Table of Contents

About this project

This application is the analysing software for our flight data recorder. This software is to be used in conjunction with the FDR-hardware. The recorded data can be exported, analysed and displayed in human-readable formats using this software. To learn more aboutht how to use this software visit this article: **How to use this software**

Getting Started

Basics

This software works on Windows PC`s with .Net Framweork 4.7.2 installed. If you are running Windows 10 with the latest updates installed this should work out of the box for you. If you are not unning Windows 10 head to this link and download and install it manually.

Installation

Installer

Donwload the installer and execute it.

Build from Source

If you want to build this project from source download or clone the repository to your computer. After downloading, open the .sln file in visual studio. The project should be loaded. Set the build settings to "Release" and press the start button - afterwards, copy the contents of the Release folder to a location of your choosing.

Setup

After sucessfull installation of the application, launch the application. You will be presented with a license dialog. Accept the licenses and click ok. You will now notice that the map views are greyed out. Please head to the Bing Maps Portal and create an account. Afterwards click "My Keys", the create a new key. Set the application name to CIDER, and the key type to Windows App. Copy the key into a new file at a location of your choosing. The fileending should be .key. Add the key in the application. Head to the about view and press "Add new key". Select the file and press ok. You should be able to use the map views now.

Load a track

1. Head to the load view
2. Press "..."
3. If you see a green tick mark, press "Load"

Your sucessfully loaded the track.

About View

The "about" view is the standard (startup) view of the application. The "about" view contains multiple features:
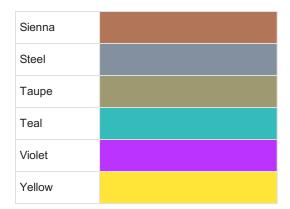
1. SET API KEY - press this button to set the reference to an api key (.key) file
2. CHANGE THEME - press this button to open the theme manager
3. E-MAIL US! - press this button to open your e-mail program and send an e-mail to us
4. VIEW LICENSES - press this button to open the license manager

Theme Manager

The theme manager allows you to change the look and feel of the application. You can select a light and a dark theme as well as different accent colours. The settings will be remembered for the next startups.

1. Select the Theme - Dark or Light
2. Select the Accent colour - see the table below

AMBER	
Blue	
Brown	
Cider Standard	
Cobalt	
Crimson	
Cyan	
Emerald	
Green	
Indigo	
Lime	
Magenta	
Mauve	
Olive	
Orange	
Pink	
Purple	
Red	

Sienna	
Steel	
Taupe	
Teal	
Violet	
Yellow	

Map Views

The map views are only available if a valid key was added to the application. If you have not done this already, head to **this tutorial** on how to do that.

Map - Route

The map-route view allows seeing the recorded route on bing maps. The view will automatically focus on the route. The start direction is marked by a bright blue arrow, following the arrows direction follows the recorded data. If no route is loaded, the map will be focused on Linz-Hörsching airport.

Map - Timed

The map-timed view shows the recorded route and a slider. Adjusting the slider gradually increases the shown part of the route. The shown part is increased on a per-data-point basis so you can slowly show the flown route.

Load View

The load view is used to select a valid dataset. Pressing the "..."-button opens a menu where a folder can be selected. After accepting the selected folder by pressing "Ok", the application checks the validity and data integrity of the selected folder. If the check fails, a red cross is displayed. If the check passes, a green tick is displayed. If the green tick is displayed, the "Load"-button is set to be available. Pressing the "Load"-button loads the selected data. During the loading procedure, the navigation bar to the side of the application turns grey. When the loading process is finished, the buttons are made available again.

The load view:

The view with a valid dataset:

The view with an invalid dataset:

The Height View

The height view shows the height of the plane. There are two parts: The frist part shows a graph of the flight height over the duration of the flight. The second part shows the current height, adjustable by a slider found at the bottom of the view. You can also enter a specific value (only numbers without comma!) in the box found to the right of the slider - this will set the value of the slider to the entered value.

The height view:

The Angle Views

Angle Timed