

Borehole2KML (Boreholes to KML) Instruction Guide

1. Introduction

Borehole2KML is a program developed with Microsoft Visual C++ 2010 on the Windows platform. Using Borehole2KML, borehole information stored in an Excel workbook can be automatically converted into KML documents, and the KML documents can be loaded into the 3D-rendering environment of a virtual globe application to intuitively represent the spatial distribution and internal characteristic of boreholes.

Download the zipped Borehole2KML.zip onto your computer and unzip, you will see the following files/folders:

- (1) **Borehole Data MIS**. This folder is the source code of Borehole2KML. The source code can be loaded and edited with Microsoft Visual C++ 2010 on the Windows platform.
- (2) **Borehole2KML.exe**. This file is the executable program code of Borehole2KML. This program can be executed directly under the PC+Windows platform.
- (3) **Boreholes_Shanghai.xls**. This file is an Excel workbook that stores 2747 boreholes in Shanghai, China. It is the test data of Borehole2KML.
- (4) **Boreholes_Shanghai**. This folder contains borehole models created by Borehole2KML. From your virtual globe, open the file **Boreholes_Shanghai.kml** in the Boreholes_Shanghai folder. You can view borehole information in Shanghai and experiment with different viewpoints.

2. Compile program to create an executable file (Borehole2KML.exe)

Using Microsoft Visual C++ 2010, you can load the following file:

...\Borehole2KML\Borehole Data MIS\Borehole Data MIS\Borehole Data MIS.sln

Please compile it to create an executable program (**Borehole2KML.exe**) on your computer.

Note:

- (1) If you use the PC+Windows platform, you also can execute stand-alone **Borehole2KML.exe** directly.
- (2) If you use other platforms (such as MacBook Pro running parallels with Windows 7), please firstly compile the program to create **Borehole2KML.exe** on your computer.

3. Create KML documents from borehole data

- (1) Execute **Borehole2KML.exe**.
- (2) Select an Excel file that stores borehole data, like **D:\Borehole2KML\Boreholes_Shanghai.xls**.
- (3) Set a save path for target KML files, like **D:\Borehole2KML\ Boreholes_Shanghai**.
- (4) Set three modeling parameters: the horizontal scale factor, the vertical scale factor and the uplifted height, to control borehole models.
- (5) Click the “**Create KML**” button to allow the program to convert borehole data into KML documents. The kml document will be created in **D:\Borehole2KML\ Boreholes_Shanghai**.
- (6) Go to **D:\Borehole2KML\ Boreholes_Shanghai**, you will find KML files. You can load **Boreholes_Shanghai.kml** into Google Earth, and experiment with different viewpoints.

4. Appendix A. Supporting information

A.1. Borehole2KML

The source code of Borehole2KML also can be found at http://202.127.1.14/Borehole2KML/en/Borehole_Data_MIS.rar, while the executable program for the PC+Windows platform can be found at <http://202.127.1.14/Borehole2KML/en/Borehole2KML.exe>.

A.2. Boreholes in Shanghai, China

Borehole data in Shanghai also can be found at http://202.127.1.14/Borehole2KML/en/Boreholes_Shanghai.xls. Borehole models created by Borehole2KML can be found at http://202.127.1.14/Borehole2KML/en/Boreholes_Shanghai.rar.

For viewing borehole models on the Internet, we refer the reader to the website at http://202.127.1.14/Borehole2KML/en/Boreholes_Shanghai.html. Any computer that has the Google Earth Plugin installed can freely access this webpage.