

TOPPY UPDATER

1 INTRODUCTION

This is a Windows application intended to simplify the task of keeping your Topy TAP etc files and firmware up to date. It compares the versions on the Topy with versions on the internet, using file length, file sum check, and information in the file (TAPs) or information in the file name (patches) or date of last file it installed (other file types). It can also be used to install TAPs and patches which do not require complex file combinations.

The connection to the Topy can either be a direct USB connection or via FTP and a Slug/ASUS/Linkstation etc running ftpd-Topfield 0.7.4 or later.

It is primarily aimed at the moderately IT-savvy user, rather than the complete novice, though the aim is to reduce the knowledge needed in future versions. Feedback as to how this can be achieved would be welcome.

2 PRE-REQUISITES

The Topfield tools must have been installed on the PC if using a direct USB connection. 64-bit versions of Windows should work with an FTP connection, but I think not with direct USB connection. Whether using direct USB or FTP, the connection should be tested and Altair/FTP client closed before attempting to run this application. Simultaneous Internet and Topy connections are required. Use with a narrow band internet connection is probably impractical, and users who pay on the basis of usage need to be aware that all the linked files are downloaded.

It is believed this application can be run on Macs using VMware Fusion or Parallels to run Windows, but I have no experience of this and cannot offer any support in the event of problems.

3 MODES OF OPERATION

The intention is that Topy Updater will have two modes of operation for beginners, as follows:

- Comparing existing files with the latest available using the internet database, and offering to update accordingly. This is known as "Compare Mode".
- Installation of straightforward TAPs, firmware, or patches and associated files, and uninstalling any incompatible TAPs, by simply selecting the required feature from a list (Install Mode)

However the latter has not yet been implemented.

For more experienced users, three additional modes are available by which the user can:

- Browse through the internet database file list to decide which should be installed (Browse Mode).
- Compare installed files with local version of the internet database, which can be tailored to speed up operations by omitting unwanted references (Personal Database Mode).

- Ditto, but using text files rather than the “.csv” format (Personal Text Mode).

The Browse mode allows the more experienced user to update specific files, or install one or more files at will. The two personal database modes allow the update process to be speeded up by removing the need to check for files the user knows he is not interested in.

4 INSTALLATION

Install the all the files from the zip download in any hard drive directory that will allow the program to read and write files. Use of a network drive will make operation very slow, and may result in erroneous operation. Appendix 1 lists the files and their purposes, for those who may wish to delete unwanted files.

It will create a subdirectory called “\TempDir” where temporary files such as internet downloads are stored. You will

The application will generate a “UpdateHistoryFile.txt” in its own directory to record the file dates of installed items where version information cannot be extracted from the files themselves. If you delete this, it will no longer know what state these files are in, and you will need to either update them all or confirm from other sources that they are up-to-date. It also generates a log file called “TopyUpdaterLog.txt”, but this is not complete in version X7.

Experienced users who wish to use the Local Db Mode should edit the supplied “MyFileDatabase.csv” to meet their requirements. Deletion of unwanted entries and fixing directory values will speed operation.

Experienced users who wish to use the Local Text Mode should delete the initial “x” from the file names of any sample “xTopyUpdateList_*.txt” files you wish to use then need to edit the “TopyUpdateList_*.txt” files with Notepad or similar as described below to reflect your particular needs. Deletion of unwanted entries and fixing directory values will speed operation.

5 LIMITATIONS

The major **current** limitations of this application are:

1. This application will only work satisfactorily if the relevant authors use the same name and internet address (URL) for the latest version of their files, rather than a new name or new address for each version. If people like this application
2. Download URLs must be of the form “http:../x/y/z/anything.zip”, or “http:../x/y/z/Filename.Extn” where FileName.Extn is that used on the Topy. “Forwarding” links such as <http://www.topy.org.uk/~mystuff/cgi/Downloads.cgi?dl=2> will not work

It is hoped to remove the second limitation in future versions if this application proves to be popular. However the first seems insuperable in terms of changes I can make, so if people like this application they will need to start a campaign to get “offending” authors (who are in quite a small minority) to change their download links.

6 USING TOPPY UPDATER – COMMON ASPECTS

6.1 General

You can use the standard Windows method to resize the window. Some screens will not change and you will get scroll bars appearing if the window is too small. Other screens adapt to the new window size, so you can see more data at a time.

6.2 Welcome screen

Run the ToppUpdater.exe file, and you will see a welcome screen, as follows:



(Anyone like to volunteer to produce a better 750x180 pixel image to go in the middle – above a very hurried attempt!!! This image is defined in a separate file, so anyone wanting to personalise the appearance can do so by changing this file)

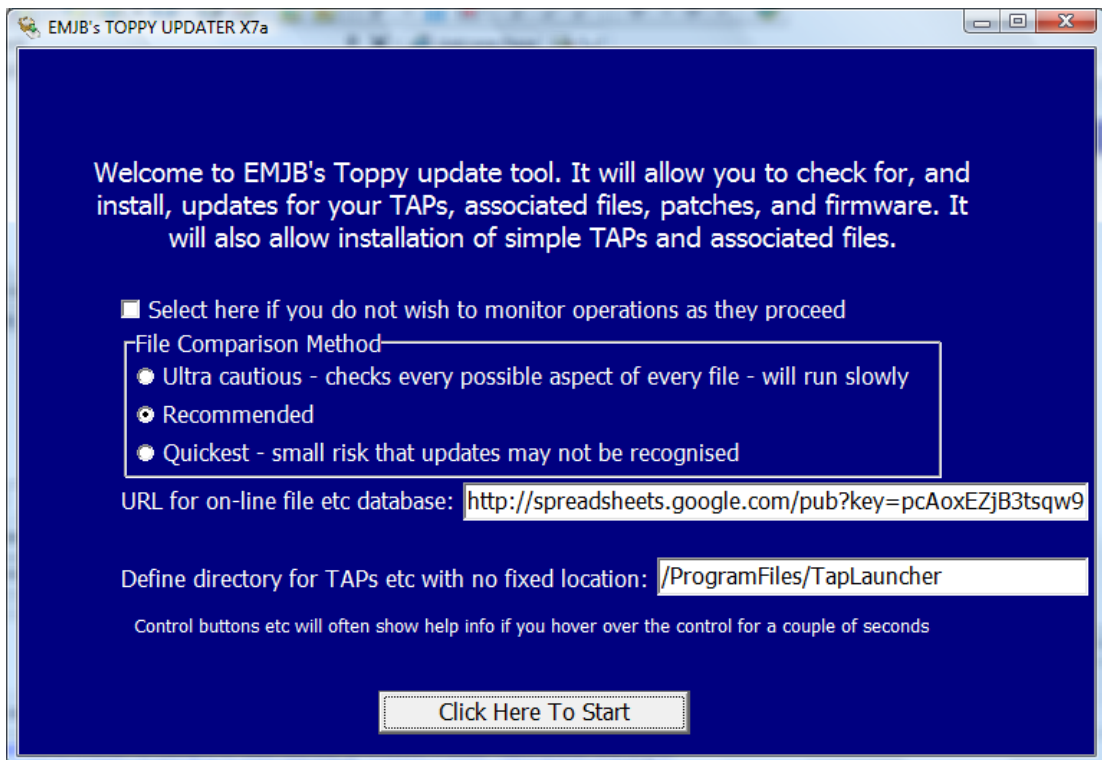
The edit box allows you to define where to find/install any TAPs etc for which the control file author has not defined a destination directory.

The note in smaller text refers to a facility to show help messages when you let your mouse pointer hover over a control etc for 2 seconds or so. You will, I hope, find these messages appear wherever the control labelling is not absolutely clear. I would like these messages to appear for rather longer, but am unable to change the displayed duration.

If you have problems with reports that Internet Explorer is working Offline when it is not, use the ToppUpdaterNIEC.exe instead of ToppUpdater.exe.

Advanced User Controls

The main purpose of the image is to hide the advanced user's selections, which are accessed by clicking on the image to get:



The check box determines whether you see "Click here to continue" messages as each stage of the process is completed, and thus allows the user to speed operation and limits user input, at the expense of not being able to monitor all that is going on so carefully.

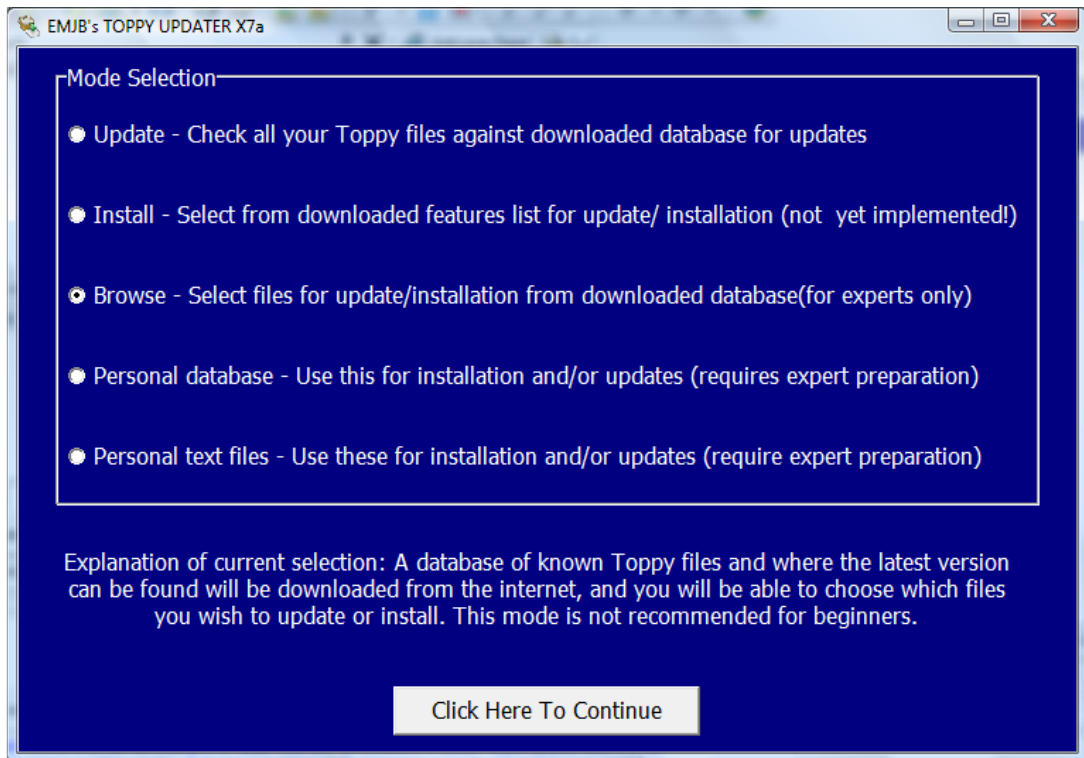
The "File Comparison Method" radio buttons allow you to choose your compromise between speed and probability of missing an update. The rules associated with each file type etc are given in Appendix 2.

The download URL edit box allows you to change the database internet address. Access uses the "GET" method unless "{POST}" (without the quotes) is included at the end of the address.

Any changes you make are saved in any "ini" file for use next time.

6.3 Mode Selection

The mode selection screen allows selection of one of the 5 modes of operation as follows:



though currently only 4 modes have been implemented. The section near the bottom of the screen provides an extended description of the currently selected mode.

Click on the “Continue” button when you are satisfied with your choice.

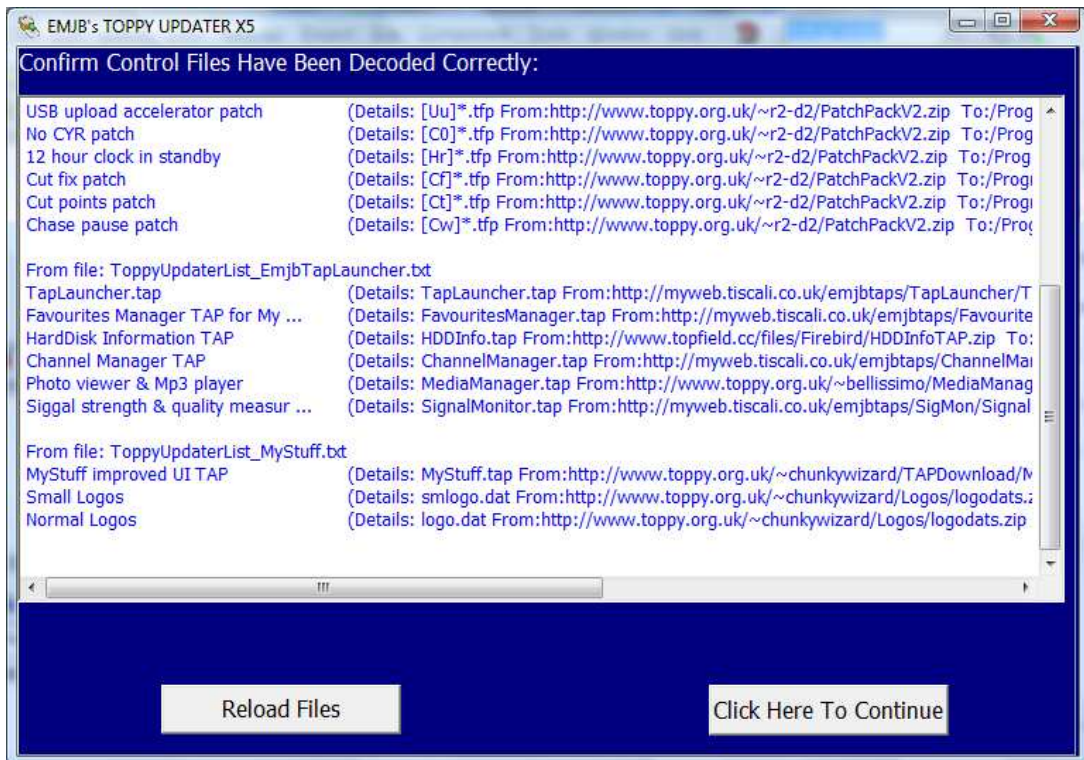
7 “UPDATE MODE” OPERATION

7.1 General

The following paragraphs describe operation when you have selected the top option, i.e. to check all your Topy files against a downloaded database. Note that database contains references to the latest versions, so does not itself need updating with every TAP change.

7.2 Decode Confirmation Screen

When you have chosen the mode by clicking on “Continue”, you will see something like:



which allows you confirm the details decoded from the database.

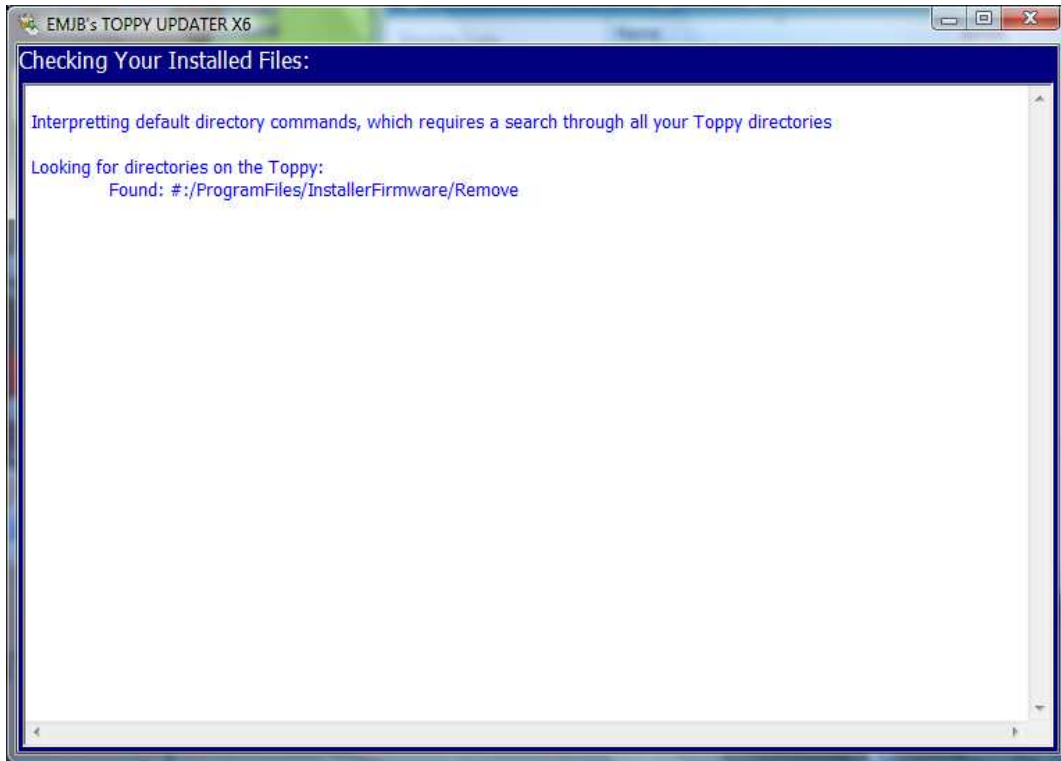
If a syntax error has been detected in the database, a warning will replace the relevant file entry. This warning identifies the input file identity, the line number, and the incorrect text. The option to continue is then replaced by an exit button. "The Reload Files" button gives you the option to reload the file in case of a downloading glitch.

If you have problems with reports that Internet Explorer is working Offline when it is not, use the ToppUpdaterNIEC.exe instead of ToppUpdater.exe.

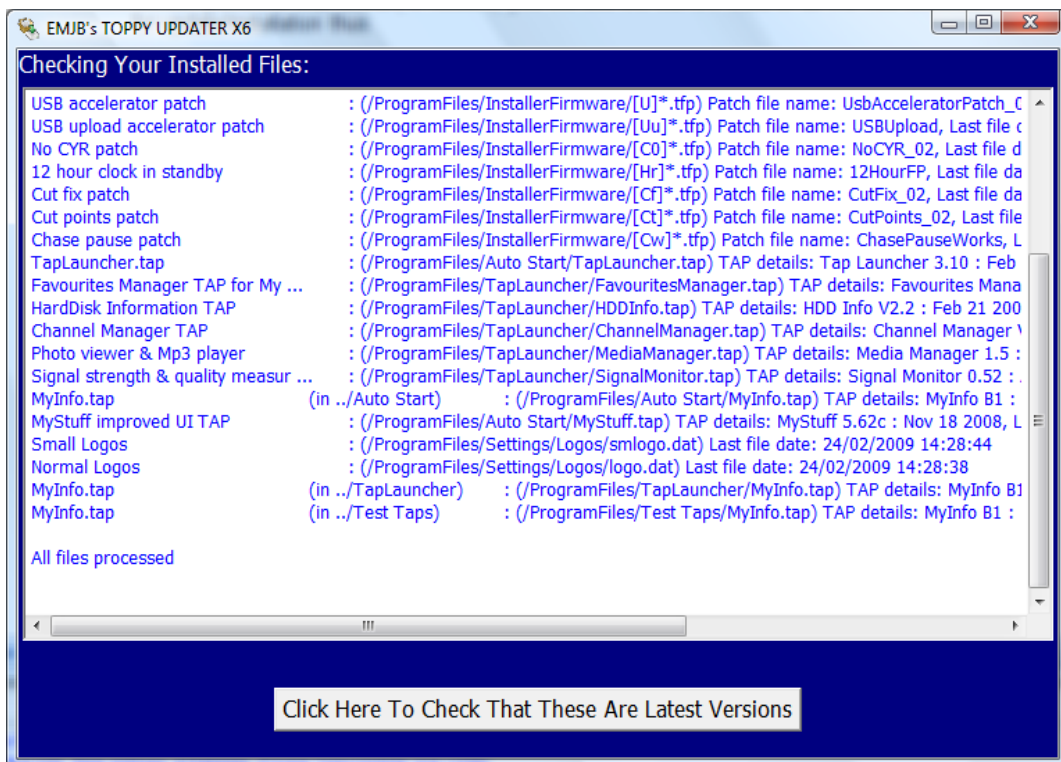
On continuing, a settings page will appear first time you run the program to allow you to define the details of your Topp connection. This page will not be shown subsequently unless you request it after a failure to connect to the Topp.

7.3 Current File States

The next major display is that of the state of the selected files on your Topp. However the database may require a search of your Topp for files whose location is unknown, in which case you will see something like:



On completion of that search, if needed, you will see the current state of all the files selected for update/installation thus:



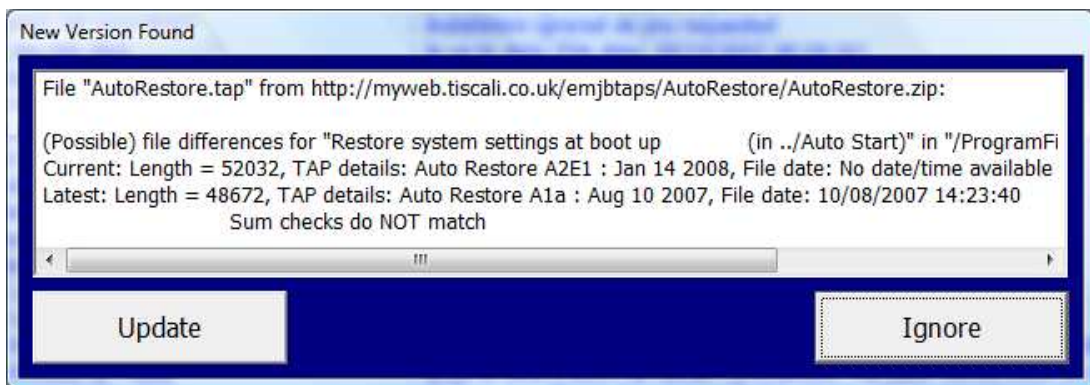
The exact information will depend on the method used to identify files – the embedded data in “.tap” files, R2_D2’s patch file naming, or just the date of the last installed file for other types. In addition to the displayed information, the file length and a sum check value are derived. Where multiple copies of files exist (MyInfo.tap in the above example), the locations are indicated.

The last line of the upper list describes any current activity such as downloading or sum checking, either of which can take several seconds for a large file (e.g. firmware or MyStuff). However unless you select the "Ultra-Cautious" mode on the first screen, sum checking will be restricted to the first time you run the application for that file.

N.B. The first time you run the application the file dates will not be available, and will be annotated as such. However when you perform updates, or the automatic logic confirms that they have been done, the file dates are noted, and will appear here next time.

7.4 Latest Version Check

Checking the latest versions produces an incremental display of the state of each file, with popup:

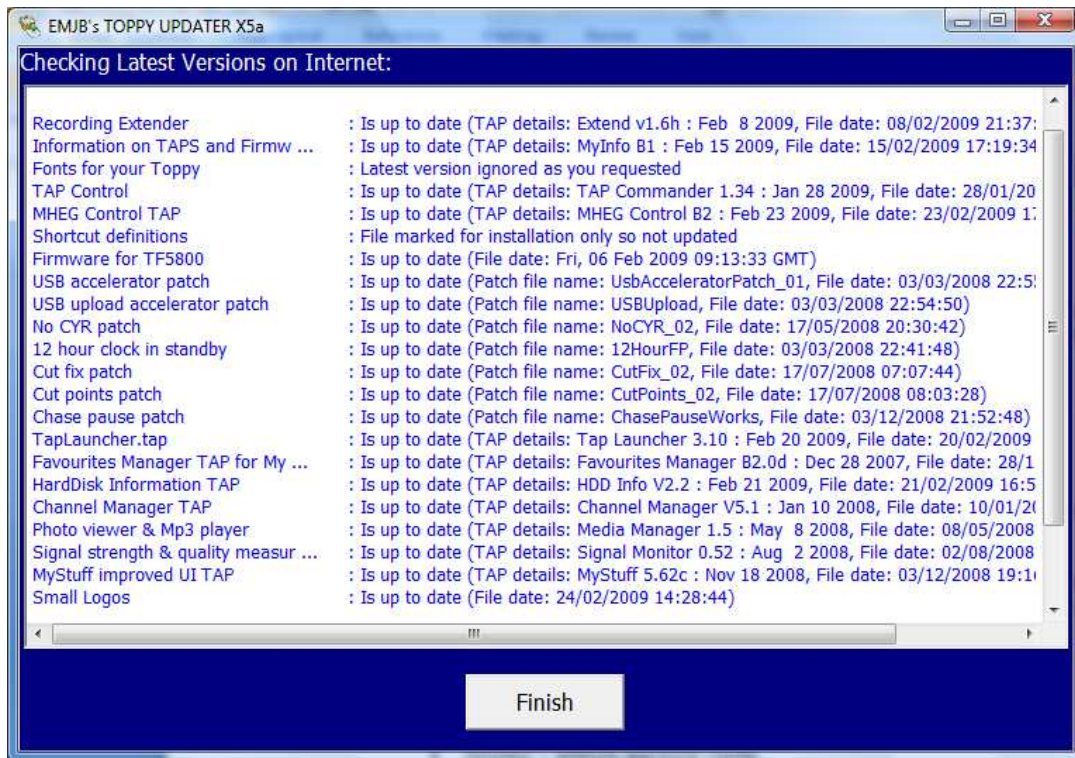


appearing when an update to an existing file has been detected

Where there is insufficient information to be sure a file is up to date, you will get a third option the first time you run the application, giving you the chance to confirm that the current version is the latest and this information will be used on subsequent runs.

The last line of the file list describes any current activity such as downloading or sum checking, either of which can take several seconds for a large file (e.g. firmware or MyStuff). However unless you select the "Ultra-Cautious" file comparison on the first screen, sum checking will be restricted to the first time you run the application for that file.

When all have been processed, you will get a display such as:



However, if any Auto Start files have been changed you will first be offered the chance to reboot the Topyy, and if anything has been copied into /ProgramFiles/InstallerFirmware you will be given the option to reboot and run the FwLoad TAP to update the firmware.

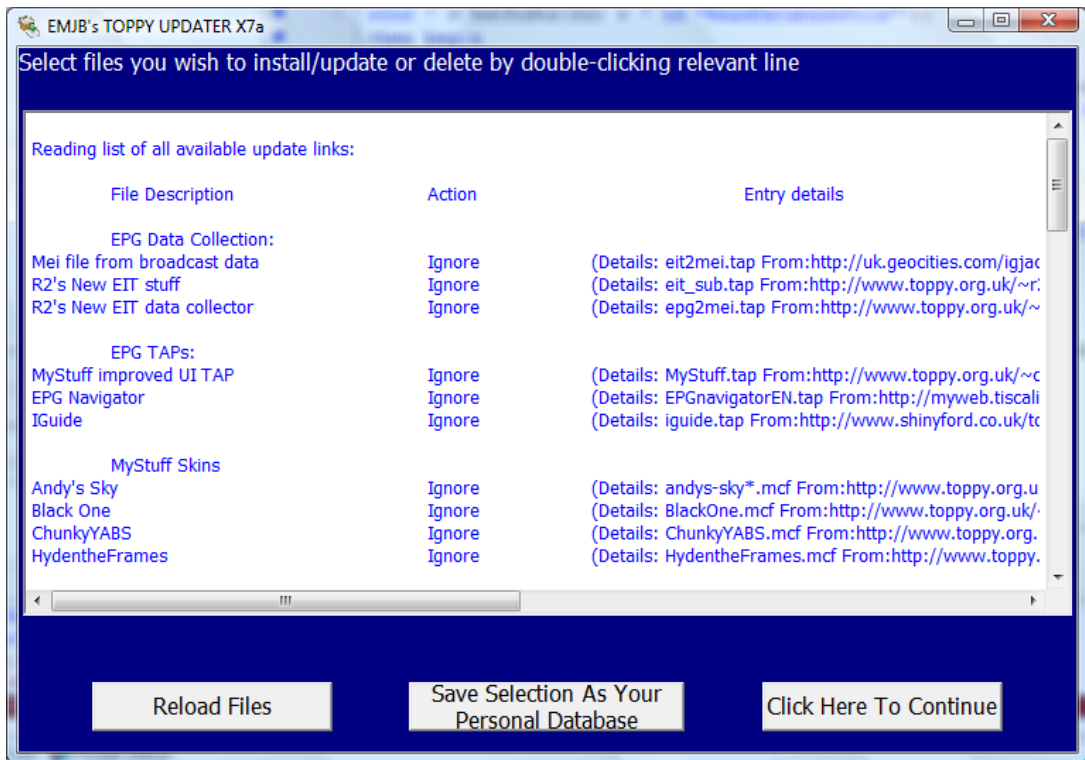
8 INSTALL MODE

Not yet implemented

9 BROWSE MODE

9.1 File Selection

Each file in the database is presented for you to choose ignore, install/update or delete thus:

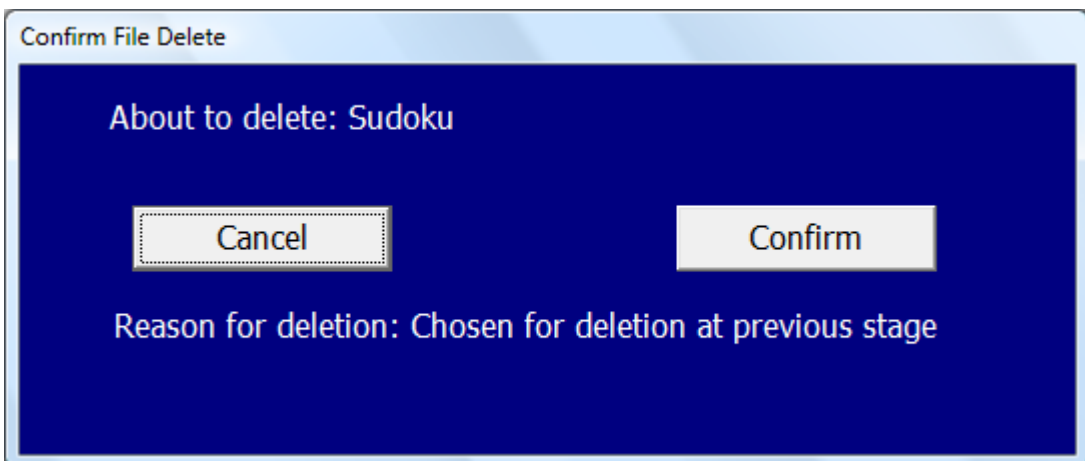


Double clicking on any line toggles the “action” between Ignore, Install/Update, and Delete. If you select Install/Update or Delete you will be asked to confirm the action before the action is implemented. As on other screens, a single click opens a browser window to any “help” page identified in the database for that file.

Clicking on the “Save...” button saves a copy of the data associated with all files in the “Update/install” state as a database for use in the Personal Database mode.

9.2 Current File States

This stage is the same as for the Update mode (see para 7.3 above) except in general the file list will be much shorter. If you have selected a file for deletion you will see a message such as:



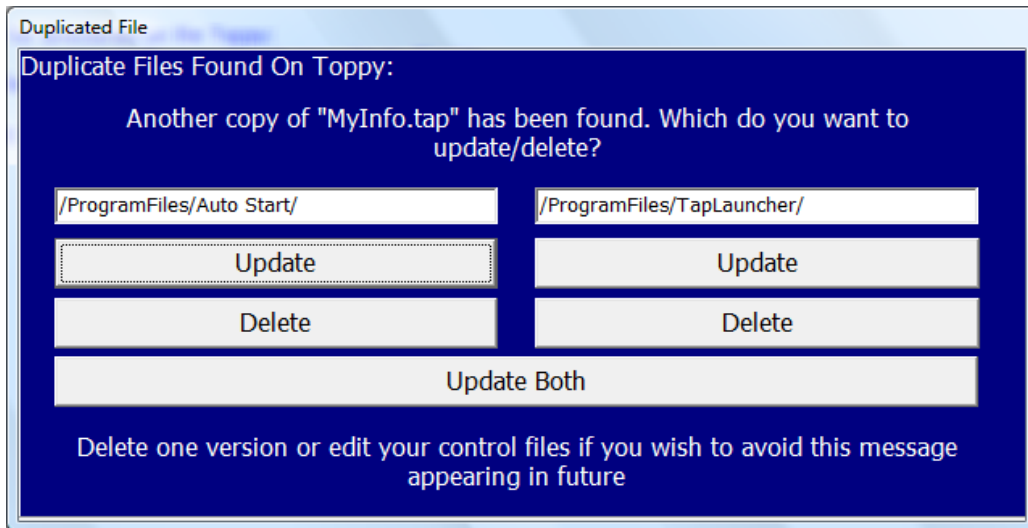
when the relevant file is found.

Thereafter operation is as the Local Database & Text Files modes as described below.

10 LOCAL DATABASE & LOCAL TEXT FILE MODES

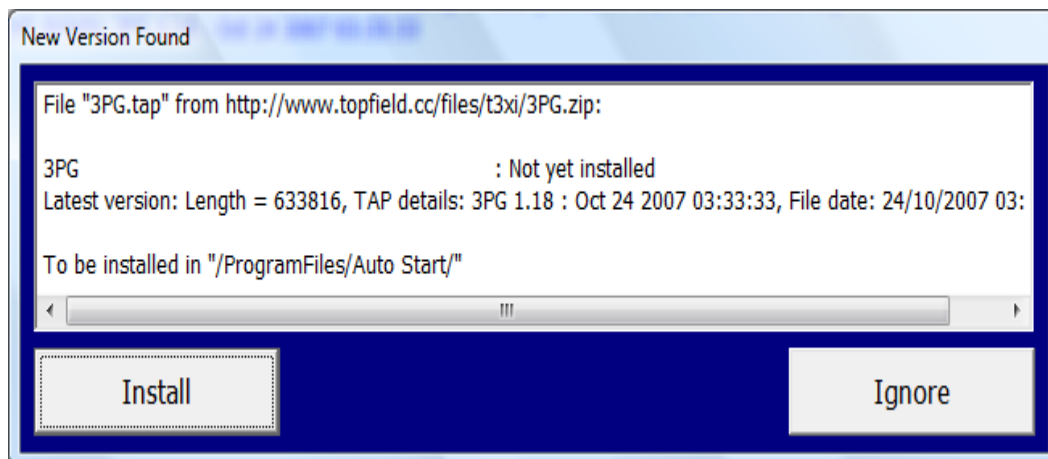
The sequence is very similar to that for the "Update Mode" described above, except:

- (1) At the decode confirmation screen (see 7.2 above), in the event of errors you can edit the relevant file(s) and use the "Reload" button to try again without having to restart Topy Updater.
- (2) When 2 or more copies of a file are found on the Topy, and only a default file location is specified in the database, you will receive messages such as:



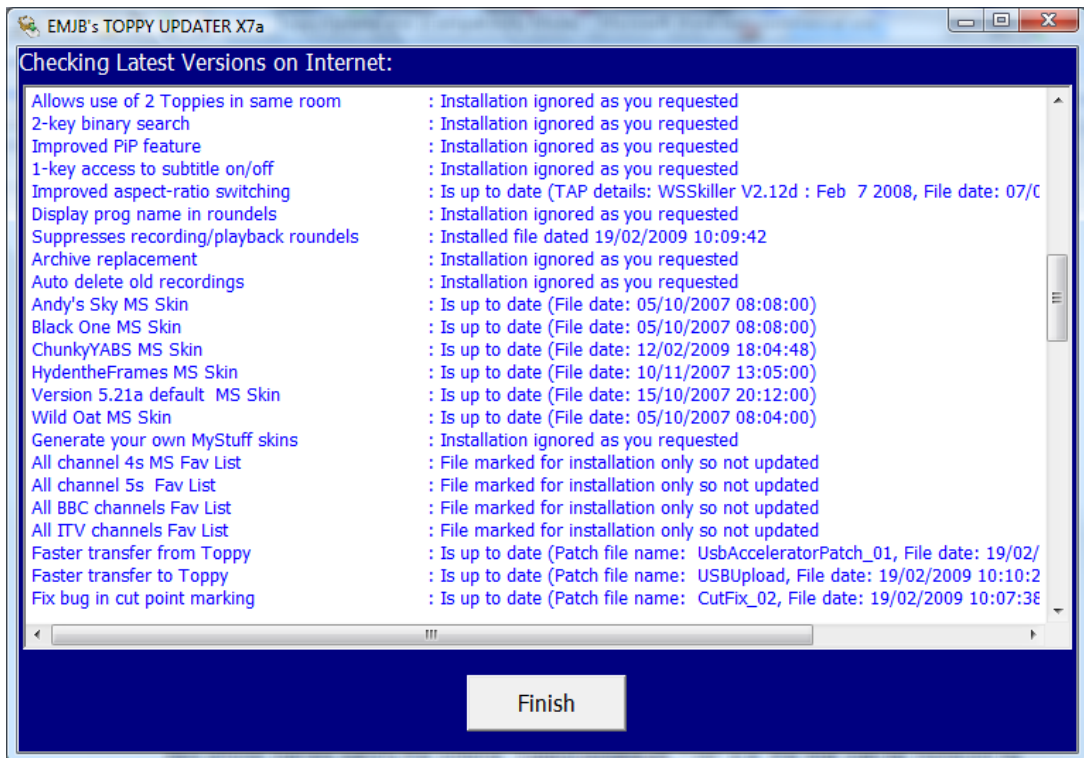
allowing you to decide which to update, or to delete one of them from your Topy. Three copies of a file will lead to this appearing twice.

- (3) Any file appearing in the database but not on the Topy will lead a message such as:



appearing.

- (4) On completion, you will see a list of actions taken for all the files in the database as follows:



The formats of the database and text files are defined in Appendices 3 & 4 respectively.

11 COMMAND LINE FEATURES (FOR EXPERIENCED USERS ONLY)

I included a number of command line features for my testing purposes, and have left them in case others may find them useful in the event of apparent bugs etc. If running from the command prompt, or from a link from the desktop, the following switches can be used:

- /AutoMode – selects the Auto Mode in which the user is only prompted when (possible) file changes have been detected, and the initial screen is skipped.
- /Mode0 – selects Ultra-cautious file comparison method.
- /Mode1 – selects Recommended file comparison method.
- /Mode2 – selects Quickest file comparison method.
- /UserDir=<Toppy Directory> - defines the default directory. If the directory name includes any spaces, you must include the whole entry in double quotes (e.g. "/UserDir=/ProgramFiles/Auto Start").
- /TM – selects test mode in which all references to "/ProgramFiles/" are replaced by "/TProgramFiles/"
- /DF – displays the list of directories and files while interpreting the default directory commands. The results are save in file "ToppyFileList.txt". N.B. The list of files does not include any in excluded directories beginning with "Old".

These settings will override anything in the ini file from a previous run. If conflicting commands are included in the command line (e.g. "/Mode0" and "/Mode1"), the last will be obeyed. The commands are not case sensitive.

APPENDIX 1

FILES

From the Zip file:

- “TopyUpdater.exe” – Windows exe file that does the work!
- “TopyUpdaterNIEC.exe” – alternative version for those experiencing false reports that Internet Explorer is working Offline. Can be deleted if you find you do not need it.
- “TopyUpdater.pdf” – this file.
- “Intro.jpg” – Image appearing on welcome screen – if deleted you will always see the advanced user options
- “FwLoad.tap” – used to install new firmware plus patches on the Topy – can delete if you do not want to use these.
- “DelZip179.dll” – used to unzip downloaded files.
- “Vista.dll & XP.dll” – files used for direct USB connection to your Topy. Note some versions of Vista seem to prefer the XP version, so both should be available.
- “xTopyUpdaterList_xxx.txt” – sample control files, that you will probably want to modify before use. The initial “x” must be removed from the filenames before they will be recognised
- “MyFileDatabase.csv” – the personal database of files used for updating & installation. You can amend or even delete this if only text or downloaded files are to be used.

Generated by TopyUpdater.exe when run:

- “TopyUpdater.ini” – your chosen settings – delete to return to defaults
- “TopyUpdaterHistory.txt” – record of file date of files as they are updated – if deleted additional sum checking will be required to confirm file status.
- “TopyCommsLog.txt” – record of attempts to communicate with your toppy
- “TopyUpdaterLog.txt” – record of Topy Updater activities.
- “TopyFileList.txt” – list of directories and files on your Topy
- “DownloadedFileDatabase.csv” – a copy of the last database downloaded from the internet.

APPENDIX 2

FILE COMPARISON RULES

The methods available for file comparison are:

- File length – always available and always used.
- TAP internal data (file description and date) extracted from the file itself, but multiple updates on one day rely on the author changing the description field. Most authors include the version number in the description field.
- Patch file name, which includes the version number after the identity.
- File date and time for last update. This is only guaranteed to be available for latest versions of files downloaded as part of a zip, but is obtained from free-form HTTP header from most sites (notably mine and Topyy.org.uk). For current versions this available when Topyy Updater has previously performed the last update, or confirmed by other means that the files are identical. The resolution of the time is one second, so little chance of two versions with the same time!
- Sum check – a good check but time consuming.

The checks (in addition to length) used for each type of file depend on the mode setting in the advanced user part, as follows:

	Cautious	Recommended	Quickest
TAP	Internal data + date/time + checksum	Internal data + date/time if available for both versions, otherwise checksum	Internal data only
Patch	File name + date/time + checksum	File name + date/time if available for both versions, otherwise checksum	File name only
Other	Checksum + date/time if available	Date/time if available for both versions, otherwise checksum	Date/time if available otherwise checksum

APPENDIX 3

FILE DATABASE

The same structure is used for the downloaded and local databases. Both are “.csv” files as generated by spreadsheets such as Excel. The former is stored as “DownloadedFileDatabse.csv” and the latter must be called “MyDatabaseFile.csv” (not case sensitive).

The file is a spreadsheet that can be edited by the likes of Excel, and has the following columns:

- A: File name – equivalent to “File=” in the control files
- B: File category – see below.
- C: File category - not used by TopyUpdater.exe, but used as a heading in the File selection screens
- D: File description. If left blank, the file name will be used instead.
- E: Internet source of updates – see below for limitations.
- F: Destination directory – see notes below for more details
- G: Help link – any internet URL which is acceptable to your default browser.
- H: Where “Install Only” directives are included. These files are install where relevant, but never updated – e.g. ini files which will probably have been updated with personal preferences.
- I, J, K & L are reserved for use with the “Install Mode”. Provisionally I contains the feature title, J a list of associated files to be installed, K a list of conflicting files to be deleted, and L an extended feature description.
- M onwards are ignored. I have used M to include comments on the database entries, such as where URL’s are incompatible with Updater

The permitted File categories are:

- File – normal file.
- FileGroup – group of files defined by wildcard only used in “Update” mode (e.g all patches, which one would not want to have to review individually for installation, but would want to use for checking latest issue states).
- Feature – To be used in Install mode to define an entry that refers to a set of files to be installed together – e.g. a TAP and its language file.
- File/Feature – TAP etc entry with only single file.

Blank entries lead to the whole row being ignored.

The limitations on internet address are that it must not include any of the redirection features such as “?” nor commas. This must either be a direct download address ending in the filename, or be a .zip file containing the file of interest. Note that this is case-sensitive.

The destination directory defines where Topypy Updater should install new files, and look for those to be updated. It can take one of the following forms:

- Unix-style Topypy directory, with final "/" – e.g. "/ProgramFiles/Auto Start/".
- Ditto, but prefixed by "!D", in which case This is the directory used when installing the file, but Topypy Updater will search "ProgramFiles" and its subdirectories except those whose name begins with "old" (case insensitive) for copies when updating.
- "!UserDir!", which is equivalent to "!D" followed by the default directory entered on the initial screen.

Note that the directory names are case-sensitive.

The database must not include more than 1000 active lines. Lines without a valid file category are not considered active in this context.

A "wildcard" in the form of "*" can be used where the precise file name is not known, for example where the author has included the version in the file name. For the file category "File" only the first file found will be updated or used for the update process, so this should be used with care. Where the file category is "FileGroup", all files meeting the criteria will be updated as necessary, but will be ignored in the "Browse Mode".

To cope with patches, special rules are applied to files whose names begin with "[" and have a subsequent "]". These are considered to have 3 elements as follows:

- Inside the square brackets – identifier such that the same value indicates mutual exclusivity.
- After "]" and up to "-" – contains version information.
- After "-“ – indicates a variant

Thus "[Zz] Wonderpatch V3 – 5800.tfp" is considered a different and mutually exclusive file from "[Zz] Wonderpatch V3 – 5810.tfp", but to be an update to "[Zz] Wonderpatch V2 – 5800.tfp". This logic is intended to allow a similar naming convention to be used for other file types – skins perhaps.

APPENDIX 4

DEFINITION OF CONTROL FILES

The files to be updated and the source of latest versions can be defined one or more control files whose names satisfy the criteria "TopyyUpdateList_*.txt" (i.e. the star can be replaced by any legitimate Windows file string).

The control files reside in the same directory as TopyyUpdater.exe. The file names are not case-sensitive. These files are text files that can be produced or edited with applications such as NotePad or WordPad. An editor such as NotePad which does not wrap the lines may be easier to use as the lines are quite long.

There is one line Topyy file to be installed or (potentially) updated, containing three compulsory elements and three optional elements as follows:

- Optional file description
- The file name.
- The internet address from which the latest version can be downloaded.
- The folder on the Topyy where any old version exists and where the new version is to be installed.
- Optional "Install Only" indication.
- Optional "help" url, which leads to a web site which will help the user decide on actions to take.

Anything on a line after "##" is treated as a comment and ignored.

The basic syntax for the definition of the update of one Topyy file is:

<filedescription>; File:<file name.Extn>; From:<latest version source>; To:<Topyy folder>;
Help:<url> <optional "Install Only">

Note the semicolon separators. The first semicolon must be omitted if the description is omitted. The colons can be replaced by "=" if you prefer. Spaces and tabs can be introduced before & between elements to make the file more legible. In addition, the "From" and/or "To" and/or "Help" elements can be entered on a previous line, and not repeated for a series of consecutive files using the same settings, but the description and filename must always be on the same line in the same order. If only some files have a help url, "Help=;" (or Help:;) should be used to indicate that it no longer applies.

The content of the various fields are identical to the database format in the previous section.

Consecutive files from the same zip source do not need a reload of the relevant zip file. Thus when laying out your file, the application will run faster if the files are grouped by source URL rather than by destination folder.

Not more than a total of 1000 files in 100 Control Files can be maintained – any excess in the input files will be ignored. Problems may occur if the line length exceeds 255 characters.

The zip file includes several sample control files to illustrate how they can be used. These include one for updating firmware and another for updating patches.