PDF Cropper

User Manual

v2.0

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1. Introduction

PDF Cropper converts ordinary PDF files into versions that are easier to read on small e-reader screens such as Kindle and Kobo. It can also produce image-based EPUB files, so you can read your documents on devices that do not support PDF natively, such as the XTEINK X4 Pro.

The idea behind the application is simple: you define **frames** on the pages of the source PDF. Each frame becomes a separate page in the result. This lets you decide precisely what appears in the result and how.

What you can do with PDF Cropper

- Define frames that cut the source pages into the exact areas you want to read.
- Share one set of frames between many pages using page groups.
- Exclude pages you do not need, or give a single page its own settings.
- Produce a new, more readable PDF.
- Export an image-based EPUB for devices without PDF support.

2. Installation

PDF Cropper is currently available only for macOS on Macs with Apple silicon (M-series chips). It is distributed as a `.dmg` disk image.

Note: Versions for Windows and Linux will be available soon.

There is no limit on the macOS version, as long as the Mac has an Apple silicon chip.

Download the installer from the PDF Cropper website:

https://www.pdf-cropper.com/download

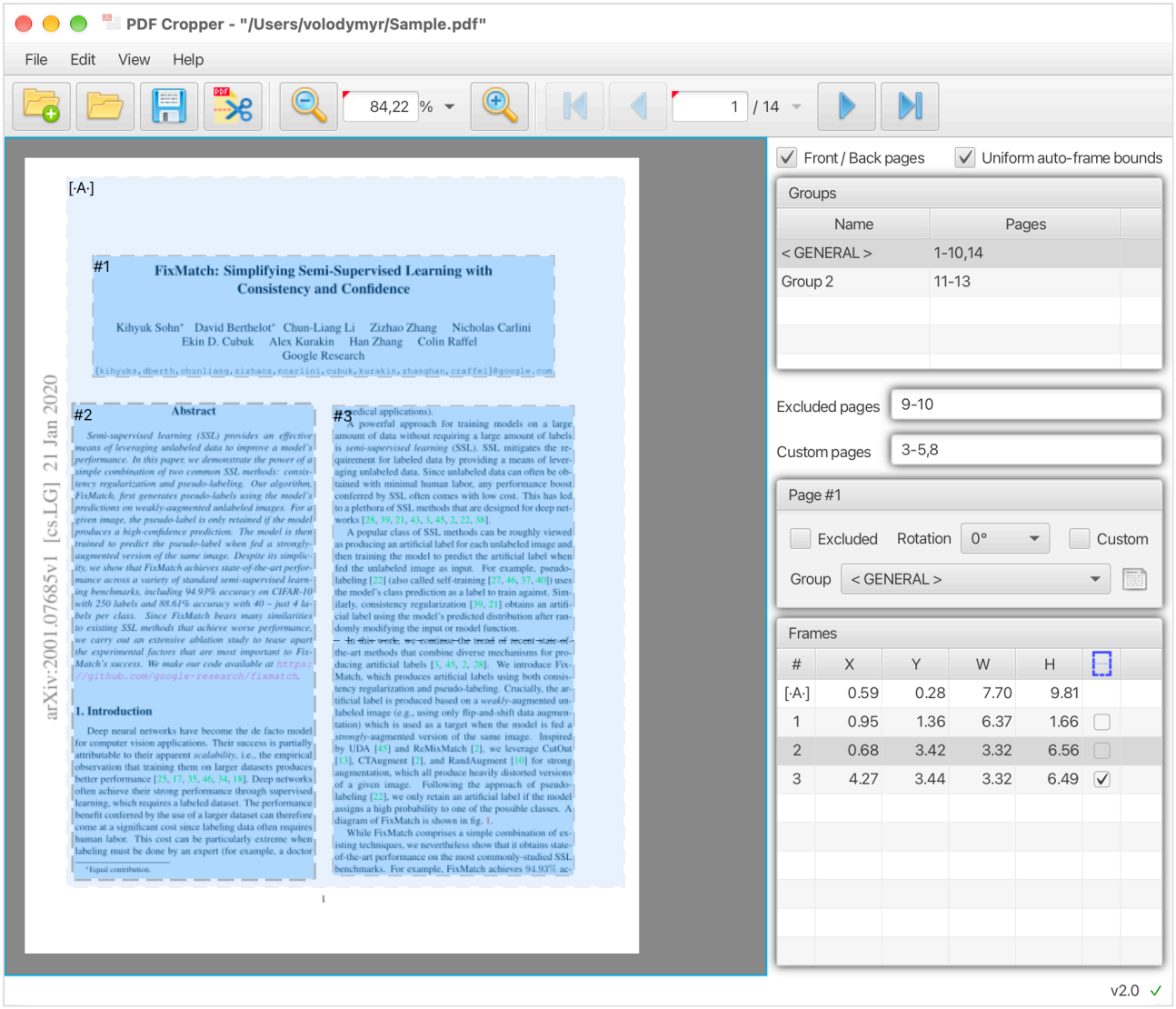
Note: The website is currently under construction.

1. Open the downloaded `.dmg` file. A window opens with the **PDF Cropper** application and a shortcut to the **Applications** folder.
2. Drag **PDF Cropper** onto **Applications**.
3. Eject the disk image.

To start PDF Cropper, open it from the **Applications** folder. If you want quick access, keep its icon in the Dock.

3. Quick Start

1. **Open the PDF.** Choose **File** → **New Project...** and select the PDF you want to process. The first page is displayed.
2. **Look through the document** before defining frames, and decide how to organize it:
    - If the first page is a cover, mark it as **custom** and give it a single frame.
    - If the document has pages such as a table of contents or an index, mark them as **excluded**. The page numbers change in the result anyway, and PDF Cropper can generate an updated table of contents for you.
    - Check whether odd and even pages have a different layout, for example when the text is shifted horizontally. If so, turn **Front / Back pages** on; if not, turn it off.
    - Decide whether you need several page groups, or whether the default group is enough, with **custom** pages for the few pages that differ.
3. **Define frames** for the pages, using **Auto-frame...** or by hand.
4. **Choose your device** in **File** → **Reader Settings...** (see section 5.3). The default settings are generally fine, but for better results select the profile that matches your device. This matters most for very small devices such as the XTEINK, which do not support PDF natively. For them an image-based EPUB is used, and the closer the size of the rendered images is to the size of the device screen, the better the result looks.
5. **Crop.** Choose **File** → **Crop...**, select the format and the output settings (see section 5.4), and click **Crop** or **Crop & Open**.
6. **Save the project** with **File** → **Save Project** if you want to reopen it later for extra tuning or to produce the result again. You do not need to save before cropping.



Main window

4. Core concepts

4.1 Frames

A frame is an area of a source page. In the result PDF, every frame is presented as a separate page. Frames are how you control what ends up on the small screen.

Selecting a frame. Click a frame on the page to select it. The borders of the selected frame change appearance so you can tell it apart from the others. You can also select a frame by clicking its row in the **Frames** table on the right.

Moving a frame. Hold the mouse over the selected frame. The cursor changes to a hand. Press the mouse button inside the frame and drag it to the new position.

Resizing a frame. Hold the mouse over an edge or a corner of the selected frame. The cursor changes to show the direction in which you can resize. Press the mouse button and drag the edge or corner to change the frame's size.

Position and size. The **X**, **Y** (position) and **W**, **H** (width, height) columns of the **Frames** table are measured in typographic units. The position is measured from the top-left corner of the page.

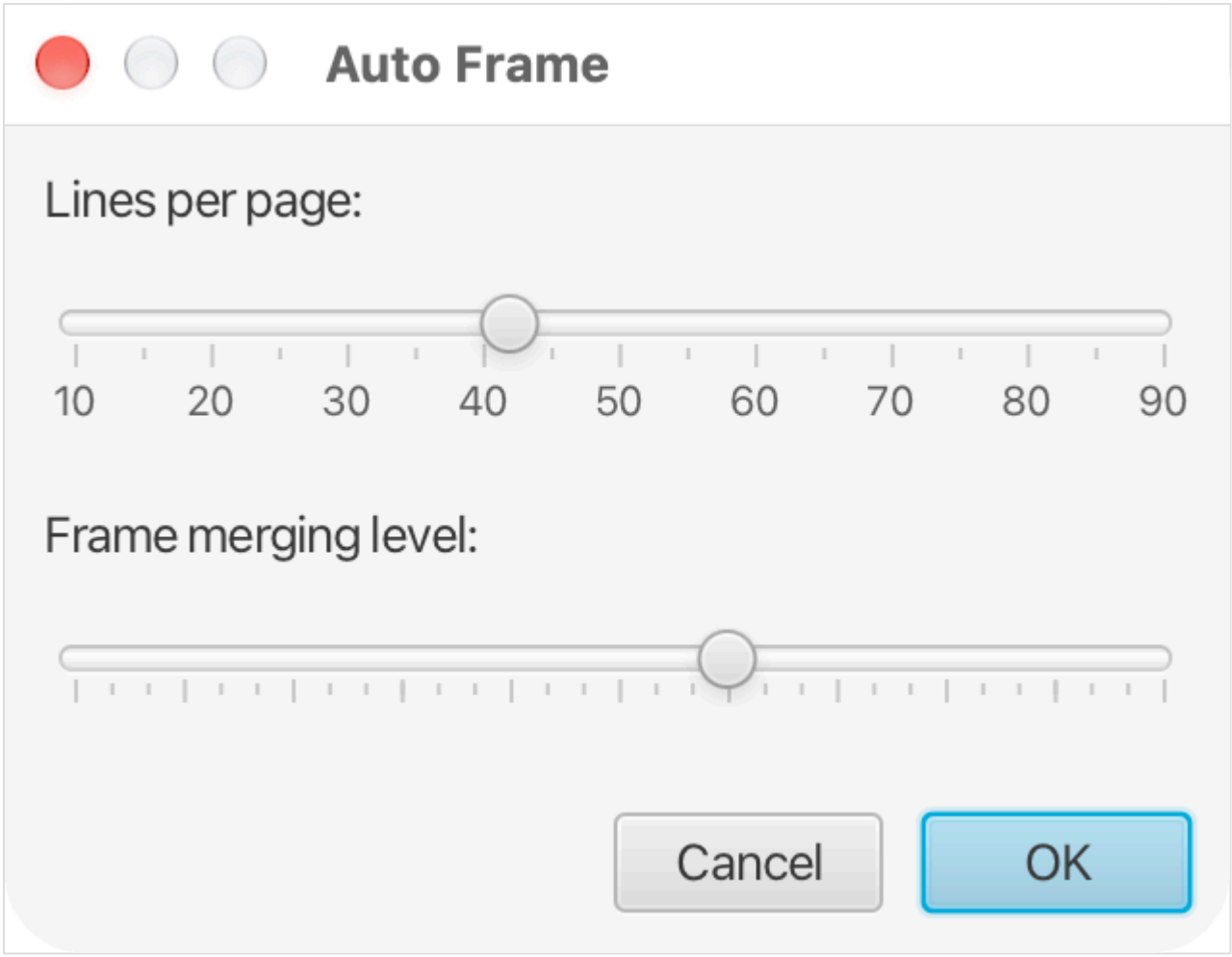
Adding and deleting frames, and marking frames as splittable. Right-click on the page, or right-click a row in the **Frames** table, to open a context menu with these commands:

- **Add Frame** adds a new frame.
- **Split Frame** marks the selected frame as splittable.
- **Delete Frame** deletes the selected frame.
- **Move Up** and **Move Down** (Frames table only) change the position of the frame in the list.
- **Auto-frame...** creates frames automatically.

Add Frame creates a new frame. After creating it, you can adjust its position, its size and its ordinal number (its position in the list of frames).

Split Frame marks the selected frame as *splittable*, or removes that mark if it is already set. A splittable frame is shown with a horizontal line through its middle. When the result is produced, a splittable frame gives two pages instead of one. PDF Cropper tries to find a gap between lines of text near the middle of the frame, so the cut falls in a clean place rather than through a line of text. In the **Frames** table, the column with the split icon shows this setting: a splittable frame has its box checked.

Auto-frame... defines frames for you. PDF Cropper finds blocks of text and images on the page and combines blocks that lie close to each other into one frame. Blocks that are far from each other end up in separate frames. Choosing the command opens the **Auto Frame** dialog:



The Auto Frame dialog

- **Lines per page** is used to estimate the typical distance between lines of text. Set it to roughly the number of text lines on a page of your document.
- **Frame merging level** controls how strongly blocks are combined into one frame. Move the slider to the right to merge more, to the left to keep blocks apart.

The auto-frame boundary

Numbered frames are labeled #1, #2 and so on. One more rectangle is labeled **[·A·]** and drawn in a lighter color. This is the *auto-frame boundary*: the area in which Auto-frame looks for frames. Anything outside it is ignored. Move and resize the boundary like a frame to leave out content you do not want in the result, such as headers, footers and page numbers.

The project setting **Uniform auto-frame bounds** decides where the boundary is defined:

- When it is **on**, the same auto-frame boundary is used for all pages.
- When it is **off**, each page group (and each custom page) has its own boundary.

In both cases the boundary respects the **Front/Back pages** setting: if that setting is on, front (odd) and back (even) pages get separate boundaries.

The order of frames sets the order of pages in the result. The **[·A·]** boundary is not a real frame: it is a pseudo-frame used only by Auto-frame and never appears in the result.

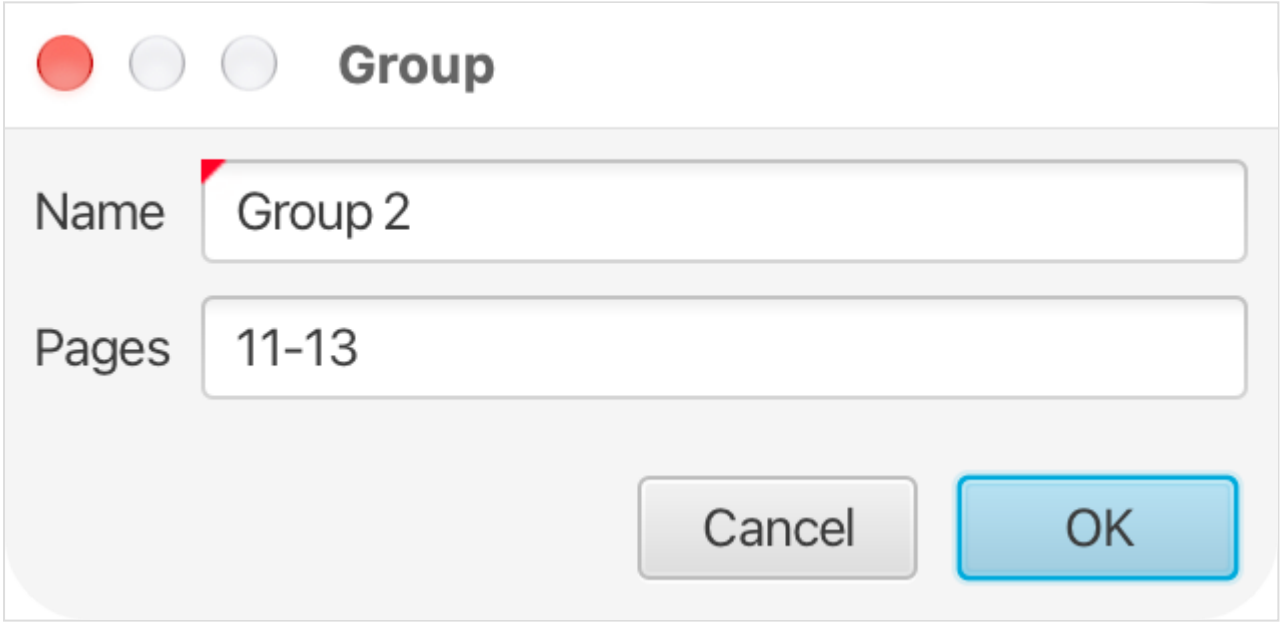
4.2 Page groups

Page settings are defined by **page groups**. A page group contains the definition of frames, and all pages in the group share the same settings.

- By default there is one group, **< GENERAL >**, and every page belongs to it.
- You can create new groups and assign pages to them.
- When you unassign a page from a group, it returns to **< GENERAL >**.

Groups are listed in the **Groups** table on the right. Right-click the table to open a context menu with **Add Group...**, **Edit Group...** and **Delete Group**.

Creating a group. Choose **Add Group...**. In the **Group** dialog enter the **Name** of the group and the **Pages** that belong to it.



The Group dialog

Specify pages as ranges separated by commas, for example `1–5,8–10,25`. If some of the pages already belong to other groups, they are moved to this group after you confirm.

Editing a group. Choose **Edit Group...** to change the name or the pages. Pages you remove from the range go back to **< GENERAL >**.

Deleting a group. Choose **Delete Group**. Its pages go back to **< GENERAL >**.

The **< GENERAL >** group cannot be edited or deleted directly. Pages move into it and out of it only when you create, edit or delete other groups.

Assigning a single page. To move the current page to another group, right-click the page, open **Page Group** and choose the group. The current group is marked with a check. The **Group** dropdown in the page section on the right does the same.

4.3 Front and back pages

The project setting **Front/Back pages** gives each group two separate sets of settings: one for front pages (odd) and one for back pages (even). This is useful when the layout of odd and even pages differs, for example because of mirrored margins in a printed book.

When the setting is on, an image next to the **Group** dropdown shows whether the current page is a front or a back page, depending on its page number. When the setting is off, the image is not displayed.

To turn the setting on, tick the **Front / Back pages** checkbox at the top of the right panel, above the **Groups** table.

4.4 Excluded pages

You can mark a page as **excluded**. Excluded pages are left out of the result PDF, even though they still belong to a page group.

To exclude the current page, tick **Excluded** in the page section on the right, or right-click the page and choose **Exclude Page**. The page numbers of all excluded pages are listed in the **Excluded pages** field.

To restore an excluded page, clear the **Excluded** checkbox for that page.

You can also edit the **Excluded pages** field directly to change which pages are excluded. Enter pages in the same range format as in the Group dialog, for example `1–5,8–10,25`.

4.5 Custom pages

You can mark a page as **custom**. A custom page uses its own settings instead of the settings of its page group. Use this for the occasional page that does not fit the layout of the rest.

To make the current page custom, tick **Custom** in the page section on the right, or right-click the page and choose **Custom Page**. The page numbers of all custom pages are listed in the **Custom pages** field.

You can also edit the **Custom pages** field directly to change which pages are custom. Enter pages in the same range format as in the Group dialog, for example `1–5,8–10,25`.

To return a page to the settings of its group, clear the **Custom** checkbox for that page. The page's own settings are discarded.

4.6 Page rotation

Some PDFs contain pages that are stored rotated. To correct such a page, use the **Rotation** list in the page section on the right. It offers 0°, 90°, 180° and 270°. The same choice is available in the context menu of the page, under **Page Rotation**.

The rotation is shared by all pages of the group. When you apply a rotation, the frames are transformed accordingly, so you do not need to set them up again.

Do not confuse this setting with **Rotation** in the reader settings (section 5.3). That one sets the direction in which a frame is turned by 90 degrees when the **Orientation** setting requires it.

5. Working with PDF Cropper

5.1 Opening a PDF

To open a PDF, choose **File** → **New Project...**. This is the only way to open a PDF. The application asks only for the location of the PDF file you want to process.

After you select the file, PDF Cropper opens it and displays the first page. The project settings are at their defaults:

- **Front / Back pages** and **Uniform auto-frame bounds** are both on.
- The auto-frame boundary **[·A·]** is slightly smaller than the page.
- Two frames are created, each a little less than half the page, one below the other.

To continue work on a saved project later, use **File** → **Open Project...** or **File** → **Recent Projects**. A new project gets a file name when you first save it with **File** → **Save Project**.

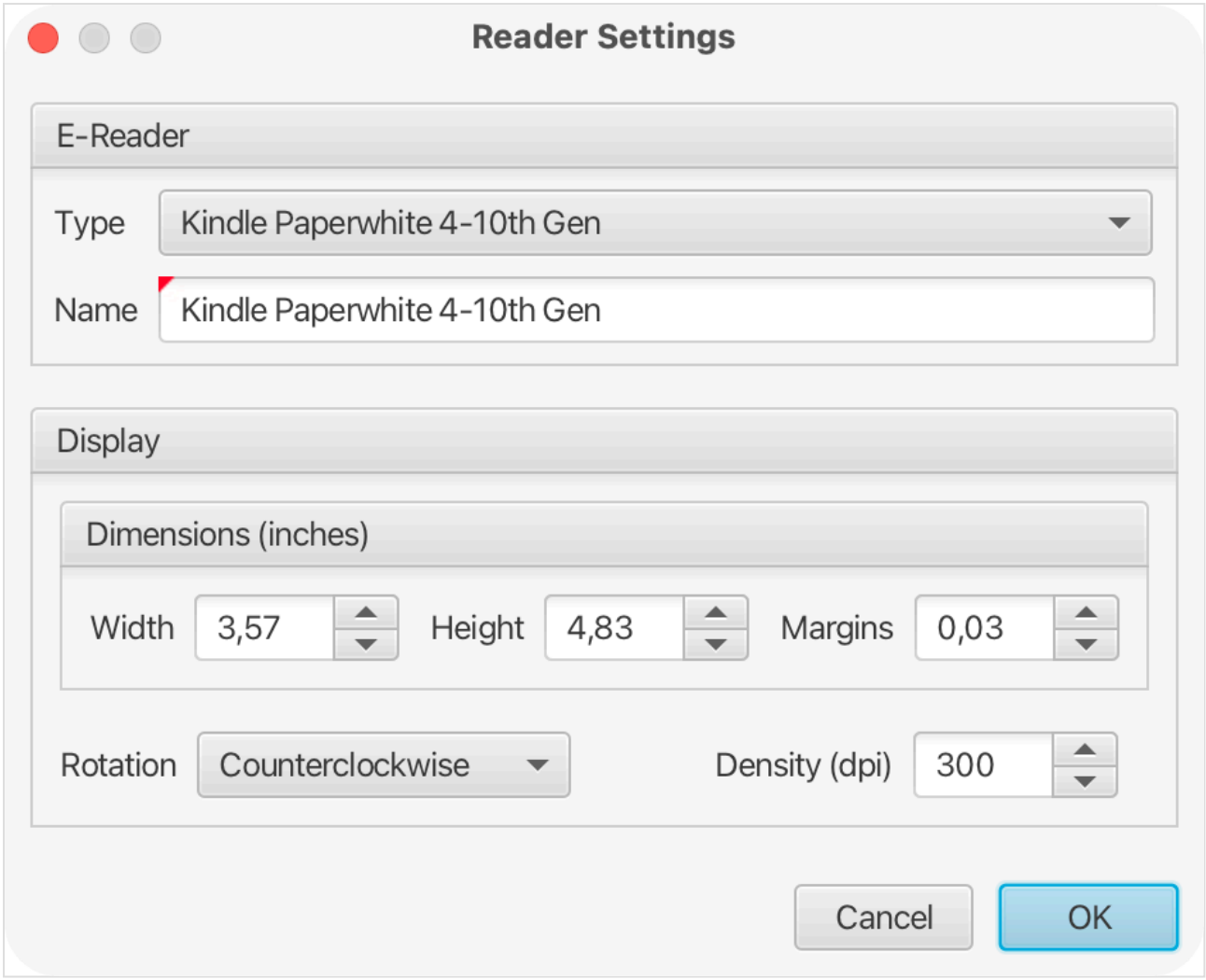
5.2 Defining frames

You can define frames with **Auto-frame...**, or add and adjust them by hand. Which is better depends on the layout of your pages. Section 4.1 describes how to work with frames.

Pages that belong to the same group share the same frame settings. If the pages of a group have a similar layout, the same frames work well for most of them. A page whose layout differs can be moved to a separate group, or marked as custom and given its own frames. See sections 4.2 and 4.5.

5.3 Reader settings

The reader settings describe the device you are making the result for. Open them with **File** → **Reader Settings...**.



The Reader Settings dialog

The **E-Reader** section has **Type** (a list of devices, for example *Kindle Paperwhite 4-10th Gen*) and **Name**. The **Display** section has **Dimensions (inches)** with **Width**, **Height** and **Margins**, plus **Rotation** and **Density (dpi)**.

Type selects predefined settings for a known device. The list currently contains Kindle Paperwhite 4-10th Gen, Kindle Paperwhite 11th Gen, Kindle Paperwhite 12th Gen, Kobo Klara, XTEINK 3, XTEINK 4 and Custom. More devices may be added in future updates of the application.

The predefined settings can be edited. **Name** can be edited only when the type is **Custom**.

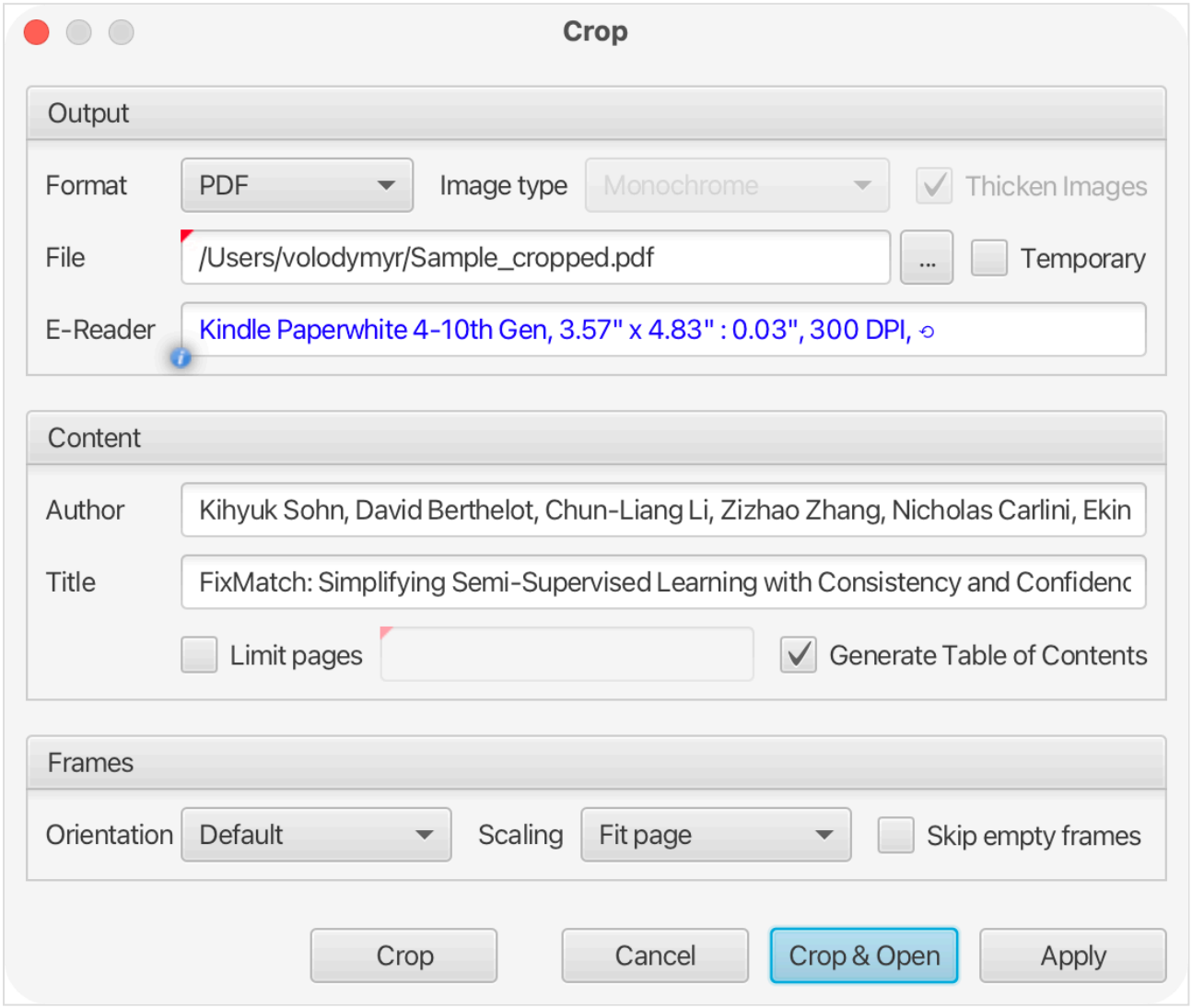
Margins defines the desired gap on the top, left, right and bottom edges of a frame. It is applied only during Auto-frame: the detected frames are extended by this gap, because bounding the blocks exactly at their edges can be too narrow.

Rotation defines the direction in which a frame is rotated by 90 degrees, when it needs to be rotated according to the **Orientation** setting of the Crop dialog (see section 5.4). It has two values: **Counterclockwise** and **Clockwise**.

Density (dpi) is the pixel density of the device's screen. It is used to render images of the optimal size when producing an EPUB.

5.4 Crop settings

The **Crop** dialog, opened with the scissors button, holds the settings of the result.



The Crop dialog

The dialog has three sections:

- **Output:** Format, Image type, Thicken Images, File and Temporary.
- **Content:** Author, Title, Limit pages and Generate Table of Contents.
- **Frames:** Orientation, Scaling and Skip empty frames.

The buttons at the bottom are **Crop**, **Cancel**, **Crop & Open** and **Apply**.

Output

Format is PDF or EPUB. An EPUB is always image-based: the pages of the PDF are rendered as images, and those images are used to create the EPUB. This approach is used only for EPUB; it makes no sense for PDF, so **Image type** and **Thicken Images** are grayed out when the format is PDF. Because EPUB is built from images, creating it is slower and the resulting file can be larger. When you select EPUB, a blue information icon appears next to the **Format** box; hover over it to see this note.

Image type has three values: **Color**, **Monochrome** and **Black and White**.

Thicken Images is available only for Monochrome and Black and White. When it is selected, the content of the images is made bolder to improve readability.

File and **Temporary** decide where the result is written. Either choose a file with the **File** field and the **...** button next to it, or tick **Temporary**, in which case the result is written to a temporary file. With **Temporary** ticked, the **File** field and the **...** button are grayed out.

E-Reader shows the device the result is optimized for, taken from the reader settings: the name of the device, the screen size in inches, the margins, the density in DPI and the rotation direction. For example: *Kindle Paperwhite 4-10th Gen, 3.57" x 4.83" : 0.03", 300 DPI*. The field cannot be edited. It is there so that you can see for which device the result is made before you crop. To change the device, use **File** → **Reader Settings...** (see section 5.3).

Content

Author and **Title** are stored in the metadata of the result. When you create a project, they are taken from the metadata of the source PDF, if it has any. You can edit them.

Limit pages lets you specify a range of pages to process. Only the frames of those pages appear in the result. The field for the range is available when the option is selected.

Generate Table of Contents adds a table of contents to the result. It takes into account how the pages were changed, for example when frames are split.

Frames

Orientation works together with the device screen size from the reader settings (see section 5.3) and the size of the frame. It has four values: **Default**, **Auto**, **Portrait** and **Landscape**.

- With **Default**, the frame appears in the result as it is, without any rotation.
- With **Portrait** or **Landscape**, if the device screen has the opposite orientation, the frame is rendered rotated by 90 degrees.
- With **Auto**, the frame is rotated when the orientation of the device screen does not match the orientation of the frame.

Scaling has two values: **Fit page** and **Fill page**.

- With **Fit page**, the frame is scaled proportionally in both directions so that it fits the page of the result.
- With **Fill page**, the frame is stretched in both directions to occupy the whole page. The proportions of the frame are not kept.

Skip empty frames: when this option is selected, the content of each frame is checked before it is put into the result, and a frame with no content is ignored. For a splittable frame, each of the two parts is checked separately, so one part can be skipped while the other is kept.

Buttons

- **Crop** creates the result (PDF or EPUB) without opening it.
- **Crop & Open** creates the result and opens it for viewing in the application registered for that file type.
- **Apply** remembers the cropping settings without creating the result.
- **Cancel** closes the dialog.

5.5 Exporting a PDF

1. Choose **File** → **Crop...** or click the scissors button on the toolbar.
2. Set **Format** to **PDF**.
3. Choose where to write the result: select a file with the **File** field and the **...** button, or tick **Temporary** to write to a temporary file.
4. Check in the **E-Reader** field that the result is made for your device. If not, change it in **File** → **Reader Settings...**.
5. Adjust the other settings if needed (see section 5.4).
6. Click **Crop** to create the result, or **Crop & Open** to create it and open it for viewing.

5.6 Exporting an EPUB

Follow the same steps as for a PDF, but set **Format** to **EPUB**. An EPUB is always image-based: the pages of the PDF are rendered as images, and those images are used to create the EPUB. Because of this, creating it is slower and the resulting file can be larger.

With EPUB selected, choose the **Image type** and decide whether to use **Thicken Images** (see section 5.4).

5.7 Menus

File menu

- **New Project...** creates a new project for a selected PDF. A project holds the page and frame settings.
- **Open Project...** opens a previously saved project.

- **Recent Projects** lists the projects you saved before. Select one to open it, as a shortcut for **Open Project...**.
- **Close Project** closes the project. If there are unsaved changes, you are asked whether to save them.
- **Save Project** saves the project settings. For a new project, you are first asked for the project file name.
- **Save Project As...** saves the project under a different name.
- **Reader Settings...** opens the reader settings, described in section 5.3.
- **Crop...** shows the cropping settings, described in section 5.4, and then produces the result.
- **Exit** exits the application. If a project is open and has unsaved changes, you are asked whether to save it first.

Edit menu

- **Undo** and **Redo** undo and redo changes to the project.
- **Front / Back pages** is the project setting described in section 4.3.
- **Uniform auto-frame bounds** is the project setting described in section 4.1.

View menu

The View menu contains the zoom modes of the page view: **Actual**, **Fit Page**, **Fit Width** and **Fit Height**.

Actual shows the page at its actual size, as the rendered image (72 dpi), without scaling.

Fit Page, **Fit Width** and **Fit Height** scale the page to fit the whole page, its width or its height into the window, as the modes of the same names do in a PDF viewer.

Help menu

In a licensed copy of the application, the Help menu contains **User Manual** and **About**.

User Manual displays this manual as a PDF.

About displays the **About** dialog. It shows the name and version of the application, the website address, the copyright notice and the serial number (S/N). In a licensed copy it also shows the name the license was issued to and the date. The **Copy S/N** button copies the serial number, and **Close** closes the dialog.

In an unlicensed copy, the Help menu also contains **Purchase license...** and **Activate license...**.

In an unlicensed copy, the **About** dialog shows the serial number marked as unlicensed instead of the license details.

Purchase license... takes you to the purchase page of the PDF Cropper website, passing the serial number of your copy.

Activating a license. After you purchase a license on the website, you receive a license file. Depending on how it is delivered, you can download it directly, receive it by email, or both. Save the license file on your computer, then choose **Activate license...** and select that file. The application checks that the license matches the serial number of your copy and, if it does, applies it. If the license does not match, the message **Invalid license!** is shown and the license is not applied. Otherwise, restart the application to start using it as a licensed copy.

Unlicensed copy. An unlicensed copy puts an **UNLICENSED** watermark on the result. It has no other limitations.

License indicator. The license status is also shown at the bottom right of the main window:

- In an unlicensed copy, a red ⚠ icon is displayed. Hover over it to see the tooltip **Unlicensed**.
- In a licensed copy, a green ✓ icon is displayed instead. Hover over it to see the tooltip **Licensed to** followed by the email address the license was issued to.

5.8 Toolbar and status bar

Toolbar

The toolbar below the menu has these controls, from left to right:

- Buttons for **New Project...**, **Open Project...**, **Save Project** and **Crop...**, which do the same as the File menu items of the same names.
- Zoom controls: **Zoom Out**, the zoom percentage field, and **Zoom In**. The dropdown arrow next to the percentage opens a list with the zoom levels 10%, 25%, 50%, 75%, 100%, 125%, 150%, 200% and 400%, followed by **Actual**, **Fit Page**, **Fit Width** and **Fit Height**. The current level is marked with a check.
- Page navigation: **First Page**, **Previous Page**, the field with the current page number followed by the number of pages, **Next Page** and **Last Page**. The dropdown arrow next to the page number opens the table of contents of the PDF, if it has one.

Status bar

The status bar at the bottom of the window shows:

- On the left, the path of the project file. For a new project that has not been saved yet, it is empty.
- On the right, the version of the application, followed by the license indicator described in section 5.7.

6. Which format should I choose?

Your device	Recommended output
Kindle, Kobo	PDF
XTEINK	Depends on the firmware: EPUB (image-based) or PDF

The official XTEINK firmware does not support PDF natively, so an image-based EPUB is the option for it. Custom firmware for the XTEINK may support PDF. The choice is yours; PDF Cropper does not force a format.

Kindle and Kobo readers open the PDF as it is. They need no special settings.

An image-based EPUB can also be a good choice for a Kindle or Kobo in two cases:

- The original PDF is image-based, for example a scan.
- You want to use **Thicken Images**, which works like using a bolder font and can make text easier to read.

Less commonly, an image-based EPUB can also help if the original PDF does not embed its fonts. A page in such an EPUB is a picture, so it does not depend on the fonts available on the device.

7. Troubleshooting

The message "Invalid license!" appears when I activate a license. The license file does not match the serial number of your copy, so it was not applied. Check that you are using the license file that was issued for the serial number shown in the **About** dialog (**Help → About**).

8. Frequently Asked Questions

Where do I find my serial number? Open **Help → About**. The serial number is shown there as **S/N**. Use the **Copy S/N** button to copy it.