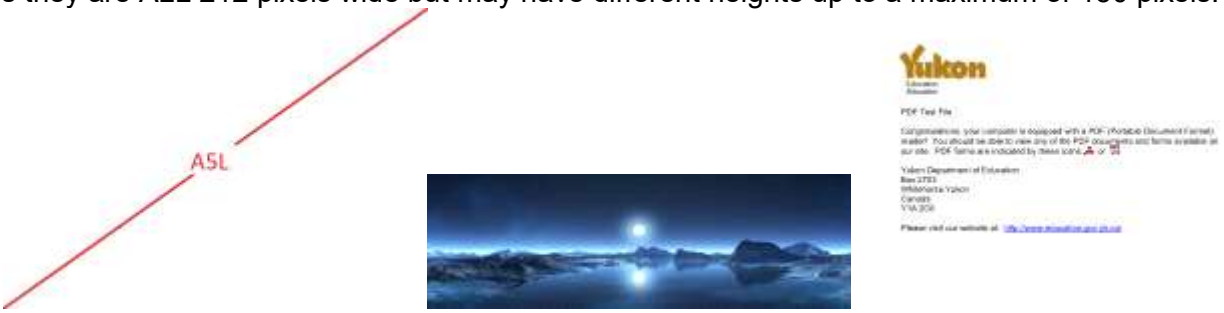
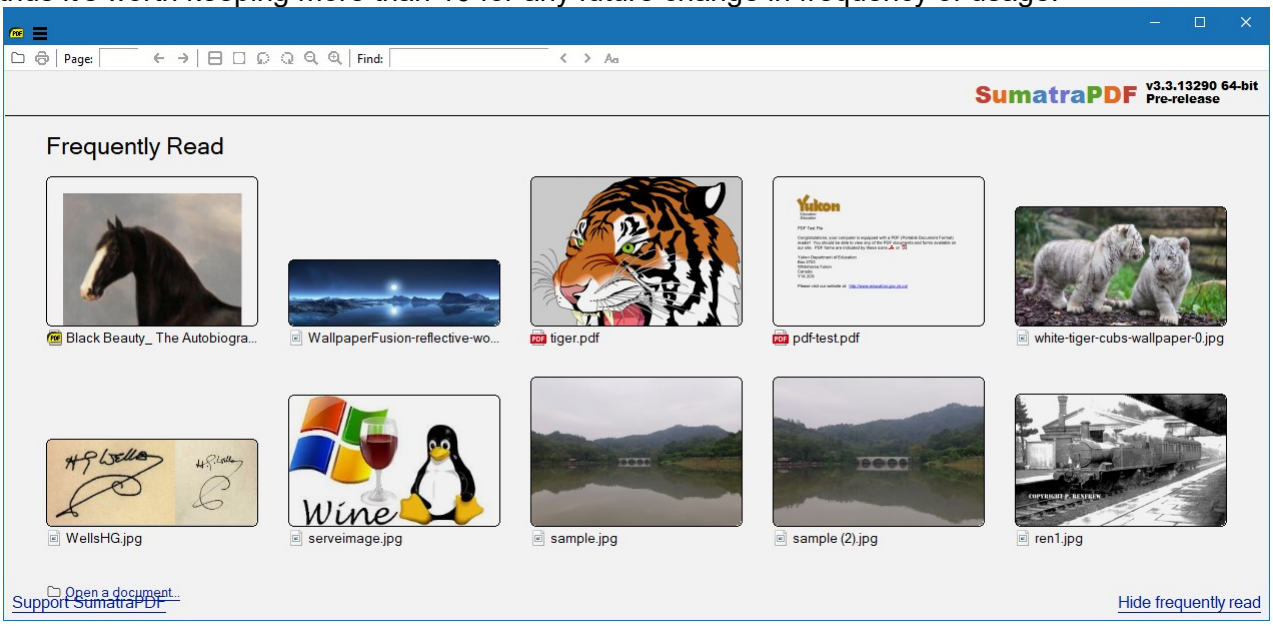
Working with SumatraPDF thumbnails cache

Users may be mystified at seeing a SumatraPDFcache folder with potentially hundreds of files with seemingly random 32 character names such as 0ded86ba0a88a27aaf6de1a68fa7d8f1. If you view them as icons or look at the extension you will see they are small .png thumbnail images. Whilst some can appear to have odd shapes they are ALL 212 pixels wide but may have different heights up to a maximum of 150 pixels.



They are generated the first time you open a file or folder that contains an image and will be a render of the **TOP** of the first page displayed. Thus sometimes the cover image is not full page as may be expected.

ONLY a maximum of 10 will be shown on SumatraPDF start-up and many users have questioned could more of them be showing on the initial "Frequently Read" page. However, it should be noted that the more "frequently" you open a particular document then the thumbnail ranking will change and thus some of those apart from the initial 10 may be eventually shown, whilst less frequently opened ones will be kept but not be seen, thus it's worth keeping more than 10 for any future change in frequency of usage.



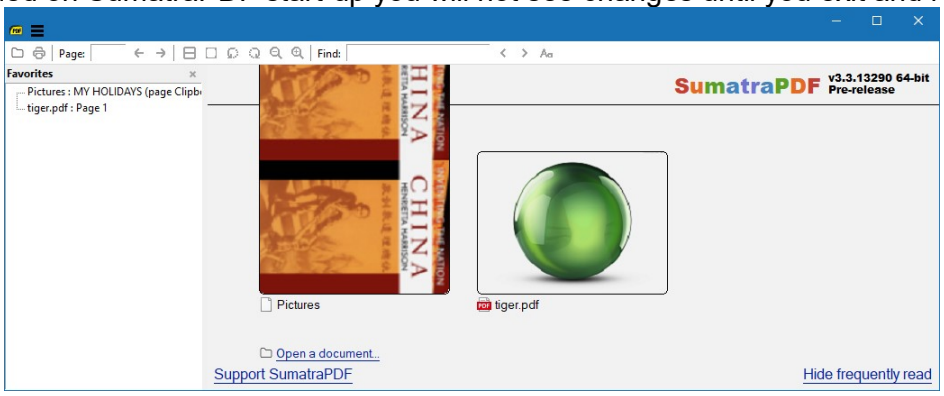
(Note some images here are much lower quality than will actually be seen on screen)

One example of why there can be an increasing number of dead entries is whilst using SumatraPDF you rename a file, then a new thumbnail will be automatically generated, and since the name is re-hashed then 7bdcf804df9bea0f92d389aa6cd35d3b may regenerate as a copy of 3b141e1f9ce680d2c22020456c8f38be. Thus there is no easy way to tell which is redundant, unless you consider the date and time of the new one and delete the older one. However, there are legitimate reasons for duplicates, since there could be two similar source files stored in different places, or deliberately have different names e.g. one is annotated.

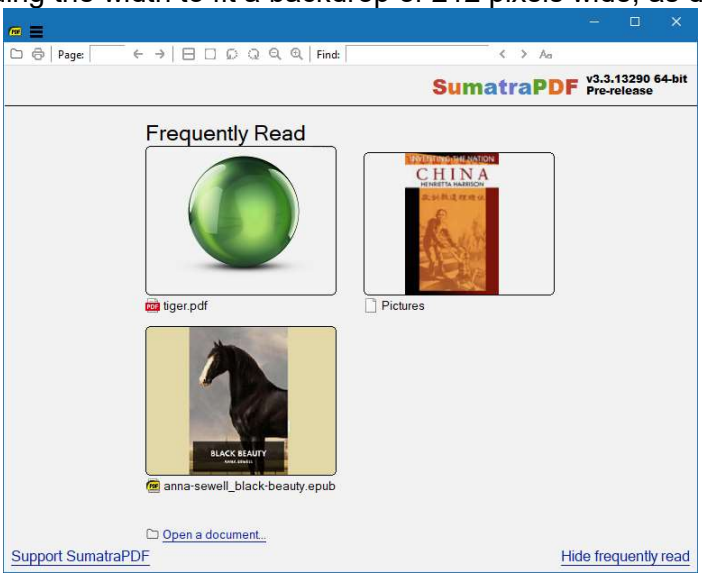
When you delete an entry from "Frequently Read" then its thumbnail will also be deleted. Thus in theory removing those unwanted front page entries should "tidy up" the cache, however, that is not always the case unless you temporarily switch OFF remember files when the WHOLE cache will be emptied, **EVEN those that are pinned,** but NOT any that are stored as "Favorites". Note "Favorites" does not need to be shown as here but I have switched them on to show the relationship with those two kept.

IF you do any customisation to the cache consider the mod's as "fragile" and if necessary keep a backup. So, why would you make any mod's, well one case is where we would like full page portrait covers or want larger images, and here the fact that SumatraPDF does not replace them each time we open a file can be advantageous. Thus we can replace some as I did with the "Tiger" icon above. Also note there is a change in that icons height, it is actually 150 pixels high but appears higher than its neighbour. The reason is that the pixel width is 200, thus when stretched to occupy the 212 pixel wide space the height is proportionally increased ! This messing about with the cached icons can cause problems if only manually rotating the icons.

Since they are loaded on SumatraPDF start-up you will not see changes until you exit and re-enter.



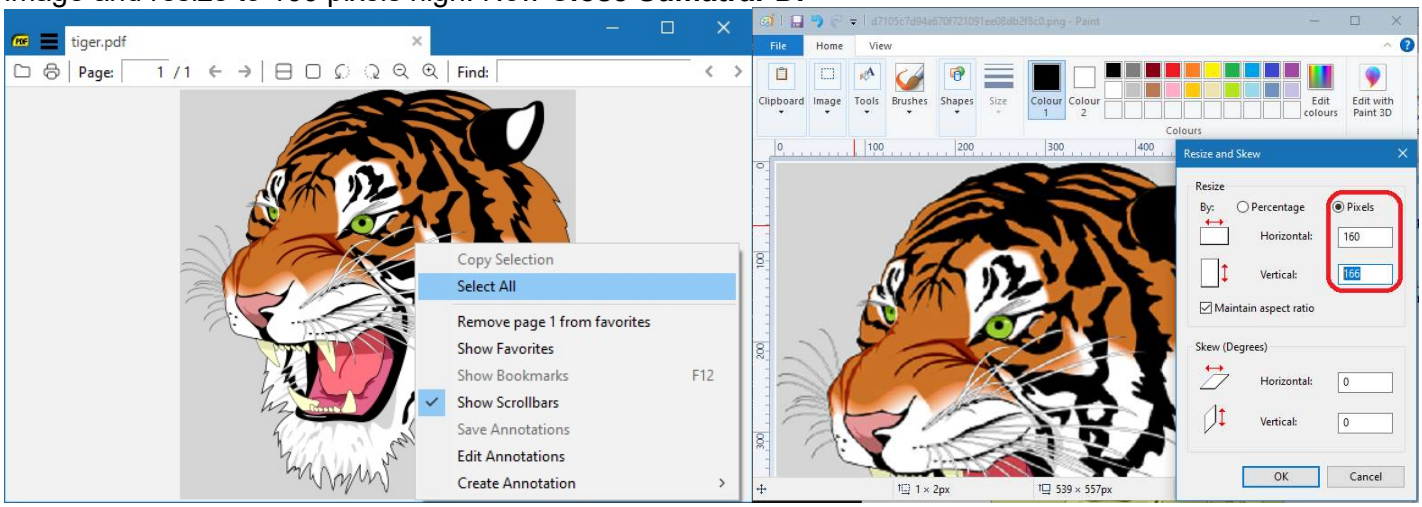
If you wish to show full portrait covers, then keep the format at 96 dpi png and a maximum 166 pixels high but avoid reduced width by padding the width to fit a backdrop of 212 pixels wide, as done here.



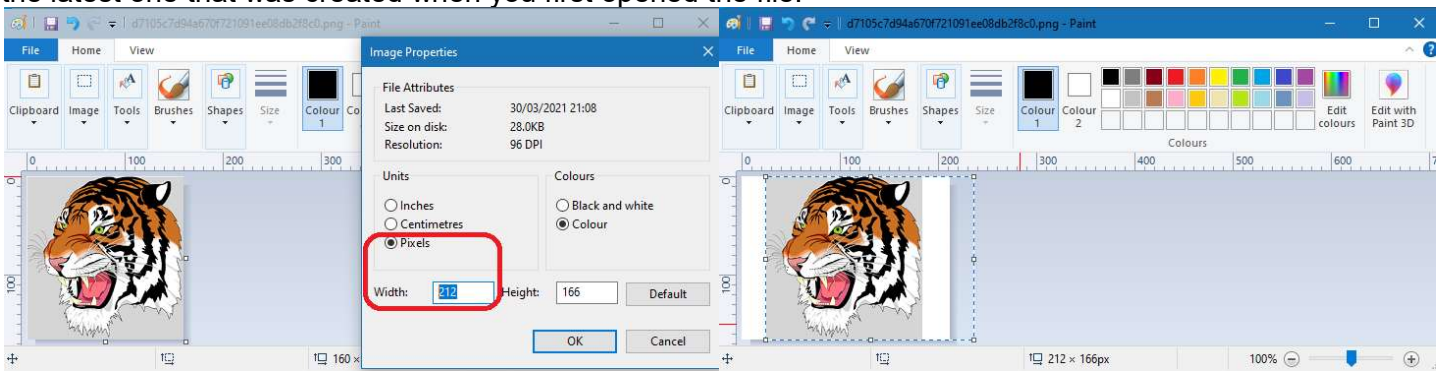
It may be tempting to increase resolution for use on high dpi monitors (especially in kiosk settings), but they need to be just the minimum size to compensate for "upscaling / aliasing" issues i.e. such as using150% ppi .

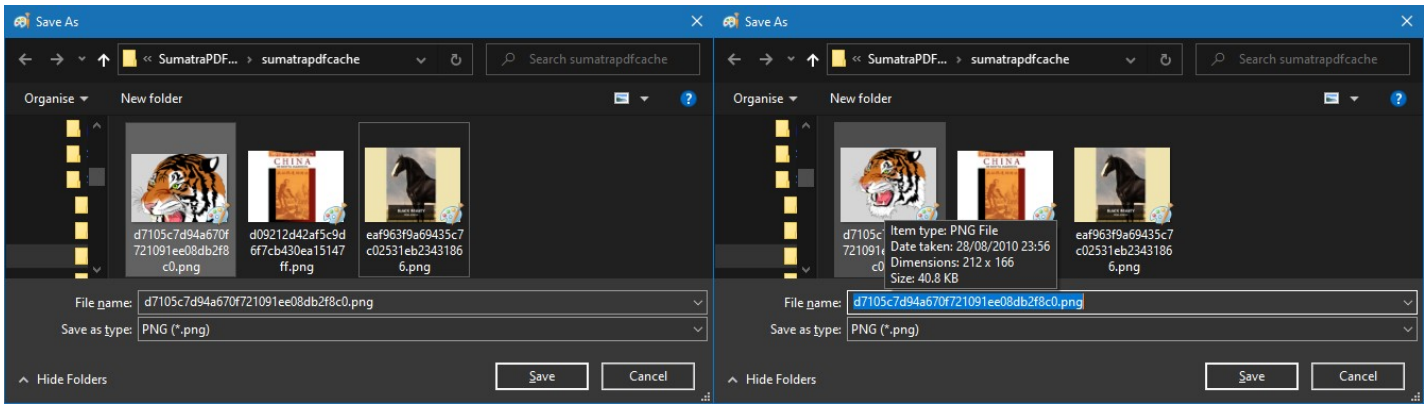
How to create new thumbnails?

One quick way "as required" is to open a file in SumatraPDF and either use the context menu to copy the page / area OR windows snipping tool to capture the desired image/area. quickly run MS paint to paste the image and resize to 166 pixels high. Now **Close SumatraPDF**

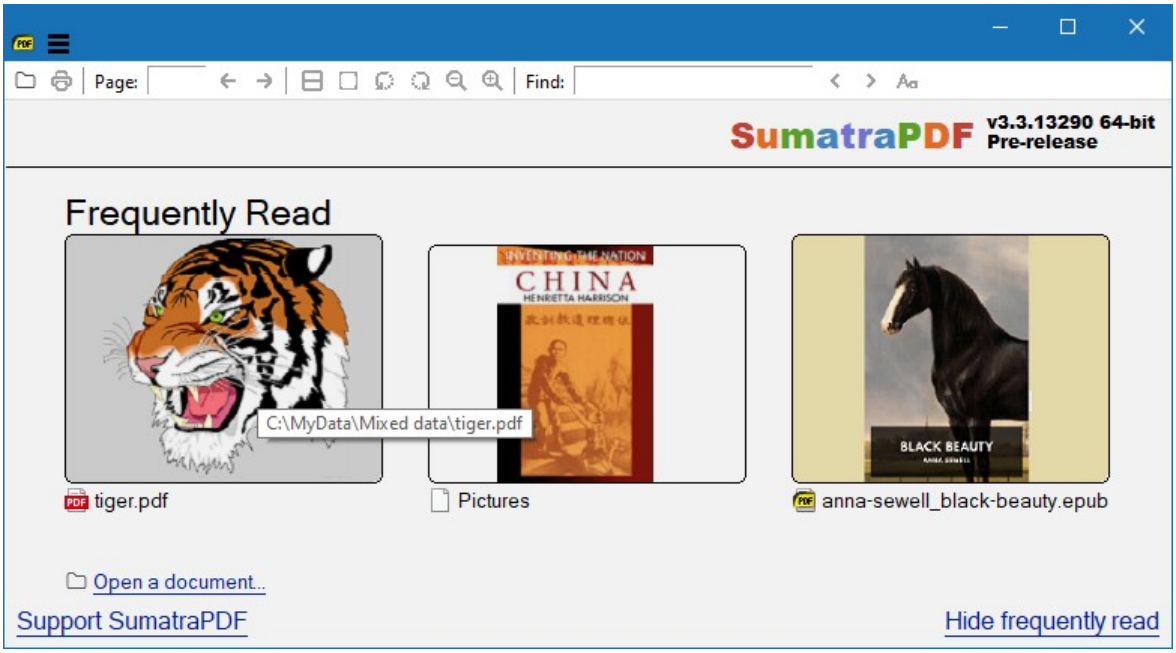


Go to file properties and set pixel width to 212, click OK then select ALL and drag to the right or use right arrow key until image is centred. Save your hard work as a backup.png, then go to the cache and overwrite the latest one that was created when you first opened the file.





Reopen SumatraPDF and see the new thumbnails



There must be an easier way, to automate this process ! Yes there is. remember the rename possibility?
1) Open the file in question, make an image / area selection (**avoid selecting page** as it may be autorotated)
2) Print current SELECTION to PDF using Fit, Landscape, Paper=Statement (note this is intentionally small)
3) Save the output as in my case Tiger-cover.pdf, it should look like this. Note it is centred and a good ratio. But more on this later.

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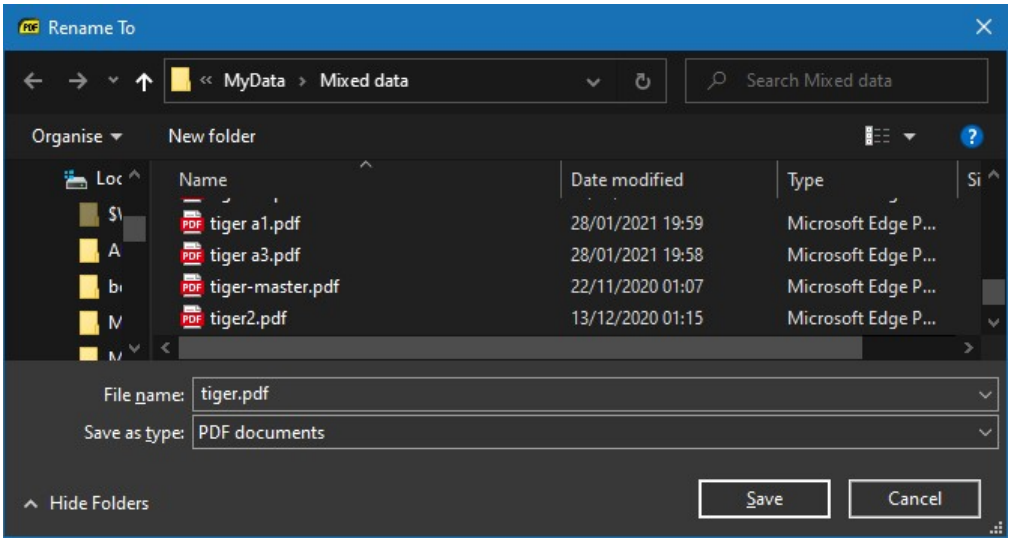
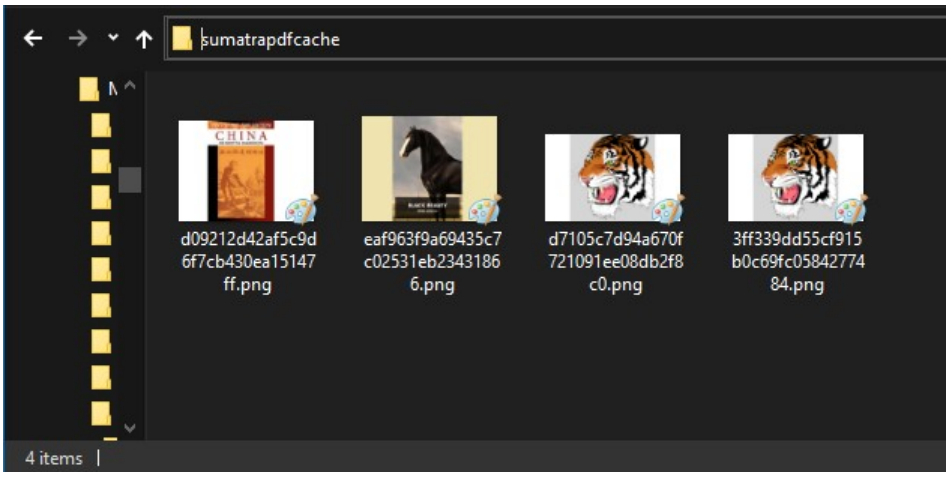
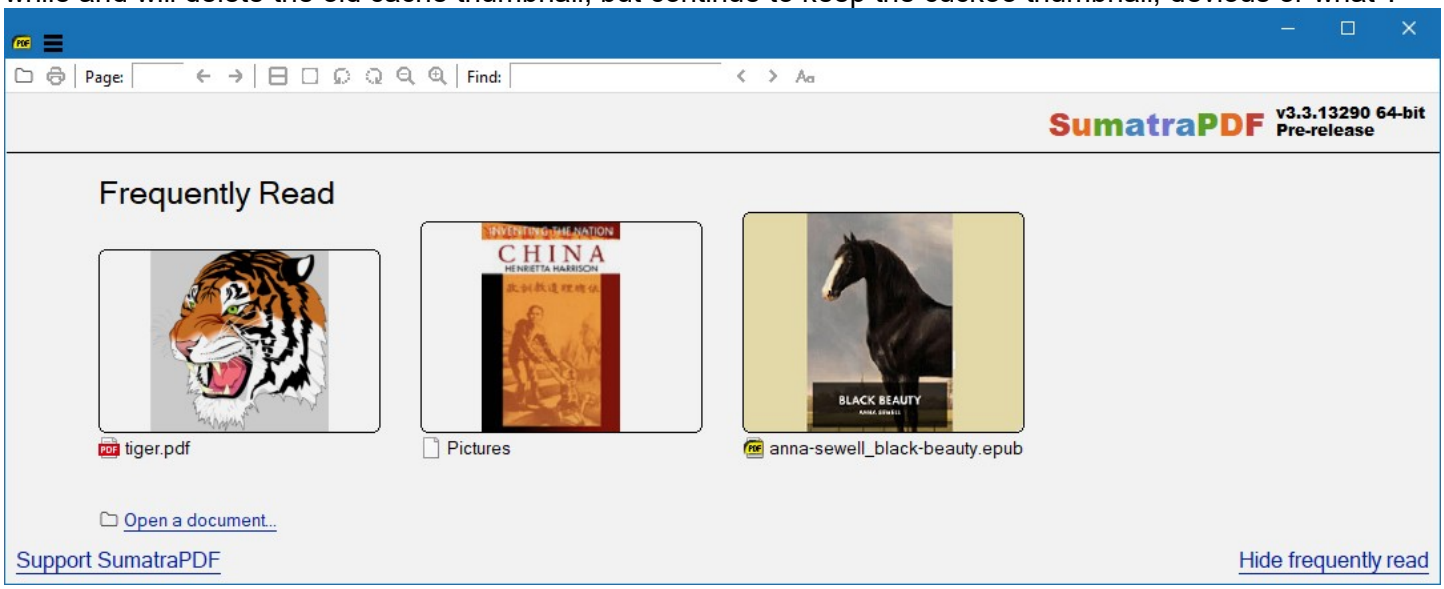
4) Now for the tricky bit, **CAUTION** very carefully, press F2 to rename and find the original file (Tiger.PDF) Keep your cool and **do NOT hit save yet**.

Right click the master file and rename to for example Tiger-master.pdf NOTE the File name: box has now changed to tiger.pdf . Now the master is safe (do NOT overwrite it) and the cover will replace the master file, and if we then look in the cache there should be two similar thumbnails. Continued....





5) The **most important step** is after you have changed as many as you want, (it could be automated) **then CLOSE SumatraPDF and go to the folder** (where -cover and -master were changed) and re-reverse them (delete the printed-cover copy if you wish).
6) Re-enter SumatraPDF and it should notice that whilst there was a "-cover" file it was no longer there for a while and will delete the old cache thumbnail, but continue to keep the cuckoo thumbnail, devious or what ?



NOTE that the result of using "Statement" is an thumbnail 212 wide but only 138 high (less than desired). To get 212 x 166 we need to use a paperkind= of a custom ratio (easier said than done, but not impossible). IF print-to-pdf is done in Metric **A or B sizes** then the ratio is the Golden Square standard of 212x150 thus **A6 should work better.** The only paper stock ratio that could be more useful is **Japanese AB however that could at best result in 212 x 173**

I also said the above steps could be automated inside SumatraPDF, however, if not error checked well, it could be prone to failure, it would be much easier and faster to do this primarily outside of SumatraPDF.

However, you may find the discussion where doing similar with MuTool was discussed in the forum at https://forum.sumatrapdfreader.org/t/sumatrapdf-commandline-usage-to-get-thumbnail/3681 which eventually resulted in an "addin" to build thumbnails 150 high.

I leave you with this Looping Algorithm.
Clear (optionally backup) the cache
Command line SumatraPDF to open the target file (e.g. print page 1 to any trash location)
See the NEW name in the cache, use that one NAME via a command line loop to process the one step.
Use IrfanView to build a full page cuckoo thumbnail on a field of 212 pixels wide by no more than 166 high, which could involve several batch passes but should be fast. Then hold the results as the cache file name.
Eventually overwrite the final empty cache with all the held processed thumbnails.