The Street Smart API – Guideline for developers

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This documents intents to be a guideline for developers who start using the Street Smart API.

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1. Street Smart API

the Street Smart API is an image viewer. Its main purpose is to let 3rd party developers to be able to show CycloMedia imagery in their application. Currently the Street Smart API supports Cycloramas and oblique aerial imagery The Street Smart API is available in two 'flavors'

1.1 Javascript API

Street Smart is developed in javascript using the react library. This resulted in the ability to use javascript in a standard way and also the react way.
The javascript API is typically used on web based applications

1.2 DotNet API

On top of the javascript API CycloMedia build a DotNet wrapper. The DotNet API is available in a 32 bits and 64 bits version. The DotNet API is typically used on desktop applications

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2.   Prerequisites

The API will only work when you have obtained the following from CycloMedia :

2.1 API Key

Every developing party needs to request an api key through the website of CycloMedia.
The API Key will be part of the integration. The retrieved API key is valid for all customers that use the integration . The API key is not used for granting access to the imagery.

2.2 Username / Password

All imagery of CycloMedia is protected by their web services. You need to authenticate using username and password before accessing the imagery.

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3.   Setup the integration

Before starting to build your integration you need to think about how it should work/ look like. Here are some considerations

3.1 Do you have a map?

3.1.1 I already have a map

If you already have a map than CycloMedia advises to show the recording locations of the cycloramas in the map. This can be achieved by accessing the [Atlas Recordings WFS](). CycloMedia also provides a javascript example so you do need a WFS connector.

The API has callback functions on the viewing direction of the opened cycloramas. You can use this to draw this direction on your map

3.1.2 I do not have a map.

If you do not have a map you should consider to use one. the API will work without one, but our experience is that a map enhances the usability of the imagery. Street Smart does not have a map component itself, but there are opensource map available. see also the openlayers code example on our website

3.2 How do I want to open a new image?

The API provides 3 ways of opening images. Here are the pros and cons of the 3 methods

3.2.1 Open by coordinate

The is best way to open a new cyclorama. The API searches automatically in a range of 100 meters for the nearest cycloramas. It opens the cycloramas and the cycloramas are directed to the requested coordinate.

3.2.2 Open by address

If you don't have coordinates available of locations that you want to open but you do have the address of the location than you can open the nearest cyclorama to the address. What actually

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happens is that we search for the coordinate of the address and then use open by coordinate for opening of the image.

It depends on the underlying database how correct the coordinates of the addresses are. CycloMedia does not own or maintain these databases. We know that dutch addresses are pretty accurate, but in other countries they are not.

3.2.3 Open by ImageId

You can open a cyclorama with its ImageId which can be retrieved from the Atlas Recordings WFS. The disadvantage of this method is that the cyclorama by default opens in the driving direction. The user than needs to turn the cyclorama towards the desired location.

3.3 Support for local installation

Some customers of CycloMedia do not host the cycloramas in the cloud but they have their imagery on-premise installed. The API is able to connect to that local installation, but the integrator need to implement this. You can check your setup at https://localinstallation.cyclomedia.com

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4.   Initializing the Street Smart API

On initializing of the API some parameters have to be set. Some of them we have discussed and some others need an explanation. Here is a list of the parameters with their explanation

username : the login name for the CycloMedia web services.

password : the password for the CycloMedia web services.

apiKey : the API key of the developing party

srs : coordinate system you want to use. It is described as a EPSG code . for instance EPSG:28992 is the dutch RD system and EPSG:3857 is the global web mercator system

locale : language setting for the API. The API supports the following languages

- ✓ de: German
- ✓ en-GB: English (Great Britain)
- ✓ en-US: English (United States)
- ✓ fi: Finnish
- ✓ fr: French
- ✓ nl: Dutch
- ✓ pt-BR: Portuguese (Brazil)

addressSettings : values for locale are 2 characters country codes
database options are 'CMDatabase;' (mainly NL and CH addresses) and 'Nokia' for other countries.

configurationUrl: used for local installations. Default value to cloud service is https://atlas.cyclomedia.com/configuration/

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