

Use Manual

Ground truth supervision tool

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1 Introduction

The tool has been designed to allow the user to quickly supervise and correct both region and line detection information. This manual assumes you have already compiled the tool. Nevertheless, you can find the compilation instructions in the annex at the end of the document.

The following sections explain in detail how to work with the tool. The file format used for the region and line information is XML PAGE ¹. Note that the tool does not fully support the XML PAGE format, meaning that if you open and save a file with unrecognised elements those will be lost. We strongly recommend saving as, or having a backup copy, if you're working with files generated with another program.

2 GUI description

This section will cover what each element of the user interface is for. It will aswell describe all the menu entries.

In figure 1 you can see the user interface. The following parts could be identified:

1. **Central window:** The central window is an openGL display where you can see the region/lines information. The interaction with this window will be explained later.
2. **Menu bar:** The menu bar contains four sub-menus, left to right:
 - 2.1 **File:** Open either a single file or a list of files. Save/save as the changes made to the loaded data.
 - 2.2 **Mode:** Set the tool to region/line supervision mode.
 - 2.3 **Options:** Opens the Settings window. We will talk about the available settings later.
 - 2.4 **Help:** Display the program help (refers to this manual) and about.

¹<http://schema.primaresearch.org/PAGE/gts/pagecontent/2010-03-19/pagecontent.xsd>

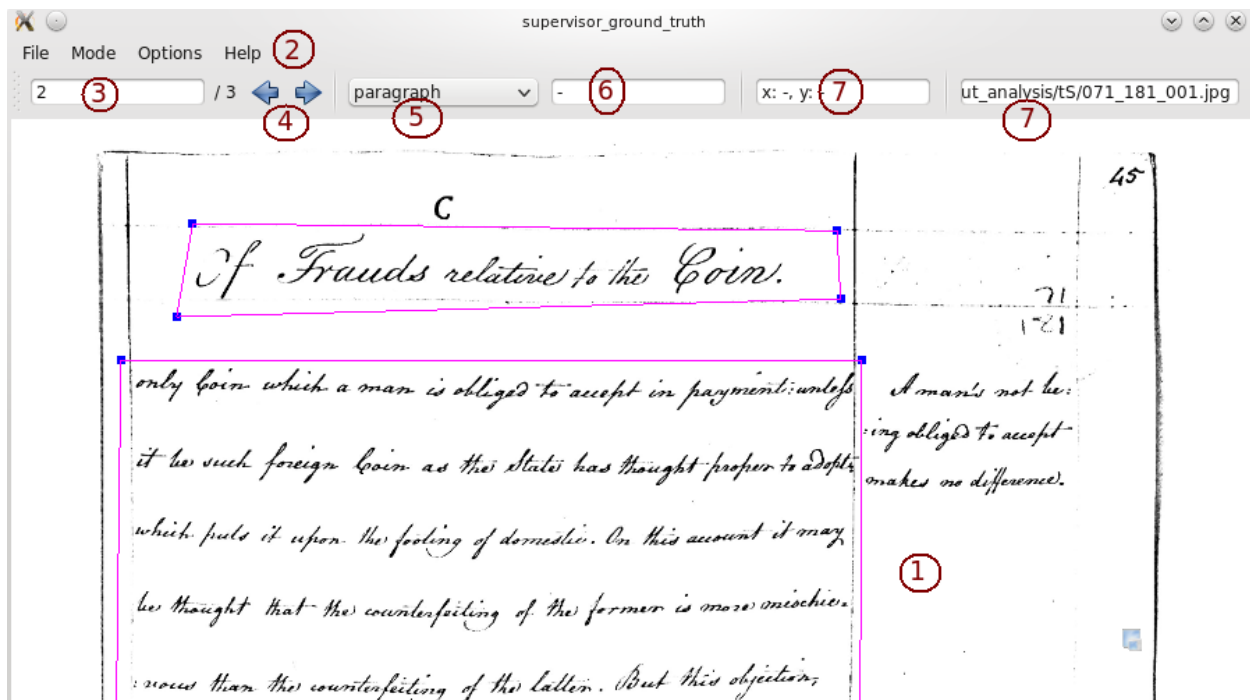


Figure 1: GUI general view.

3. **File counter:** Shows the current image number and the total amount of images in the loaded list.
You can change the number and press Enter to go to a different image.
4. **Navigation arrows:** Pressing the left/right arrow you can go to the previous/next image in the list.
5. **Label selection:** Shows the selected region label. You can also click and select another one to change the label.
6. **Selected item ID:** Shows the selected region/line ID.
7. **Position:** Displays the selected item position.
8. **Image name:** Shows the loaded image name, as it appears in the XML file.

2.1 Central window: Region mode

At figure 2 you can see the central window in region mode. For every region of text it shows the four points that define it in blue, and the lines between them in purple. The selected point is indicated by a red square around it, and the selected region is highlighted in a darker tone than the rest of the regions.

In the figure you can also see a green point in the middle of one of the lines. That green point is a handle, and every line has one, but they're shown only when hovering over with the mouse.

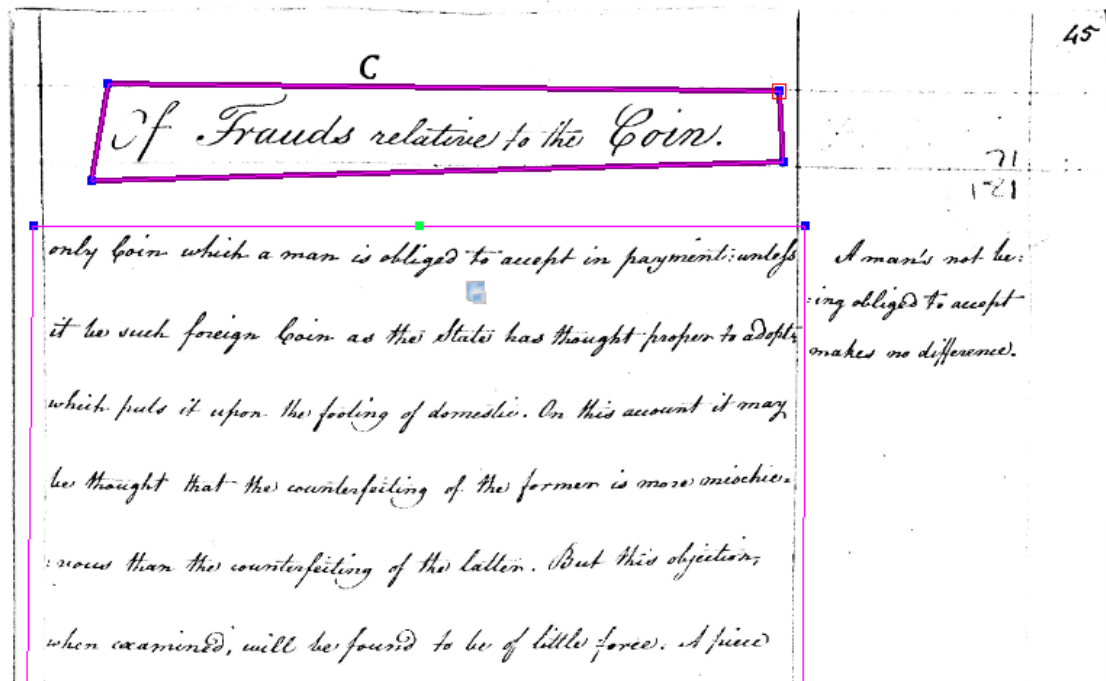


Figure 2: Central window in region mode.

It is important to note that while you can open files that contain regions defined by more than four points, you can only define new regions with four points each.

The following operations are possible while in this mode:

- Move the camera focus: right click and drag with the mouse.
- Zoom in/out: mouse wheel.
- Reset the camera to fit image width: mouse wheel click.
- Reset the camera to fit image height: Ctrl+mouse wheel click.
- Select a point (and the associated region): left click the point.
- Move a point: left click the point and drag with the mouse.
- Move a line: left click the line handle and drag with the mouse.
- Change the selected region label: Shift+left click.
- Delete the selected region: Del.
- Add a point: Ctrl+left click. When you have added four new points, they will form a region.

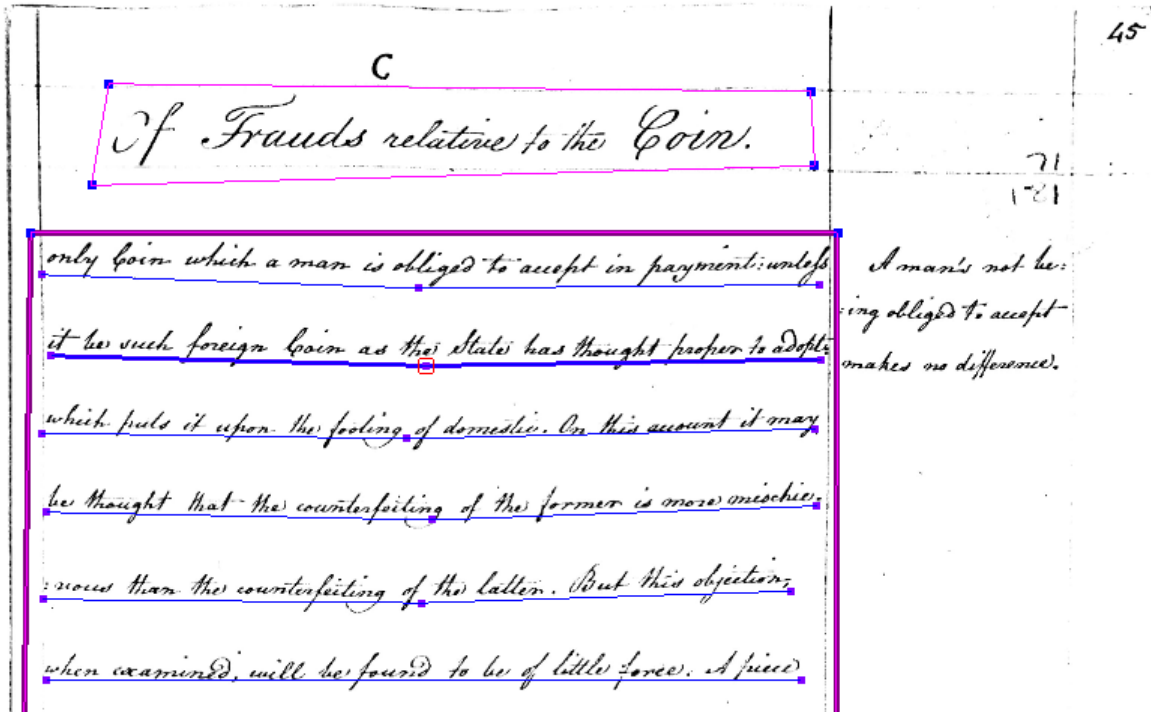


Figure 3: Central window in line mode.

2.2 Central window: Line mode

At figure 3 you can see the central window in line mode. For every block of text detected in layout mode it shows the lines in purple. The selected layout when the mode changed is highlighted, and only the lines inside it are displayed. The lines are shown in blue, and the selected line is highlighted in dark blue. Note that the lines are polylines, defined by a set of points.

The following operations are possible while in this mode:

- Move the camera focus: right click and drag with the mouse.
- Zoom in/out: mouse wheel.
- Reset the camera to fit image width: mouse wheel click.
- Reset the camera to fit image height: Ctrl+mouse wheel click.
- Select a point: left click the point.
- Select a line: select a point of the line.
- Move a point: left click the point and drag it with the mouse.
- Move a whole line: Shift + left click a point of the line and drag it with the mouse.
- Delete the selected point: Del.

- Delete the selected line: Shift + Del.
- Add a point: Ctrl+left click. The point will be added to the closest line.
- Add a new line: Ctrl+Shift+left click.
- Move the selected line up/down: Up/Down arrow key.
- Select the next line: Spacebar.

3 Keyboard shortcuts

Some of the operations that can be done through menus can also be called with a keyboard shortcut. Here is the list of available shortcuts:

- **F1**: Switch to layout mode.
- **F2**: Switch to line mode.
- **Ctrl+S**: Save current files.
- **Ctrl+Shift+S**: Save current files as. A saving window will pop to ask for a new file name.
- **Left arrow**: Go to previous image.
- **Right arrow**: Go to next image.

4 Settings

This last section will describe the options you can configure through the Settings window, as well as list their default values.

- **Autosave** before loading a new image/closing the program. *Default value*: Disabled. If autosave is disabled, the program will ask before discarding changes.
- **Overwrite XML file** when saving. *Default value*: Enabled.