geo Position

Use **AddressToGeoPosition** function to find Geo Position of the address.

Result = AddressToGeoPosition(Address1, Address2, PostCode, City, CountryCode, ref Latitude, ref Longitude, ShowMap, ref ErrorMsg, Engine, BingMapsKey)

Description	Field Type	Comment
Address1	string	All of the address fields are optional, however the more detailed address the more accurate latitude and longitude.
Address1	string	
PostCode	String	
City	String	
CountryCode	String	Country Code in ISO format
Latitude	Decimal	
Longitude	Decimal	
ShowMap	Boolean	If <b>true</b> displays website with map of your location.
Engine	Integer	0 – Microsoft® Bing™ Maps 1 - Google Maps™  Use only 0 or 1 otherwise the function results error message no. 4. Please, see Result section for more information.
BingMapsKey	String	You access key to Microsoft® Bing™ Maps. Should be blank when Engine equals 0.
ErrorMsg	String	If <b>Result</b> equals zero than ErrorMsg equal empty string (not null). Otherwise see error messages in <b>Result</b> section
Result	Integer	0 – no error 1 – No internet connection 2 – Incorrect connection to Geo Locator 3 – Over Query Limit 4 – Incorrect map engine

Example:

1. Microsoft® Bing™ Maps

```
Result = ANTEIGeoLocator.AddressToGeoPosition('Train Station Rd.', '', 'CM20 2JD', 'Harlow', 'GB',
ref Latitude, ref Longitude, FALSE, ref ErrorMsg, 0, my_bing_key);
IF Result <> 0 THEN
    ERROR(ErrorMsg)
ELSE
    MESSAGE('Latitude %1\Longitude %2', Latitude, Longitude);
```

## 2. Google Maps™

```
Result = ANTEIGeoLocator.AddressToGeoPosition('Train Station Rd.', ", 'CM20 2JD', 'Harlow', 'GB',  
ref Latitude, ref Longitude, FALSE, ref ErrorMsg, 1, ");  
IF Result <> 0 THEN  
    ERROR(ErrorMsg)  
ELSE  
    MESSAGE('Latitude %1\Longitude %2', Latitude, Longitude);
```

**Note:**

ANTEI Geo Locator 2.00 does not use Post Code database for British addresses any more.

## Finding Driving Distance and Time

Use **AddressToGeoPosition** function to find Geo Position of the address.

```
Result = AnteiAddressLocator.FindDistanceAndTimeFromGeoPos(
    FromLatitude1,
    FromLongitude1,
    ToLatitude1,
    ToLongitude1,
    Mode,
    Avoid,
    ref FoundTime,
    ref Distance,
    ShowMap,
    ref ErrorMsg,
    Engine,
    BingMapsKey);
```

Description	Field Type	Comment
FromLatitude1	Decimal	Latitude of the starting point
FromLongitude1	Decimal	Longitude of the starting point
ToLatitude1	Decimal	Latitude of the destination point
ToLongitude1	Decimal	Longitude of the destination point
Mode	Option	0 – Driving 1 – Walking 2 – Google Maps: Bicycling 2 - Bing Maps: Transit (Japanese market only) Otherwise – Driving
Avoid	Option	0 – No avoidances 1 – Avoid toll roads 2 – Avoid highways 3 – Minimize highways (Bing Maps only, Google Maps – no avoidances) 4 – Minimize tolls (Bing Maps only, Google Maps – no avoidances) Otherwise – no avoidances.
ref FoundTime	Integer	Estimated driving time in seconds
ref Distance,	Decimal	Estimated distance in metres
ShowMap	Boolean	If <b>true</b> displays website with map of your trip.
Engine	Integer	0 – Microsoft® Bing™ Maps 1 - Google Maps™  Use only 0 or 1 otherwise the function results error message no. 4. Please, see Result section for more information.
BingMapsKey	String	You access key to Microsoft® Bing™ Maps. Should be blank when Engine equals 0.



Result	Integer	
		0 – no error 1 – No internet connection 2 – Incorrect connection to Geo Locator 3 – Over Query Limit 4 - Incorrect map engine

Example:

1. Microsoft® Bing™ Maps

```
Result = ANTEIGeoLocator.FindDistanceAndTimeFromGeoPos(51.78105, 0.09517, 51.8324, -0.08534,  
0, 0, FoundTime, Dist, TRUE, ErrorMsg, 0, my_bing_key);
```

```
IF Result <> 0 THEN
```

```
    ERROR(ErrorMsg)
```

```
ELSE
```

```
    MESSAGE('Time %1\Distance %2', FoundTime, Dist);
```

2. Google Maps™

```
Result = ANTEIGeoLocator.FindDistanceAndTimeFromGeoPos(51.78105, 0.09517, 51.8324, -0.08534,  
0, 0, FoundTime, Dist, TRUE, ErrorMsg, 1, "");
```

```
IF Result <> 0 THEN
```

```
    ERROR(ErrorMsg)
```

```
ELSE
```

```
    MESSAGE('Time %1\Distance %2', FoundTime, Dist);
```

## Calculate Distance

Function **CalculateDistance** calculates the great-circle distance between two points. The algorithm uses 'haversine' formula.

```
Distance = CalculateDistance(  
    FromLatitude1,  
    FromLongitude1,  
    ToLatitude1,  
    ToLongitude1)
```

Description	Field Type	Comment
FromLatitude1	Decimal	Latitude of the starting point
FromLongitude1	Decimal	Longitude of the starting point
ToLatitude1	Decimal	Latitude of the destination point
ToLongitude1	Decimal	Longitude of the destination point
Distance	Decimal	The shortest distance between two points on the globe in kilometres.

Example:

```
Result = ANTEIGeoLocator.CalculateDistance(51.78105, 0.09517, 51.8324, -0.08534);  
MESSAGE('%1', Result);
```