

CAI to OLC Flight Log Conversion Utility

Background

The Cambridge flight recorders use a proprietary flight log format, the .CAI file. To register these on the Aerokurier OLC they need to be converted first to an FAI format .IGC file, but also modified to include a copy of the original .CAI file (an OLC requirement). This is done using a number of DOS programs available on the Cambridge Aero Instruments web site (<http://www.cambridge-aero.com/executables/igcshort.zip>).

- CONV-CAM This program translates flight log files from .CAI proprietary format to .IGC compatible format.
- DATA-CAM This is the Cambridge Aero Instruments data transfer program, which transfers flight log data from a CAI flight recorder to a computer file
- VALI-CAM This program verifies the security status of a CAI format log file

An additional program is provided by the OLC

- CAI2IGC This program appends an ASCII encoded CAI file onto the end of your IGC file

This process is a bit fiddly in these days of Windows operating systems so Karl Ekdahl wrote up a script a few years ago to automate this process. With the advent of 2010 however a number of pilots have reported problems with this utility and have had to revert to the DOS process. The OLC has tried to simplify this providing a batch file (`igc2olc.bat`) but it remains an inconvenient process for those unfamiliar with DOS.

As a consequence a visual basic script file `Cai4olc.vbe` to run under WSH (Windows Scripting Host) has been written and provided to automate the task.

Installation

All the files mentioned above, except `data-cam.exe`, are included in in the archive `Cai4olc.zip`. It also includes an addition batch file; `conv2olc.bat` used by the script.

To install the contained files should be all extracted into one directory. This does not need to be (and to avoid confusion shouldn't be) the same directory as your log files. I simply created a `cai2igc` directory under "C:\Program Files" and extracted the files there. NOTE: If running the program under Vista use a stand alone directory, UAC will prevent the script completing if located under the Program Files folder.

Adding a shortcut to the script file in the start menu makes it easier to run. To do this

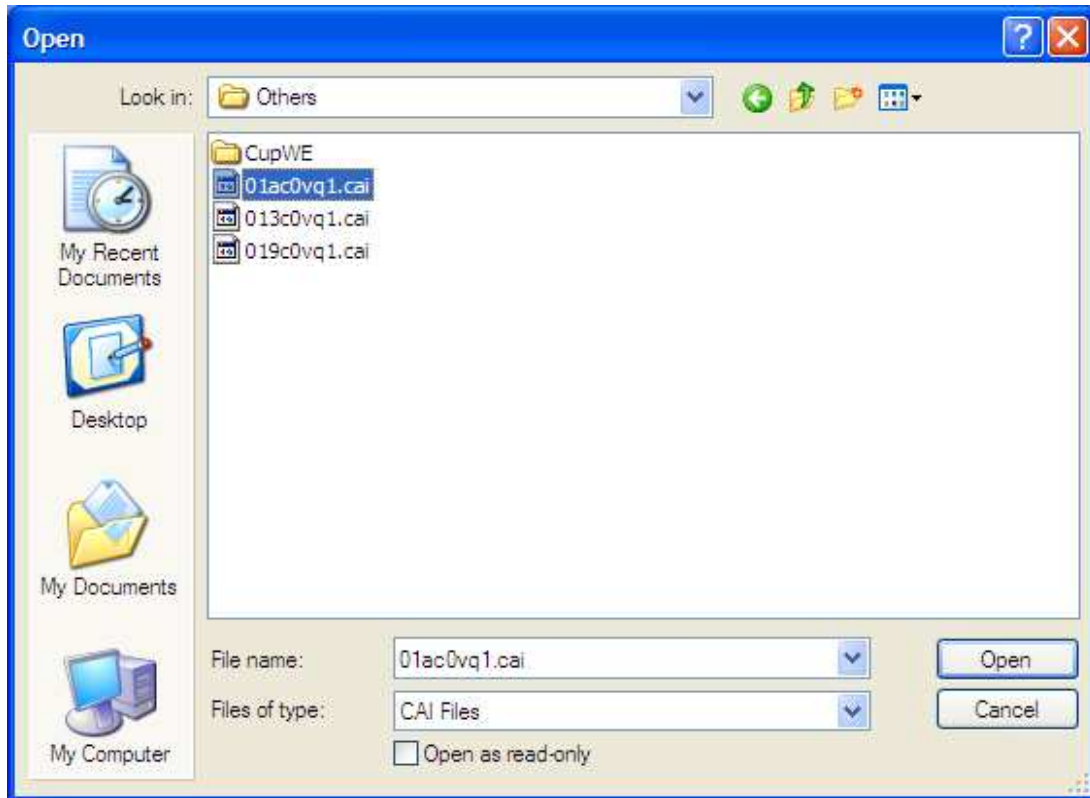
- open the start menu
- Choose All Programs
- navigate to where you want to store your shortcut
- right click and choose Explore
- Choose File - New – Shortcut, this will open the new shortcut wizard and follow the steps there choosing `Cai4olc.vbe` as the target, and naming the shortcut as you wish.

Usage

Your .CAI flight log will need to be downloaded from the flight recorder using whatever means have been previously used. This could include the use of the DOS file `data-cam.exe`, off an SD-Card using a mobile PC and Connect-Me or Strepla Connect, or a standalone program such as Aero Explorer, SeeYou or Strepla. Store the log file in your preferred directory (e.g. "My Documents\Flight Logs").

Start Cai4olc, either choose your shortcut from the start menu or double click the Cai4olc.vbe file in windows explorer.

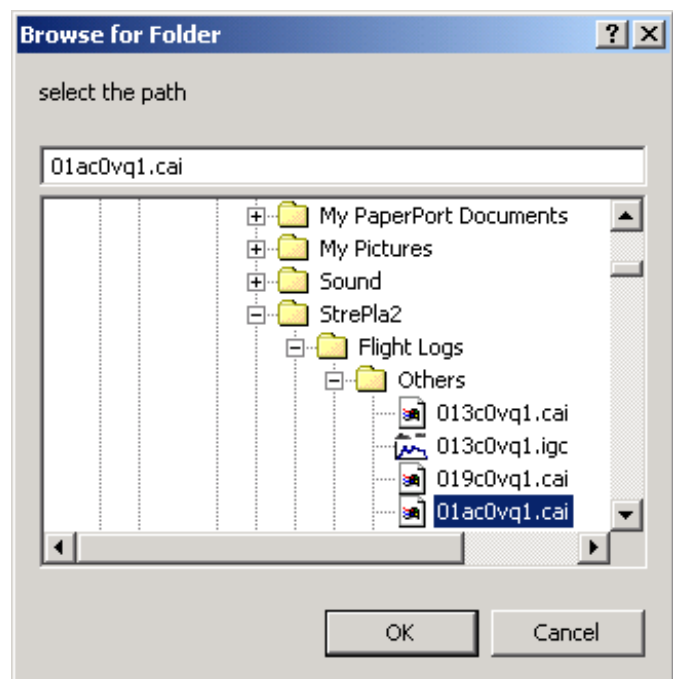
A file open dialog box will open (it defaults to My Documents). Navigate to and select your xxxxxxx.cai flight log file, and push the open button. In Windows XP the following dialog box will open.



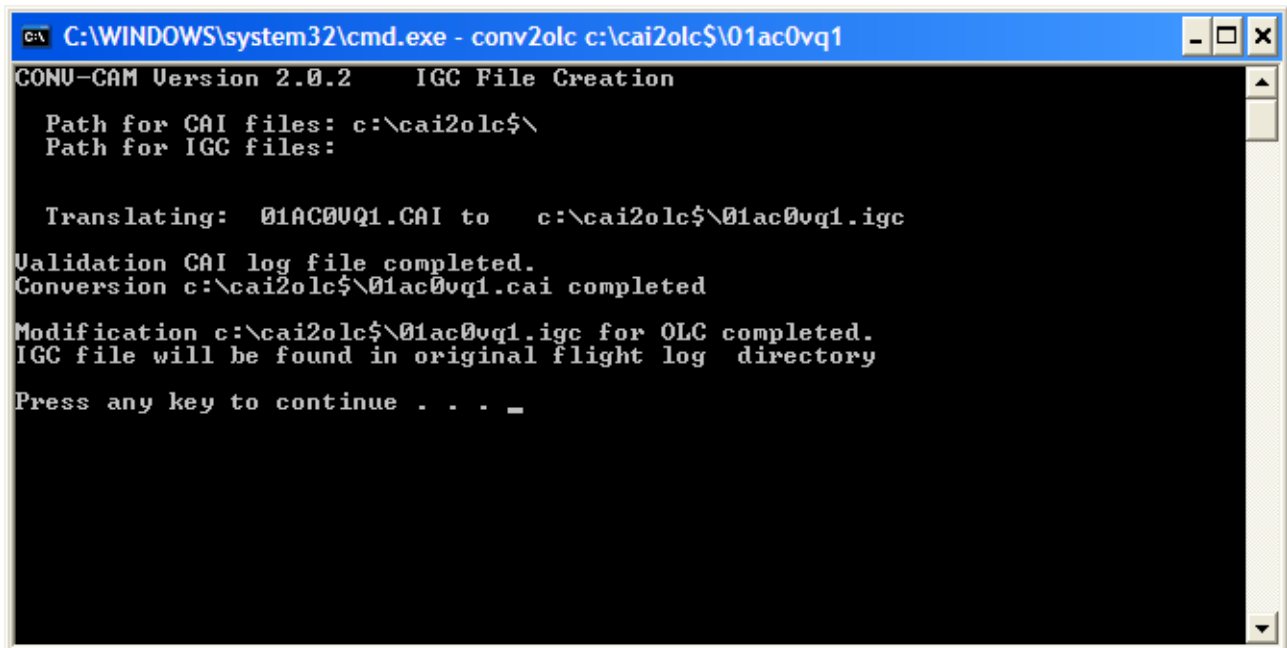
If you are unsure which files have been processed then choose IGC file types, this will display the IGC files present for checking. Remember to switch back to CAI File types to select a file for processing. If an incorrect file type, or no file is selected, the program will notify you and quit.

Due to operating system (OS) limitations running WSH scripts, the file selection method varies with OS:

- If you are using a Windows 2000 system the file selection is done using a Folder Browsing dialog box (see right). This does not filter files according to type.
- Under Vista a standard File Open dialog box is used, but it is created by running a hidden copy of Internet Explorer. This may result in the box not appearing on top of other windows. Because of this it is preferable to minimise other windows before running the script



Following file selection a DOS box will open in which the various DOS programs mentioned above will validate, convert and modify a copy of the original flight log to an IGC version. When this is completed the program will pause to enable you to read any details reported. Push any key to proceed. The DOS box will close.



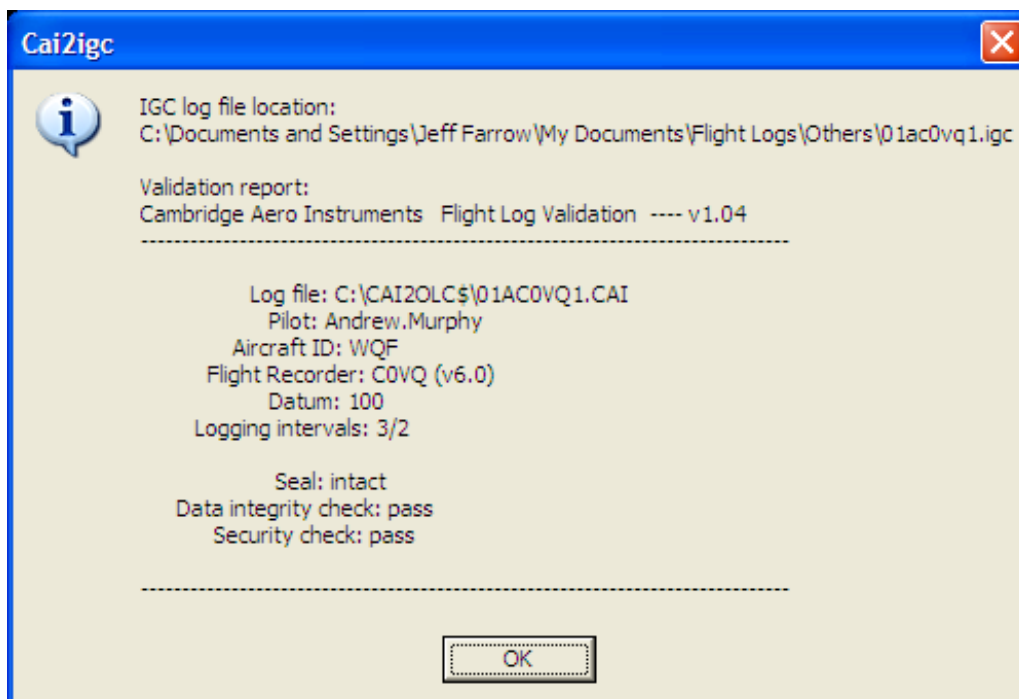
```
C:\WINDOWS\system32\cmd.exe - conv2olc c:\cai2olc$\01ac0vq1
CONU-CAM Version 2.0.2   IGC File Creation

Path for CAI files: c:\cai2olc$\
Path for IGC files:

Translating: 01AC0VQ1.CAI to c:\cai2olc$\01ac0vq1.igc
Validation CAI log file completed.
Conversion c:\cai2olc$\01ac0vq1.cai completed
Modification c:\cai2olc$\01ac0vq1.igc for OLC completed.
IGC file will be found in original flight log directory

Press any key to continue . . . _
```

Following completion of processing a dialog box will open. This contains details of the location of the IGC log file produced. Also included are the validation details of the original CAI log file.



Push OK to close the dialog box and complete the conversion.

Details

Cai4olc is a script file written in visual basic and runs in windows under the Windows Scripting

Host (WSH). This has been provided with all recent flavours of windows. Because of security concerns the WSH is occasionally disabled by system administrators. If you have problems running the script this is worth checking.

Because a script file has the code readily accessible it can be modified either by mistake, or maliciously. As such it has been provided as an encoded script. I would only use this script if you have obtained it from a reputable source, or with the unencoded script are familiar enough with the visual basic itself to be satisfied.

The script functions initially by determining the operating system it is running under. It then uses the appropriate method (read kludge) to display a File Open dialog box (as outlined above). File conversion is performed using Cambridge's/OLC's original DOS programs by creating a temporary working directory (by default C:\cai2olc\$) and copying the chosen CAI file there. The original file is not otherwise manipulated. The file is validated, the results being stored in the file log.txt in the Cai4olc program directory. The validated copy is then processed to produce the IGC file. The validation details are displayed. The IGC file is copied back to the original log file directory. The working directory and contained files are deleted.

The script has been tested and runs (with the above limitations) in the following versions of windows:

- Windows 2000 Professional SP4 – limitations on File Open dialog
- Windows XP Home (32bit) (XP is the system it is designed for)
- Windows XP Pro (32bit) "
- Windows Vista Home (32bit) – limitations on script location due User Access Control (UAC). Limitations on File Open dialog box.
- Windows Vista Business (32bit) – limitations as previous

Other systems listed may well work, just not tested.

I hope you find this script of use.

Jeff Farrow (Geelong Gliding Club, Australia - <http://www.gliding-in-melbourne.org/new/>)