

Program Features

Program name: ediTrail

Version: 1.0

Program official web Page: <http://www.ediTrail.com>

Program description: Software for Management/Creation/Edition/Visualization of trails over a map.

System requisites: The program will work in any computer with Microsoft Windows operating systems from Windows XP to Windows 8.1, both 32 and 64 bits.

Program development: The program has been developed with Microsoft Visual C++ and C# including the ObjectARX and BricsCADARX libraries to integrate it both Autocad and BricsCAD.

CADs where works the program: Autocad 2007, 2008, 2009, 2010, 2011, 2012, 2013, 2014 and 2015 **32 and 64bits**. Bricscad v10, v11, v12, v13 y v14 **32 and 64bits**

Program prerequisites: The program has been developed in the Visual C++ 2005 32 bits platform to the executable with what got it to work in maximum possible machines, and later was ported to Visual C++ 2008, 2010 and 2012 to create the applications within Autocad and BricsCAD.

Because of this the prerequisites of the program are

1. **Microsoft .NET Framework 2.0:** This version of the .NET Framework is preferred so that the program can work in many more best computers. This component is installed with the "installation", but in the event that needed manual install can be downloaded from <http://www.editrail.com/productos/editrail/dotnetfx.exe> to 32 bits y <http://www.editrail.com/productos/editrail/NetFx64.exe> to 64bits
2. **Visual C++ 2005 redistributable:** It will be installed in systems where the program is put and it's necessary to make it work. Where it is necessary to manually install can be downloaded from http://www.aptop.com/productos/wikiloc/vcredist_x86.exe

Components and controls used: To the creation of this program has been used a number of controls. .NET, ActiveX, DLLs to will be installed on the system

1. **Infragistics Controls 9.2:** This is a library of .NET controls, among which is the table we use, as well as others type of controls of import/export, etc. They are commercial controls and are found on the following page: <http://www.infragistics.com>
2. **GMap.NET control:** This control is free and open source, and allows you to view the maps of the various providers of maps that exist in the world, not only for google. To see its features you can go to the next URL: <http://greatmaps.codeplex.com/>
3. **.NET Framework 2.0 controls:** This includes standard controls combo box, edit box, tool bar, etc, installed, by default, in the operating system.
4. **ImageMagick:** Component to create/edit/compose/convert any format bitmap images. To see its features you can go to the next URL: <http://www.imagemagick.org/>
5. **.ocx y .dll controls:** We have included a .dll library for control and management of communication RS232/USB, (<http://www.marshallsoft.com/>) for future use if we want to create an application input of GPS signal for the inclusion in the program. Included ActiveX controls, (.ocx), of various kinds, such as a display of folders, another type of table (grid), print management, etc, thinking ahead.

Own libraries: During the 25 years that I've been developing in C++ I've been creating a series of libraries for general use, which are the key to the development of this application, and that without them, not could have developed in such a short time, namely:

- Coordinates transformation from geographical to UTM XYZ and from UTM XYZ to geographical, for any ellipsoid.
- Setting coordinates for the calculation of the 7 rotational parameters and thus being able to change of reference system by Hemert, affine transformation, 3D, etc.
- Dealunay triangulation for the Digital Terrain Models, DTM, creation.
- Creation/Edition/Draw of contour lines over a DTM.
- Management of SRTM files.
- Creation/Edition/Draw of entities on Autocad/BricsCAD
- User interface.
- Libraries of geometry for positioning, calculation of areas, volumes, distances, etc.
- Etc... (I have created a few thousand routines for general use in Cartography/Geodesy)