PawMac User Guide

Version 1.6.1

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Support: retro@pagasus.org

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Installation

1. Download the zip file containing the latest version of PawMac
2. Copy the exe and config file to the required folder on your PC
3. Launch the exe by double-clicking on it
4. To extract data from a Quill adventure, either to convert it to PAW format, or to create a map, you'll need to download and install UnQuill
5. To convert the output from PawMac into a TAP file that can be loaded into PAW, you'll need to download and install InPAWS
6. If your Quilled adventure was produced using The Press or The Expander, it probably won't fit into the free space available in Paw. Pawmac has lots of functions to truncate some of the locations, messages, fonts so that it will fit into the 48k version of Paws. Alternatively, you can use a special version of InPaws called InPaws128 that moves some of the messages into ram page 1 on a 128k machine, so your Quilled adventure should run, without much modification, in a 128k version of Paw.
7. To view any map files created by PawMac, you'll need to download and install Trizbort

8. Links to download the above apps can be found on our [webpage](.).

Using PawMac to convert Quill files to Paw

Conversion Introduction

PawMac (Paw Map and Convert) will allow you to convert adventures produced using the Quill to a format where they can be loaded, edited and played in PAW using InPAWS.

InPAWS allows you to create PAWS databases for multiple different formats, such as CP/M and from there to convert your adventure to, for example, DAAD using ANTUR. However, such conversions are out of scope of this user guide, where we'll concentrate on the creation of a valid file for InPAWS to use.

Most adventures produced using The Press or The Expander won't fit into a standard 48K PAW adventure, as the more sophisticated parser used in PAW takes up more memory than The Quill.

PawMac allows you to use a variety of techniques to reduce the final size of the data sent to PAW. However, all of them involve truncation or editing of the messages and or location text in your adventure. This may mean additional work for you to insert the truncated text back in once the adventure is saved into PAW. An alternative is to use the InPaws128 program supplied with PawMac which will fit all of your Quilled adventure into the 128K version of PAW.

Conversion Instructions

Function selector

1. Ensure that the function selector is set to **Convert to PAW**.

Output Path

2. If desired, select an output path and filename. If not, a default output path and filename will be used.

Remove control codes

3. Quill and PAW allow you to change the ink, paper, flash, inverse, brightness of text using control codes. Stripping these out will save memory at the expense of colourful text. If you are converting the adventure to a system without control codes, this may help save valuable memory.

Use smart wrap

4. PAW wraps text, and Quill doesn't. To save space, many Quilled adventures don't split the text where one word ends the line and the next word starts the line. These words are then joined together when displayed in PAW. Smart wrap attempts to fix this by inserting a space after each 32 characters of location and message text.

    This function also inserts a space after each full stop (unless the following character is a number,) and will replace multiple spaces with a single space.

    With these functions, you increase the readability of your text, at the expense of memory.

Export Fonts

5. Quilled adventures can include up to 2 fonts. You can select whether to import the first, second, both, or neither of these fonts into the PAWed version. Again, this is a trade-off between the look / atmosphere of your adventure against memory. If you only use the second font for a particular location, you may want to consider if the memory can be better used elsewhere.

   Both (Reverse) imports both fonts, but reverses the order of the fonts as they are loaded into PAWS. Useful if your "alternative" font has been loaded as the default font.

   Please note that although the front end is not updated, this function is smart – so it won't try and remove the second font if it doesn't exist, etc.

Truncate longest X percent

6. Check this box, enter the **X percentage** into box **7**, and then select whether you want to truncate locations, messages or both in the dropdown **8**.

   If this box is checked, PawMac will:
   - Sort the messages (and/or locations depending on what was selected) into descending order of length.
   - Remove the text from the longest X percent of the messages

   The idea behind this functionality is to reduce the number of messages that need to be rekeyed when the final adventure is loaded back into PAW.

Truncate characters / percentage

7. The meaning depends on box 6:

   - **if box 6 is ticked**, this will set the percentage of messages and/or locations that are truncated. There is no need to enter the % symbol. Maximum value is 100, but obviously, setting at 100 will mean all messages and locations in your adventure will be blank. It is suggested that you start off at 5% and increase as necessary until InPaws processes your file successfully.

   - **if box 6 is unticked**, this will set the maximum length for each location and/or message before it is truncated. As the front end suggests, start with 200 and decrease until InPaws processes your file successfully. Of course, as this number is reduced, the more locations and/or messages will be truncated, and will need to be dealt with once loaded into PAW.

If necessary, truncate

8. Choose whether to truncate messages, locations, or both. This is personal choice, and will depend on how your adventure is written. If your adventure has lots of messages, but only 6 locations, then truncating your messages will probably have a bigger impact on reducing the file size so that it will load into PAW.

Create log file of activity

9. This is checked by default and creates a log file of the changes that PawMac has made to your adventure. It creates a really useful worklist for you to work through to finalise the conversion from Quill to PAW. This will always be saved to the same path as the final output file.

Verbose logging

10. Check to see everything PawMac has done, uncheck to see a smaller log that details only those changes or issues that you'll need to go and sort out in PAW, post-conversion.

Output window

11. The same text that ends up in the log file of activity, and a useful guide as to what needs to happen to finalise your PAW adventure.

? (Help)

12. The usual help button that displays version information, and a link to our support site.

Font mapping

13. This allows you to correctly map the fonts in your adventure to entries in the process and response tables. For example, if you're expecting certain messages to be printed in your alternative rather than your default font, you can try both options in the dropdown, in conjunction - if necessary - with the **Both (Reverse)** export font option.

InPaws and UnQuill Automation Settings

14. V1.6+ of PawMac allows you to run InPaws and UnQuill as part of the PawMac conversion process. Please refer to the _Automating InPaws_ and UnQuill _in PawMac_ section of this user guide.

Get UnQuill output

15. This opens a dialog box and allows you to select the text file produced by UnQuill. Please ensure that the **-TZ -V options were selected**. _This should be the last button you press to start the process_. Ensure that all options are selected prior to this one.

    As of V1.6+ of PawMac, you can convert an .SNA snapshot file of a Quilled adventure by dragging the file from Windows Explorer and onto the main screen of PawMac, and following the prompts.

Finalising your adventure in PAW

Once you've created a file that will successfully load into PAW, there will still be work to do before your adventure looks and runs the way you want it to in PAW.

Vocabulary

The Quill imposes no restrictions on words in the vocabulary, and uses a basic two-word instruction set, such as GET HAT, WEAR HAT, KILL EVERYONE, and so on. PAW is more sophisticated and demands that a word be identified as a verb, noun, adverb, adjective etc., etc. (There are more, but only verb and noun need concern us here.)

When converting, PawMac uses the following logic:

- The Quill event table specifies an entry as *Word1 Word2* so PawMac categorises any word in *Word1* as a VERB, and any word in *Word2* as a noun.
- If a word *starts* with a number, e.g. 50p, this seems to *sometimes* cause errors with InPaws rather than with PAW itself. So PawMac will:
  - Create a synonym of the offending word with an A prefix, so **50p** becomes **A50p**
  - This will then allow InPaws to process the file correctly
  - You can then remove the A-prefix synonym from PAW if desired.
  - This only affects words that contain text but *start* with a number. Words that are wholly numeric, i.e. **808** are unaffected.
- PAW reserves word numbers 0, 1, and 255 (according to the manual, although in practice, you *can* insert a word as word number 1.) so PawMac shifts all word numbers up by 2 (word 0 becomes word 2, word 1 becomes word 3 and so on.)
  - If words 253 and 254 are populated in The Quill, PawMac will reallocate them to any unused word numbers in the vocabulary.

Event > Response

When converting Quill Event entries into the PAW response table, PawMac will:

- Amend the entry for any word that starts with a number and ends with text, e.g. **GET 50p** becomes **GET A50p**. This is due to an InPaws issue. The A prefix can then be removed from the final PAW database if desired.
- PAW disallows the use of one word type as another word type, so you can't, for example, use a verb as a noun. PawMac *used* to replace any noun in the event table with a _ in the response table if that noun had also been used as a verb in the event table. As a laboured example:

  - *You see that the key will fit into the lock if you sand the rough edges off the teeth of the key with the sandpaper.*

    >**SAND** KEY

  - *You notice a pile of sand in the corner. What could be buried in there?*

    >EXAMINE **SAND**

  In the above example, the **EXAM SAND** entry in the response table will have been replaced by **EXAM _** as SAND has already been defined as a verb.

  As of v1.4.2+, PawMac behaviour has changed. In this situation, PawMac will now:

- Count the entries in the event table that use the word as a noun and a verb
- Replace the *smaller* number of entries (verb or noun) with the _ placeholder.

This is to reduce the amount of post-import fixing that you'll have to do to the response table.

Status > Process

Defined very basically as "*do something even though the player hasn't typed anything*", PawMac uses the following logic:

- If the logic contains the ANYKEY command or checks the contents of flags 5-8, move it to Process 2
- Otherwise, keep it in process 1*.
- If Word1 in the entry is defined in the vocabulary as a noun, replace it with _
- If Word2 in the entry is defined in the vocabulary as a verb, replace it with _

*I'm not sure if this is the correct way to go, and whether, for example, I should just move everything to Process 2 unless… {specific small set of circumstances.} Any advice gratefully received!

Messages and Locations

- These may be truncated as discussed above. Certain emulators, such as ZXSpin allow you to copy text from your pc and it's then pasted in as Spectrum text. So truncated text can be pasted back into PAW (provided that there is sufficient free memory.) The output log will list the truncations that can then be copied and pasted back into the running emulation.
- Smart Wrap isn't 100% efficient, so there may be text where two conjoined words need to be separated by a space.

System messages

- There are more system messages in PAW than in The Quill so system messages 32-60 are the standard PAW system messages. These are stored in the PawMac exe config file, and can be amended if, for example, you always want to use your own bespoke replacement for "Time passes…"
- By design, PAW doesn't force a newline before displaying an input cursor, so you may need to manually add one into the relevant system message, otherwise the input cursor may be displayed at the end of a line of your location text.
- It appears as if system message 16, (the "*press any key…*" message that is displayed at the bottom of the screen) doesn't render correctly unless it ends in a newline character, so PawMac will add one, (if it is missing from the Quill version.)
- System messages 17 & 21 do not appear to include padding (unlike the Quill version,) so PawMac will add a space, to turn, for example:
  - "You have taken30 turns and your score is5%." into:
  - "You have taken 30 turns and your score is 5%."
- Early versions of The Quill (A series) did not allow you to amend the system messages, and system message numbers 19-31 were out of sync with later versions of The Quill and PAWS. Pawmac will automatically detect and replace A series system messages 19-31 with a generic set so that the correct system messages are imported into PAWS. Some authors manually hacked their A series system messages so bear this in mind.

UDGs

PAW has room for 19 UDGs (even on the 48K version of PAW) compared with The Quill's 21, so:

- The final 2 Quill UDG's will end up as the first 2 of the 16 graphics shades patterns in PAW.
- The remaining 14 shade patterns are the standard PAW shade patterns.

If you are using UDGs as your input cursors, you may find that PAW displays some other UDG as the cursors instead. This can be easily fixed by amending the relevant PAW system messages (33 & 34)

Objects

There is no concept of **object weights** in The Quill, so each object is assigned a default object weight of **1**.

PawMac will import any associated **object words** in with the object, *unless:*

- *the word has been used as a verb in the event or status tables*;
- *the word starts with a number as this causes an issue with InPaws.*

The maximum items carried {value} is inserted into the Process 1 table as *_ ABILITY {value} {value}*. The weight value will always be the same as the items carried value.

In PAW, system messages 36 to 45 contain automated responses to the player's attempts to get / drop / wear / remove objects. These messages don't exist in The Quill, so you may find that when you GET an object, for example, you'll see duplicate messages, namely:

- Your original logic and response ported over from The Quill
- The standard "*I now have the _*" system message 36 in PAW.

Patch or Press Flags

Certain Patch or Press Flags are imported and converted by PawMac. These are:

- LET 28 8 or 7 are converted to CHARSET 1 or 2
- LET 28 21 PAUSE 50 is converted to RAMLOAD 254
- LET 28 21 PAUSE n (where n is 0-254 except 50) is converted to RAMSAVE
- LET 28 11 PAUSE n is converted to ABILITY n n (note that setting a new specific maximum objects conveyable has been implemented, but increasing or reducing this number via 28 14 and 28 15 has **not** been.)

Using InPaws128

InPaws128 is a modified version of InPaws that moves a percentage of the messages to ram page 1 and saves the output in a .tap file that can be read by the 128k version of PAW. This will allow you to convert your Quilled database to a PAW database *without any truncation of messages or locations*, (assuming that you are running PAW on a 128k machine or emulator.)

Installation

Place the .exe into the desired folder. InPaws128 has to be launched from the command line, or from within PawMac

If you get an error saying that MSVCP140D.dll is missing, you'll need to install the Microsoft Visual C++ Redistributable installing on your machine, see: https://support.microsoft.com/en-gb/help/2977003/the-latest-supported-visual-c-downloads. Please note that InPaws128 is a 32-bit program, so even if your machine is 64-bit you may need to download the 64-bit AND 32-bit versions of the redistributable before InPaws128 will run.

Running InPaws128

Use the -z option followed by a number from 0 to 100 to specify the percentage of messages to move to ram page 1. For example:
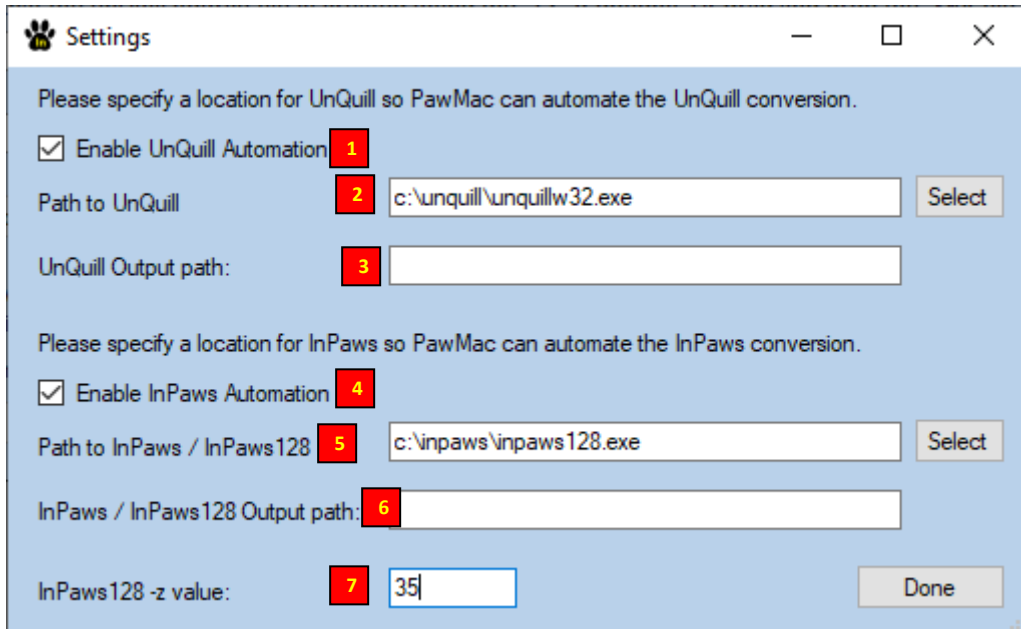
c "C:\output.paw" -o "C:\output_paw.tap" -z 35

will convert output.paw from PawMac to a tap file where 35% of the messages are moved to ram page 1

Notes:

- InPaws128 is beta software, provided "as-is"
- It has not been tested on adventures with graphics
- If your Quilled adventure fits comfortably within 48K, it is recommended that you stick with InPaws
- There are a further couple of changes in InPaws128 to improve functionality:
  - The bytes used function has been re-written to report how many bytes your converted file is over the memory limit.
  - The output filename in the tap file has been amended to use the source filename rather than the start of the file path as the saved filename in the Spectrum. For example:
    - Source file: c:\users\quill\my adventures\my adventure.paw
    - InPaw output: c:\users\
    - InPaw128 output: my advent
- It is suggested that you should aim to keep as many messages as you can in page 0 (whilst keeping enough free work space to edit your adventure) rather than moving them all to page 1 as unexpected results may occur. This is code for "I haven't tested what will happen if you do that."

Automating InPaws and UnQuill in PawMac

V1.5 and above of PawMac allows you to run InPaws automatically after you've converted your Quill output to a PAW file. The following screen is accessed by pressing the settings button ⚙ on the main screen.

Enable UnQuill Automation
1. Check to run UnQuill after dragging the .SNA file into PawMac file.

Path to UnQuill
2. Press the select button to browse to and find the folder where UnQuill is installed.

UnQuill output path
3. Specify an output location for your newly-created TXT file. If left blank, the output TXT file will be saved to the same folder as your input .SNA file, saved as output_unquill.txt.

Enable Automation
4. Check to run InPaws after PawMac has created your converted InPaws file.

Path to InPaws
5. Press the select button to browse to and find the folder where InPaws or InPaws128 is installed.

InPaws output path
6. Specify an output location for your newly-created TAP file. If left blank, the output TAP file will be saved to the same folder as your input PAW file, saved as output_paw.tap

InPaws128 -z value
7. Select a number from 0-100 to represent the percentage of messages in your adventure that are to be moved to ram page 1 when using InPaws128. If you are using standard InPaws this argument is not passed.

Using PawMac to map Quill or Paw adventures

PawMac creates maps of Quill or PAW adventures. It uses the file created by UnQuill or UnPaws to create maps that can be opened or edited in the Trizbort application.

A note about mapping

One key thing that is missing from the mapping data in The Quill and PAWS is the idea of **distance between locations**. Consider this example:
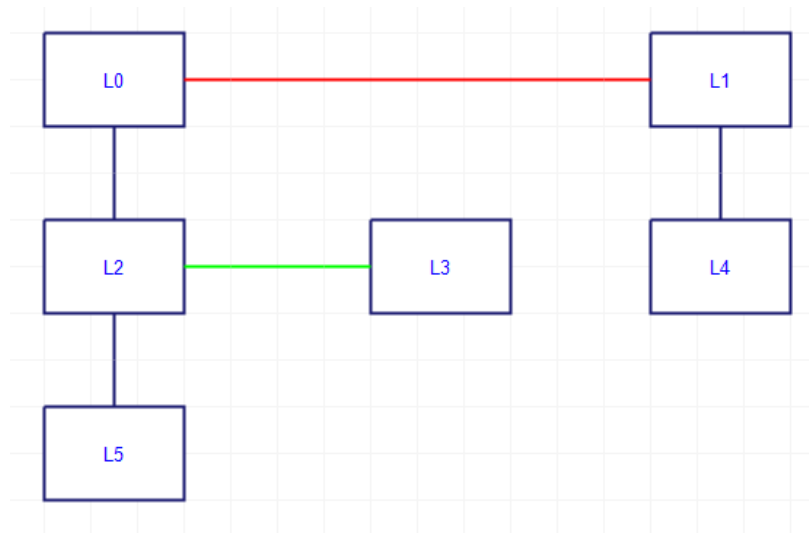
The above only works as a map because the lengths of the red line and the green line are different. We can see that L1 is to the east of L0, and L4 is to the south of L1, but because of the greater distance between L1 and L4 the map still looks nice and clear.

Now, let's look at the same map in PawMac:
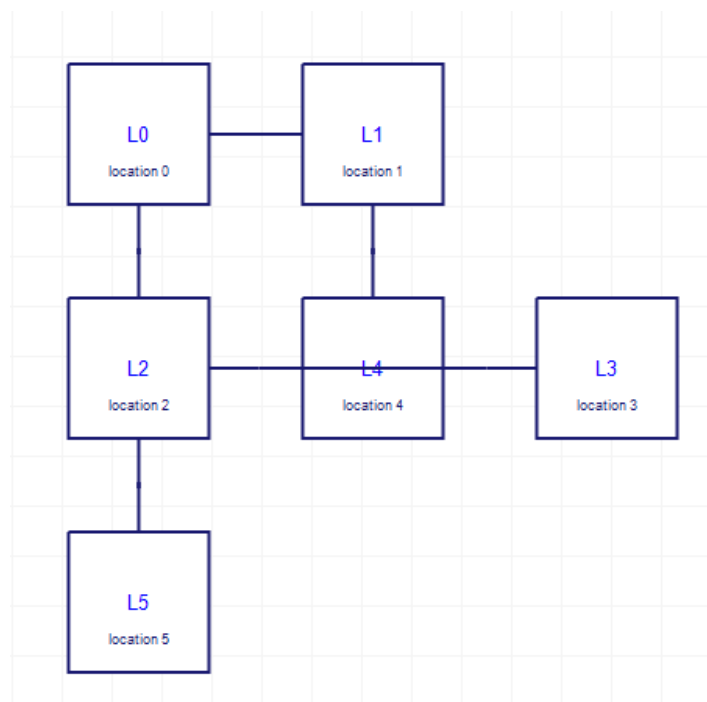
PawMac has mapped the locations, but as it has no way of knowing about the additional distance, it places L4 between L2 and L3. It's not wrong, but there's a bit of clutter, even though only 6 rooms have been mapped.

Garbage in, Garbage out.

Did you plan and map your adventure before you started, or did you just wing it? Did you add additional locations at the end that link to locations at the beginning? Here's a map of the start of Part 1 of **Arnold the Adventurer**. It's *beautifully* laid out, so PawMac does a decent job of mapping it.
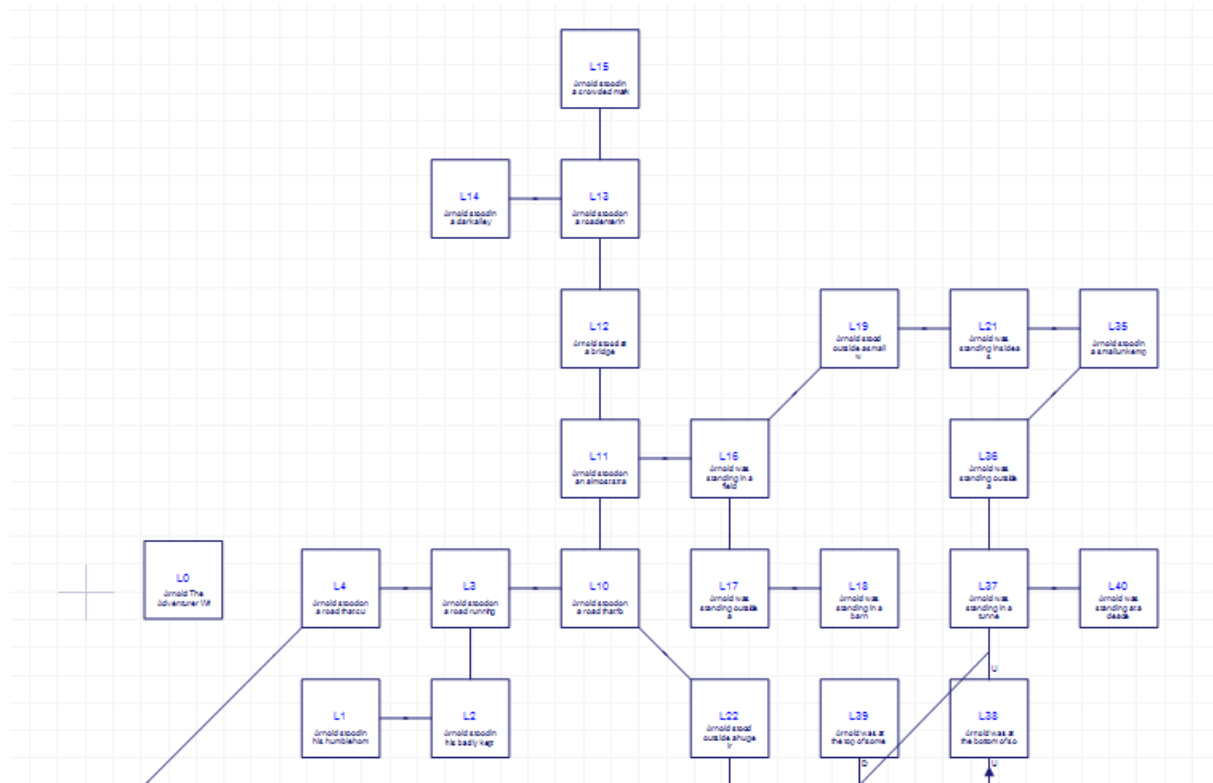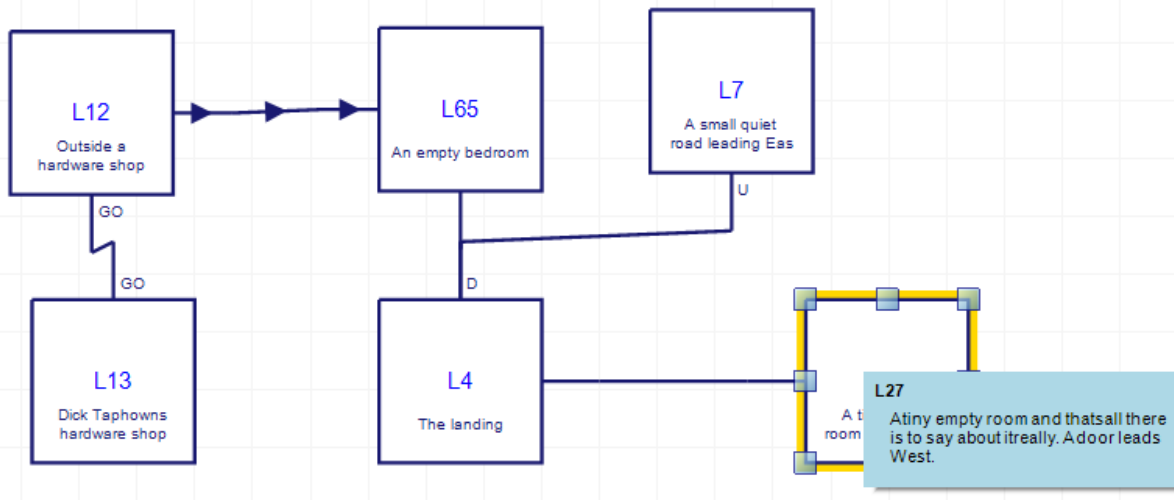

It does less well with this map of the start of **Deek's Deeds**, where I was guilty of both winging it, and joining later locations with early locations:
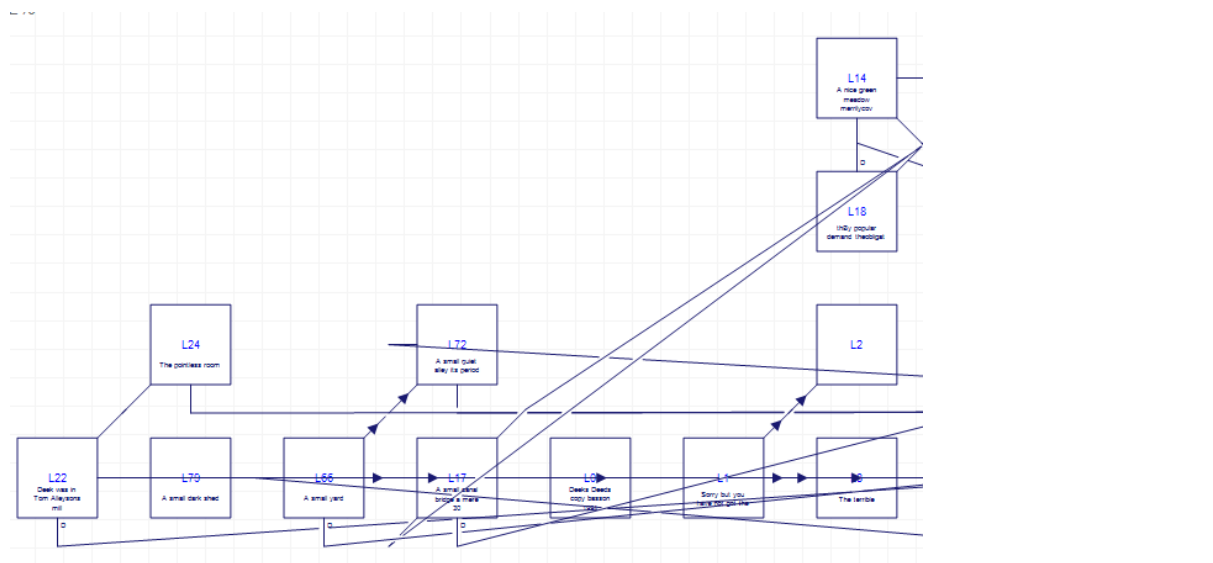
You can always edit the map, and move locations about in Trizbort, but be aware that the more locations there are, the more this can quickly become a herculean task.

1 WAY and 2D

- As the map is rendered in 2D, it's difficult to differentiate between North/South and Up/Down. So, Up/Down directions (or anything that isn't a compass point direction) are rendered on the map in text next to the connector, as in L4 to L7, and L13 to L14 above.
- If travel is only possible in one direction, this is indicated by arrows on the connector, as in L12 to L65 above.
- Mouse over a location to display the entire location description (although this function seems to be dependent on the version of Trizbort used.) A truncated version of it is always shown in the location itself.

Mapping Instructions
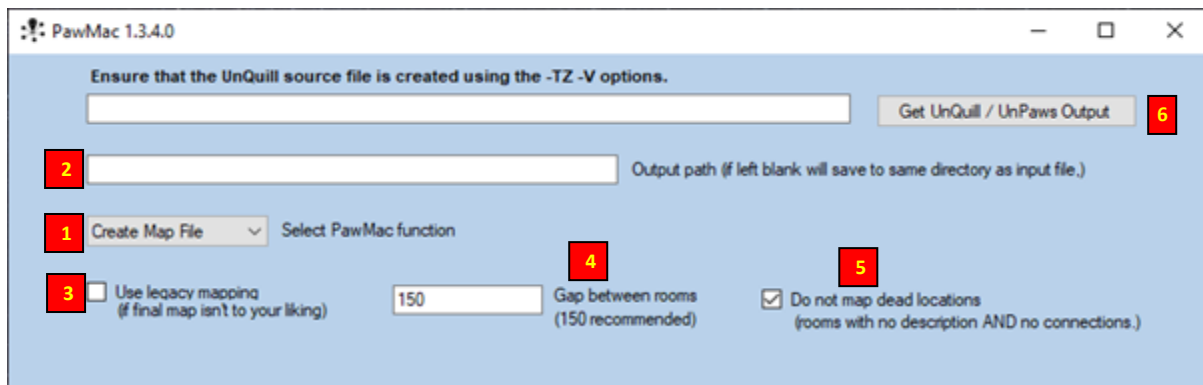
Function selector

1. Ensure that the function selector is set to **Create Map file**.

Output Path

2. If desired, select an output path and filename. If not a default output path and filename will be used. Top Tip: If you have this output file open in Trizbord, you can reload the map and review changes on the fly.

Use Legacy mapping

3. There are two mapping algorithms in PawMac. The default, new mapping routine should produce better results, but it may be worth checking what the legacy version looks like. Just go with whichever version looks better.

Gap between rooms

4. 150 is the default and is recommended, but feel free to play around with these values and see the results.

Do not map dead locations

5. As the name suggests, this exclude locations that have no description, or have no entries in the connections table.

Get Unquill / UnPaws output

6. This opens a dialog box and allows you to select the text file produced by UnQuill or UnPaws. Please ensure that the **-TZ -V options were selected**. This should be the last button you press to start the process. Ensure that all options are selected prior to this one.

   As of V1.6+ of PawMac, you can convert an .SNA snapshot file of a Quilled adventure by dragging the file from Windows Explorer and onto the main screen of PawMac, and following the prompts.