

CHANNEL MANAGER

(Currently at Version 5.1)

1 INTRODUCTION

This TAP is intended to provide an improved facility for scanning and managing UK TV channels on the Topfield TF5800 ("Topsy"), and in particular it includes options for:

- Deleting your old channels directly or by Factory Reset, retaining timers and system settings such as TV type & volume.
- Running a complete scan without further intervention, carrying forward timers to the new channel layout even though LCNs and internal Topsy numbers may have changed.
- Automatically deleting pay TV channels, for those without TUTV subscriptions.
- Intelligent duplicate channel handling so as to retain only the one with the strongest signal, but with the option to renumber the strongest of any of the remainder which has a different regional identity.
- Automatically deleting channels by (partial) name, LCN or Service ID, or selecting channels to be retained by (partial) name or LCN No, in the associated ".ini" file.
- User review & override of the automatic deletion logic.
- Copying or transferring radio channels into the TV channel list, or deleting radio channels from the TV List.

Selections of options can either be by an options screen, or by ".ini" file so that the whole process of scanning & deleting/renumbering can be done unattended. However many will find the default settings OK.

Version 5 introduced major changes from earlier versions, which include speeding up of many processes, cosmetic improvements, auto-generation of ini files, more radio support, and avoidance of the need to reboot if not copying radio channels to the TV list.

N.B. Version 5.1 has some facilities which I have been unable to re-test after the major re-write. These aspects are highlighted in pink below.

2 BASIC USE

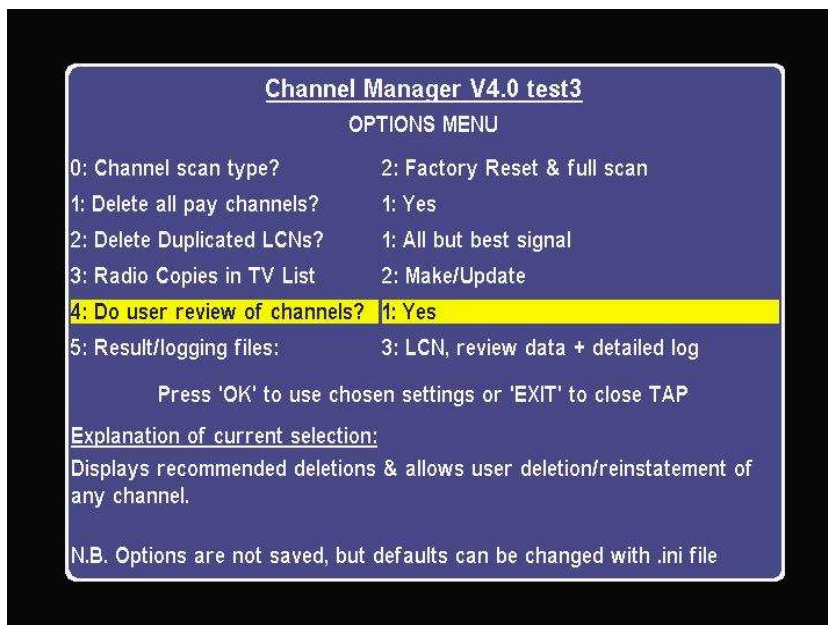
2.1 Installation & Loading

1. Make sure you have read all these notes. This TAP is potentially hazardous to family viewing (e.g. by deleting key channels, favourites, and/or timers), so until you have confidence that it works OK for you, use it when you have time to recover. Saving all key data beforehand using the PC application "Top Set" (or equivalent) is recommended (particularly if using the advanced features below).

2. Download the ".zip" file from <http://myweb.tiscali.co.uk/emjbtaps/ChannelManager/ChannelManager.zip>. This contains:
 - "ChannelManager.tap" – use Altair or equivalent to copy this into (a subdirectory of) "/ProgramFiles" on your Topyy.
 - Two sample ".ini" files as detailed below. These are not necessary for basic operation, and so can be ignored at this stage.
 - This ".pdf" file.
3. This version automatically suspends other TAPs with the exception of Remote Extender & TF5000 Display (the latter so the front panel clock continues to be updated rather than frozen at the time Channel manager started).
4. The TAP is inconsistent with recording & copying and should exit if any are in progress when it starts. It takes up to 5 minutes (plus your thinking editing time if reviewing the recommendations) to run when doing a full scan, so make sure no recording is imminent. It will also exit immediately if there is insufficient spare memory.
5. Load Channel Manager by pressing Archive, navigating to where "ChannelManager.tap" was copied, and pressing "OK". You will then be taken to the initial menu.

2.2 Initial Menu

2.2.1. General



The initial menu allows the basic operation of Channel Manager to be selected –further details of the options and their use is given below. Use the up/down keys to move to the next item, and left/right to change setting for the current selection. More information is given on the current selection at the bottom of the screen. More details of the options available without the ".ini" file are given below. When you are satisfied with the selections, press "OK".

2.2.2. Scanning Options

There are three options available:

0. No scan, so the TAP deletes, renumbers and/or renames previously scanned channels. In this mode, operation is analogous to that of the Channel Remover TAP except that the deletions can be reviewed and added to or reversed – see para 2.5 below.
1. Automatic, after deleting all existing channels. This process deletes all timers and native Favourites, but these are regenerated from data recorded before the start of the scan.
2. Factory Reset & full scan. Note that the system settings, Favourites, and timers are restored to their original values after the factory reset (provided the relevant channels still exist, of course).

During the subsequent scan, a banner appears across the lower part of the standard Topy “Searching” display to indicate that it is being run by Channel Manager. Recognition of completion of the scan is automatic, but may take a few seconds.

If a scan finds more than 200 channels (including duplicates), only the first 200 will be processed. Having reduced the number, the TAP can then be run a second time using scan mode 0 to process the rest.

N.B. The 5V mast head amplifier power-on will not be selected, so those using this facility will need to do the scan outside Channel Manager and then use option 0.

N.B. It is not possible to limit the scan to specific channels, and it is unlikely that such a facility will become available in future versions.

N.B. Problems have been encountered using option 2 when running 5.13.xx firmware after running 5.14.xx firmware and/or after running “EmptySettings.tfd”. Version 5.1 includes an attempt to fix this problem for TF5800 users, but if you have problems, you should perform a manual Factory Reset before using option 2.

2.2.3. Deletion Of Pay Channels

You can choose to automatically delete all pay channels at the initial menu stage. However please note that if the channel was inactive at the time of the (last) scan, the Topy will not have recognised it as a pay channel, and it will not be deleted. This may therefore be of limited use.

2.2.4. Duplicate LCN Handling

Two active modes (plus ignore) are available, which can be selected at the initial menu stage. Mode 0 leaves duplicates, and Mode 1 simply retains the one with the best signal and deletes the rest. For most people Mode 1 will be appropriate, and this is the menu default in the absence of an “.ini” file.

For those on the regional borders, who can receive signals from both regions, and who wish to be able to watch either regional variants of BBC1 or ITV1, Mode 2 should be used. The Service ID is used to determine whether a signal is a different regional variant. For channels with no regional variants, the same ID is used nationwide, but for BBC1/2 & ITV1

(and perhaps a few others) the ID is transmitter dependent. Among the channels with the same LCN, but different ID, that with the second best signal is renumbered so it no longer appears to be a duplicate and thus one can choose which regional variant to watch or record. Any further duplicates are deleted. By default, 200 is added to the original LCN to give the LCN of the regional variant. Initially the new regional variant will appear in its original position in the Topsy channel list so you might get:

1	BBC1
201	BBC1 second region
2	BBC2
3	ITV
203	ITV second region
4	Ch4
etc	

but if you do another scan without deleting the old channels it will move to its "correct" position in numeric order.

The above processes are applied to both TV & radio channels

2.2.5. Radio Channels In Your TV Channel List

Copying or transferring your radio channels into your TV channel list arguably makes the Topsy radio easier to use, releases a key for other purposes, and allows EPG TAPs (notably MyStuff) to work with radio channels without special code etc. This TAP includes the functionality of the OneList & RadioDelete TAPs, by providing the following options:

0. No action, which will leave any existing radio channels in the TV list unless deleted by LCN etc if you do not do a rescan.
1. Delete any existing radio channels in the TV list.
2. Copy the (new) radio channels into your TV list, after applying the duplication & deletion rules in force. If no channel scan has been requested and there are no true radio channels, your previous radio channels will be left in your TV list.
3. Transfer the (new) radio channels to your TV list, after applying the duplication & deletion rules in force, so your Radio list is empty and the Tv/Radio key is available for other uses. If no channel scan has been requested and there are no true radio channels, your previous radio channels will be left in your TV list.

Option 2 equates to running the "OneList" TAP, and Option 3 equates to running the "OneList" TAP followed by the "RadioDelete" TAP.

2.2.6. User Review Enable/Disable

This option allows you to enable or disable the manual review process described in para 2.5. **It is strongly recommended that you perform a user review the first time you run Channel Manager** to check that it is making the correct deletion decisions, but you may wish to skip this once you are happy that Channel manager is doing what you want.

2.2.7. Results & Logging

Four levels of recording are offered at the main menu screen as follows:

0. None
1. "LcnList.xls" which is a text file optimised for viewing in a spreadsheet listing your names vs. LCNs for all channels found, including those subsequently deleted. Those deleted are marked as such.
2. As (1) plus "Scan Results.xls", which presents the same data as the review screen.
3. As (2) + "Channel Manager Log.txt", which provides a detailed log of the internal operation of the TAP for software diagnostic purposes.

If it exists, these files are placed in the "/ProgramFiles/Logs" directory, otherwise in "/ProgramFiles". If you encounter problems, please use option 3 and retain the log file.

2.2.8. Action On Completion

To complete the processes (notably when you had native favourite channels), a reboot may be needed. In addition, a reboot of the complete Topy may be the easiest way of restarting EPG TAPS (see 2.8). Four options are available:

0. Do nothing.
1. Reboot if required – recommended solution for MyStuff (5.51 & subsequent) users as Channel Manager will automatically instruct MyStuff to reload its channel list on completion.
2. Always reboot – recommended for users of EPG TAPS other than MyStuff.
3. Shutdown – use this if you want to initiate a scan etc before going to bed.

2.2.9. Changing Your Mind!

"Recall" at any time up to the start of the deletions takes you back to reading the initial menu. **HOWEVER DO NOT USE THIS TO DO MULTIPLE SCANS, AS CHAOS MIGHT ENSUE.** It can be used safely to change the selections when viewing the recommended results provided scan option zero is then selected.

2.3 Channel Scan

If you have selected either scan option 1, all your existing channels will be (almost instantaneously) deleted and a scan started. For option 2 the Factory Reset deletes all your existing channels, and then a scan is started.

During the channel scan the standard Topy "searching" screen is displayed, with a message superimposed to indicate that the scan is being performed within Channel Manager. Channel Manager takes a few seconds to recognise that the scan is complete – ignore the "Press exit to continue" message.

2.4 Signal Strength Measurements

On completion of the scan, the quality of the signals on each Mux found is measured to allow optimum selection where duplicates are found, and to give an indication on the review screens. If automatic deletion of duplicates has been selected and duplicates are present the signal strength & quality is measured on each Mux for a default time of about 3 seconds. Otherwise, the time is reduced by a factor of ten if a review has been requested, and the measurements are skipped if no user review has been requested. The details of the current channel being monitored is displayed.

2.5 Review Screen

If it has been selected in the initial menu, the review screen lists the following data for each channel which has been found:

PROPOSED CHANNEL CHANGES						
Svc:LCN:Name	RF Sig	V & A PIDS	ID	\$ FI	Action	
30 : 28 : ITV4	56 *	8192 : 32768	8353		To be deleted	
31 : 28 : ITV4	68 ***	8192 : 32768	8353		No change proposed	
32 : 29 : E4	68 ***	570 : 33339	8448		No change proposed	
33 : 29 : E4	56 *	570 : 33339	8448		To be deleted	
34 : 30 : E4+1	54 **	501 : 33270	22336		No change proposed	
35 : 31 : ITV2 +1	50 *	601 : 33370	27072		No change proposed	
36 : 32 : Film4	50 *	701 : 33470	27136		No change proposed	
37 : 33 : Eurosport UK	48 *	8192 : 32768	16000		To be deleted	
38 : 34 : SETANTA SPOR	48 *	8192 : 32768	16096		To be deleted	
39 : 35 : Five US	48 *	6689 : 39458	12992		No change proposed	
40 : 36 : Five Life	48 *	6673 : 39442	12928		No change proposed	
41 : 37 : smileTV	54 **	8192 : 32768	22400		No change proposed	
42 : 38 : TopUp Anytime	148 *	6705 : 39474	16224	\$	To be deleted	

Current Seln Notes: Deleted as Pay channel, by '.ini' name,
 Press White to Delete/Undelete Press OK to proceed to delete etc

- Topy Service No (0,1,2 etc), LCN (as amended where relevant), & Service Name (using smaller font for long names, and even then may be cut off), as amended where relevant.
- RF channel number
- 0-3 star signal

rating.

- Audio & Video PIDs
- Service ID
- Pay channel indication
- Recommended action

Notes giving reason for proposed deletion/renumbering on the currently selected channel appear the bottom of the page. The deletion recommendation can be changed by selecting that line with the Up/Down & <</> keys and pressing the white key. A deleted channel will then no longer be deleted and an ordinary channel will be deleted. Renumbered/rename channels can be deleted, but not changed back to the original values/names.

Initially the TV channels are displayed, but the user can toggle between these and the radio channels by pressing the Tv/Radio button. A full list of the effective keys can be viewed by pressing "Text".

Pressing "OK" with either TV or Radio review screen visible implements the selected changes.

2.6 Implementation of Changes

On pressing OK in the review screen, or on completion of the signal measurements if the review process has been bypassed, Channel Manager proceeds to implement the requested changes. This should take ~ 1 second.

2.7 Restoration of Normal Operation

This includes, where necessary:

- Regeneration of timers and native Favourites which will have been deleted by scan options 1 & 2, and potentially in need of update if option 0 was chosen.
- Update of MyStuff favourites, where necessary.
- Instruction to MyStuff (V5.51 onwards only) to reload all its channel-related data. If successful, this will lead the MyStuff showing its "Searching ..." message.
- Final Reboot or shutdown according to option selected in the initial menu.

The timer update process can fail (it has been reported) if done too quickly, so takes about ½ second per timer.

2.8 Impact on EPG TAPs

Changing the channel layout is likely to confuse EPG TAPs, since the interface to set timers is defined in terms of position in the channel order rather than LCN. Restarting your EPG TAPs is therefore a wise precaution whenever you have run Channel Manager. In general the easiest way of doing this is to select the "Always Re-boot" or "Shut down" options in the initial menu, but MyStuff is a special case in that Channel Manager will automatically close it down and re-start it where necessary, provided it is in "Auto Start" and that you have not renamed it.

3 THE ".INI" FILE

The "ChannelManager.ini" file resides in "/ProgramFiles/Settings" and consists of three sections:

1. The initial menu default values, denoted by section heading "[Options]".
2. The channel deletion commands, denoted by section heading "[Keep/Delete]".
3. The advanced user commands described in section 5 below.

However it will read a file from a previous version of Channel Manager (even though the headers are missing and the order wrong), and commands which belong in sections 2 & 3 should be correctly interpreted.

Though all sections can be edited with a text editor such as "Wordpad", the recommended way of setting up section 1 is to press "Record" while in the initial menu screen. This will create or update a section 1 such that the current settings are the defaults when Channel Manager is next run. If you just want to change the settings for one run and then revert to the previous defaults, do not press "Record".

For most users, the easiest way of setting up section 2 is to do a scan with the review screen enabled, mark all your unwanted TV & Radio channels for deletion, and then press "Record" **before** "OK". This will generate a section 2 containing a list of channel names to be recommended for deletion on future runs, though if you have selected a user review you will have the opportunity to reverse the deletions and update section 2 of the ".ini" file accordingly. Using this method any new channel appearing in the Freeview line-up will not be deleted without your intervention. Alternatively you can set up a section 2 using the advanced features listed below.

Section 3 is best left empty by the majority of users.

4 SKINS

The colours used for the various display elements can be changed using a "skin" in "ProgramFiles/Settings/Skins/". It looks for:

1. "ChannelManager1.mcf". If this is not found,
2. "EMJBTaps.mcf", which allows a common colour scheme to be used for all my TAPs. If this is not found,
3. "CurrentlySelectedSkin.mcf". This is produced by MyStuff 5.5 when you change skin to anything other than the default, and allows other TAPs to automatically change their skins in line with that in use by MyStuff.

If none of the above are found, a default colour scheme is used which is optimised for CRT TVs.

A copy of a MyStuff skin file can be used, though only the following elements are used:

- "Background=" (normal background)
- "Highlight=" (background for selected menu entry)
- "TextForeground=" (normal text)
- "TextHighlightedForeground=" (selected menu entry text)
- "Frame=" (border round warning/info messages)
- "Screen=" (the area outside the border)

and all other entries are ignored. The keywords above should be followed by the red, green & blue values (separated by commas) in the range 0-255 with no spaces or final comma (e.g. 255,0,0 for red, 255,255,0 for yellow etc).

5 ADVANCED USER FEATURES

5.1 Warning

Please read this section carefully before attempting to generate or edit and ".ini" file manually. While I don't think you can damage your Topsy, you can certainly waste a lot of time and upset the rest of your household by losing some or all your favourite channels if you get it wrong (or find a bug I have missed!). Use the review screen the first time you try an ".ini" file to make sure it does what you want.

5.2 Additional Initial Options

Pressing “Opt” while in the initial menu gives access to 4 additional parameters as follows:

- The time taken for the Signal measurements described in para 2.4.
- The maximum LCN value to be considered when looking for regional variants.
- A test LCN value to simulate regional variants - should be left as zero.
- A facility to skip the initial menu and proceed using the defaults set by the “.ini” file – to allow unattended use – e.g. run on a regular basis by TAP Launcher.
- A facility to replace the “what is happening” progress messages with progress dots advancing as each activity is completed. The associated heading can be amended using a “SimpleProgress=XXXXX” “.ini” command where XXXXXX is the message you wish to replace the standard “Updating Channel & Related Data” heading.
- A facility to hide or show the TV picture behind the progress messages. Note that sometimes Channel Manager has inhibited both TV channels, in which case black background appears instead of a TV picture.

In considering the use of the menu skip, remember that the menu will not appear to let you revert to viewing the menu, so a manual edit of the “.ini” file will be the only escape route! The settings are saved with the main options in section 1 of the “.ini” file.

5.3 The “.ini” File

5.3.1. General

Additional functions and customisation are available via a “ChannelManager.ini” file, which must be in the “ProgramFiles/Settings” directory. Sample files are provided as part of the download and should be edited/merged/renamed to meet your particular requirements. Comments after “#” are ignored. “Recall” reloads the “.ini” file, so can be used to try an amended version. A warning message is displayed if an invalid command is found. This message includes the offending text, and is repeated in the log file (see below).

Given the wide range of combinations of these features, I have not been able to test every combination. Proceed with care, especially just before crucial programmes are due to be transmitted!

5.3.2. “.Ini” File Section 2 Commands

There are two types of relevant commands in the “.ini” file – the user can either define the channels to be deleted or the channels to be kept using “Delxxx” and “Keepxxx” commands respectively. In the former case only the channels listed are deleted, and in the latter case all but the channels listed are deleted. However absence of any “Keep” command is interpreted as an instruction to keep all channels.

Examples of the commands are:

- DelLcn=70 # Allows indicated LCN to be deleted even if other deletion criteria are not met.

- DelLcnR=071:099 # Deletes indicated range of LCNs (71-99 inclusive in this case). Must be 3 digit numbers.
- DelName=top # Deletes those channels whose name begins with "top". Note this is not case sensitive so "top" is the same as "TOP", "Top", etc. Only first 10 characters will be used. Any spaces at the end of the name will be ignored.
- DelSvID=14208 # Allows channels with indicated Service ID to be deleted even if other deletion criteria are not met.
- KeepLcn<=4 # Keeps channels with LCN of 4 or less.
- KeepLcn>=300 # Keeps channels with LCN of 300 or more.
- KeepLcn=35 # Keeps channel with LCN of 35.
- KeepLcnR=300:305 # Keeps channels in the specified range (300 to 305 inclusive in this case).
- KeepName=BBC # Keeps those channels whose name begins with BBC. Note this is not case sensitive so "bbc" is the same as "BBC", "Bbc", etc. Any spaces at the end of the name will be ignored.

These allow removal of classes of channels based on the LCN numbering conventions such as:

- 7x – Children’s programmes
- 8x – News
- 1xx – Teletext

in a way that is likely (but not guaranteed!) to operate correctly on any new channels that might appear. The DelName function could be used in the same way if, for example, you had a strong dislike of BBC channels.

The sample “ChannelManager1.ini” & “ChannelManager2.ini” files give more details of the delete & keep commands respectively, and each is intended to be a plausible set of commands (depending on your interests!) and they should result in the being left with the same set of channels (with the line-up as of December 2006)..

It is anticipated that most people will use either all delete or all keep commands, but both can be used in the same “ChannelManager.ini” file. However note that if you mix them only the files that satisfy the “keep” criteria and do not satisfy the “delete” criteria will be retained. Thus KeepLcnR=300:305 & DelLcnR=302:304 would leave you with 300, 301, & 305.

See <http://dt-tx-info.org/mux/index.html> for details of the Service IDs on the transmitters near you.

5.3.3. “.Ini” File Section 3 Commands

A different Service ID does not appear to always indicate a different regional programme, so the duplicate handling logic is preceded by a facility to amend the Service ID using an “.ini” command of the form “AmendID=4167:4162” where 4617 is the transmitted ID and 4162 is the new value. 4167 & 4162 will then be treated as the same service, and no regional variant generated even in Mode 2.

The operation of the regional renumbering can be tuned with the following “.ini” file commands:

- ReName=4162:BBC1 (E) # Renames all channels with Service ID of 4162 {to BBC1 (E) in this example}
- RegOffset=150 # Number to be added to original LCN for the regional variants (Default = 200)

These commands can only be added manually, but will be retained if the “Record” facilities are used to update sections 1 & 2.

5.4 Running From Auto Start

If Channel Manager is run from “/ProgramFiles/Auto Start”, operation is modified as follows:

- It looks for the ini file in “/ProgramFiles/Auto Start” rather than the “ProgramFiles/Settings” directory.
- Both the tap file (provided is has not been renamed) and the ini file are deleted, so they only run once.

This facility is provided to allow running of Channel Manager to be automated by processes such as my “TAP Installer” application for Windows (for details, see http://myweb.tiscali.co.uk/emjbtaps/TapInstaller/TAP_INSTALLER.pdf)

6 GOT PROBLEMS?

The following notes may help:

1. If you manage to delete all your TV & radio channels (presumably by mistake!) and the Topy is rebooted, you will find you are unable to get out of the native Topy main menu until you have done a scan to get some channels.
2. If an “.ini” command is not working, try selecting option 3 for “Results & Logging” in the initial menu, and look for invalid entry reports in the resulting log file.
3. If unexpected deletions occur, select option 2 or 3 for “Results & Logging” in the initial menu, and look at the resulting “Scan Results.xls” file for the reason why the deletion occurred.

7 UK FIRMWARE VERSIONS 5.14.XX

This version has primarily been tested on firmware version 5.13.65. When used with firmware version 5.14.xx you may encounter problems, notably with it not rebooting the Topy when required.

8 VERSION HISTORY

14/12/2006: Alpha1: released for very limited testing

22/12/2006: Alpha 2:

- Simplification of initial menu & clarification/expansion of explanations
- Re-arrangements of internal code.
- Suppression of MHEG loading messages
- Change to Delete/Keep by name functions to ignore trailing spaces
- Progress screens added to timer updates & channel deletions .
- Overlay added to full scan screen to indicate Channel Manager is running.
- Minor cosmetic improvements
- Rewrite of this document to put more emphasis on basic operation, with the advanced features mentioned later.

V3.0 - Not released

V4.0RC1 - “.ini” override options in initial menu removed

- “OneList” operation supported
- Factory reset added
- Rename bug fixed
- Logging added
- MyStuff favourites updated as necessary after rescan
- Other TAPs (except TF5000 Display & Remote Extender) stopped when this TAP is running
- “.ini” file moved to “ProgramFiles/Settings”
- Deletion of radio channel duplicates when equivalent TV channels deleted

V5 – major re-write to avoid the use of simulated key presses and reduce the need for reboots.

V5.1 - Regional variants facilities enabled

- Special mode of operation from Auto Start introduced
- For TF5800 only, Factory Reset country set to “Other Europe”
- Option to show TV behind progress messages added
- Option to show progress dots rather than progress details added
- “OneList” radio channels no longer deleted when using options 2 & 3 with no rescan if radio channels have already been deleted.
- Check on available memory added.

9 ACKNOWLEDGEMENTS

Particularly to Firebird for help with the flash memory aspects, R2-D2 for code to access various Topy internal functions to speed the process and avoid the clumsy simulated keypresses, and for feedback on test versions from ChunkyWizard.

10 FEEDBACK

Via <http://forum.topy.org.uk/forum/viewtopic.php?t=7049> please.