Decapod 0.4 Release

Introduction

The Decapod 0.4 release builds upon the 0.3 release by improving connectivity with supported cameras, bug fixing, and a number of back-end enhancements. New to this release is the "Camera Calibration" screen which guides the user in setting up cameras in an independent left and right camera configuration.
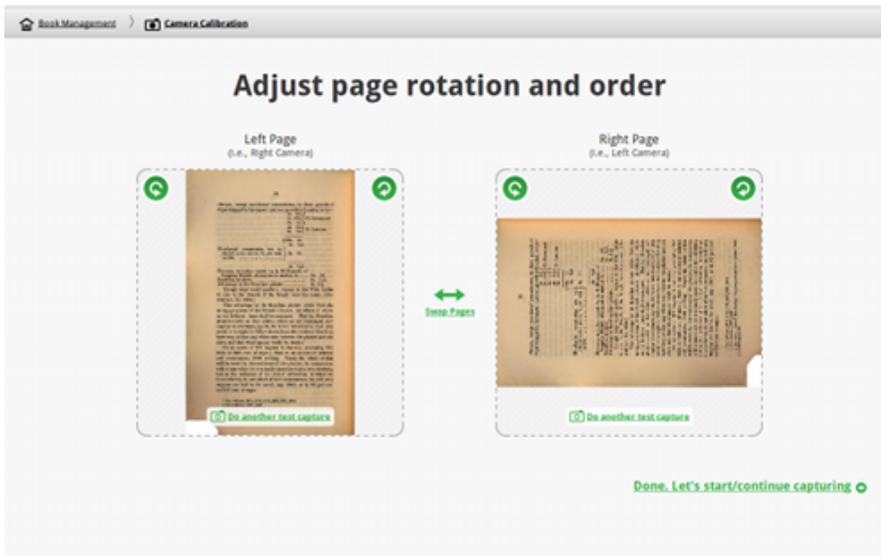
On a properly configured machine, Decapod 0.4 will be able to:

1. Configure the camera order and image rotation when capturing using independent left and right cameras.
2. Capture images from a pair of supported cameras. (See Decapod FAQ for supported cameras).
3. Do some basic remastering of the captured images.
4. Export the collected images as an image-based PDF document.

By the end of the project, you should be able to:

1. Perform stereo dewarping on images, effectively flattening book pages.
2. Specify content bounding boxes to eliminate unwanted clutter from book pages.
3. Export to PDF with support for font generation and searchable / OCR text.
4. Save a Decapod book as a set of images, or archive the book to be processed on a different system.
5. Import images from disk, USB drive, or other media (there will be some caveats to this feature).
6. Save and resume multiple books.
7. More advanced book remastering tools.
8. Batch / deferred processing and exporting.

Being an early release, you should expect some lacking functionality, quirks, bugs, and other oddities.

While some of these issues may already be known and documented, some may not.
Your feedback in using and testing this release will help us make improvements in future releases!

You can send us your comments, questions, and feedback by joining the Decapod Project mailing list or visiting the Fluid Project IRC room.

- Contact us using the Decapod Project Mailing List on Google Groups. (You will need a Google account to access this group).
- Fluid Project IRC channel: #fluid-work on irc.freenode.net (See this guide on getting connected)

Requirements

Required:

- Ubuntu 10.04 (32 bit or 64 bit)
- Firefox 3.6 or later
- Decapod application (including OCRopus and Fluid Infusion elements)
- Two supported cameras attached to system using USB cables. For a list of supported cameras, see: http://www.gphoto.org/doc/remote/

Recommended:

- A display capable of 1280x1024 pixels.

Optional Equipment:

- Book Liberator or two tripods for cameras.
- A printed book to digitize. (see limitations below

Get Decapod 0.4

- Download and Install Decapod 0.4.

Features & Functionality

Camera Setup:

- Cameras detected, and any issues or unsupported
- Fix image rotation and page order.

Interface:

- A vertical thumbnail navigator listing images captured by the cameras.
- A larger preview area displaying the currently selected thumbnail in higher resolution.
- Keyboard navigation of image thumbnails.
- Reordering of image order by keyboard or mouse.
- Delete an image by using keyboard or mouse (appropriate warning dialog displayed).
- Display a status message confirming a successful deletion of image.

Capture:

- Capture images using two cameras that support remote capture.
- Activate capture process using mouse.
- Detect supported and unsupported cameras, and give an appropriate diagnosis to the user (Partially implemented).
- Display a status message confirming a successful capture.

Post-Capture Processing:

- Automatically rotate and adjust the page order as specified during Camera Setup.
- Join a pair of captured images to create a page spread equivalent.
- Generate a thumbnail of the page spread.

Exporting:

- Export the collection of images as a greyscale image PDF.

Limitations and Known Issues

Book content:

- It is strongly recommended that Decapod be used with books employing a "Manhattan" style layout. These layouts should be in rectangular columns, with content fitting and staying within those column boundaries.
- Books that are not this style may produce PDFs with unexpected anomalies.
- Future releases of OCRopus (which Decapod uses for page analysis and OCR operations) may support more complex layouts.

- Please see the Decapod 0.4 User Guide for breakdown of issues and limitations according to function.

Planned Improvements

The following is a partial list of planned improvements to Decapod.

Planned Improvements for 0.5 Release:

- Ability for user to specify content bounding box to exclude clutter from the exported file.
- Finer rotation adjustment post capture.
- Simultaneous capturing from cameras.
- Bug fixes and improved stability.

Improvements for 0.6 Release:

- OCR text for PDF.
- Export interface to select formats.
- Stereoscopic camera calibration.
- Improved accessibility for keyboard modalities.
- Improved accessible user feedback.
- Improved performance.
- Bug fixes and improved stability.

Planned Improvements for Future Releases

Further down the road, we expect:

- 3D stereoscopic capture.
- 3D stereoscopic page dewarping when capturing using two cameras.
- Image threshold adjustment.
- Importing images from the local file system.
- Bug fixes and improved stability.
- Selection of camera setups:
    - Two cameras. Each camera capturing a single page.
    - Stereo cameras. Each camera capturing the page spread from slightly different angles.

Feedback and Getting Involved

We welcome comments, questions, support requests, and feedback! Please contact us by joining the Decapod Project mailing list.

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- You can also join us in the Fluid Project IRC channel: #fluid-work on irc.freenode.net (See this guide on getting connected)

We also welcome help from members of the community. Here is are some areas where you can help out:

- Javascript and Python programming.
- HTML and CSS design, and web standards compliance.
- User testing, and user test administration.
- Evangelism and community outreach.

If you're interested in helping in this way, please contact Jess Mitchell.

Decapod 0.4

- Download and Install Decapod 0.4
- Walkthrough
- Release Notes
- Decapod 0.4 User Guide
- License

On this Page

- Introduction
- Requirements
- Get Decapod 0.4
- Features & Functionality
- Limitations and Known Issues
- Planned Improvements
- Feedback and Getting Involved

Screenshots