The K-Space Segmentation Tool Set

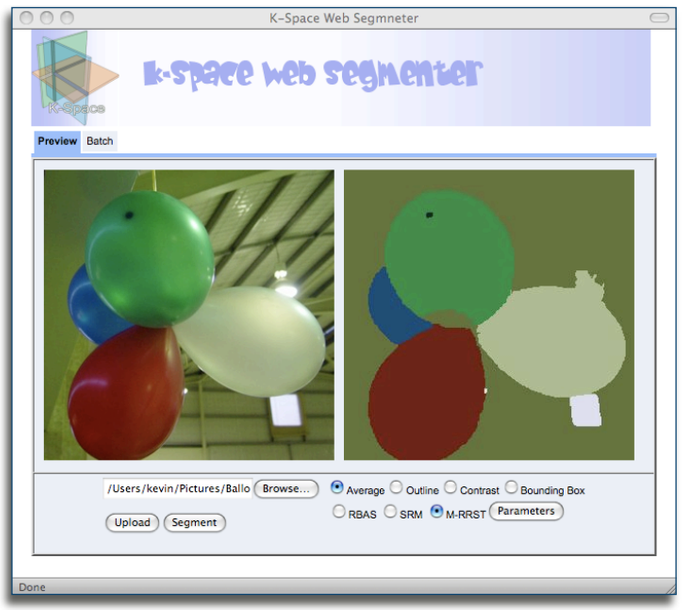
Web Segmentation Platform

Overview

- Web-based variant of the K-Space video region segmentation tool (SAMT 2006: *A Framework and User Interface for Automatic Region Based Segmentation Algorithms*)
- Allows users to perform automatic region segmentation on images or video sequences using different segmentation algorithms
- New platform contains much of the same functionality as the original, with the added benefit of not requiring prior installation; the only software required is a web-browser.

Usage

- *Single images*: using the preview tab, select the desired image and click upload. Select the algorithm to use and configure the parameters if desired. Click segment to partition the image
- *Multiple images or videos*: using the batch processing tab, upload videos or archives of images. When segmentation is complete, the results are compiled into an archive and displayed for download.



Features

- Runs in a web-browser
  - GWT based
- Supports multiple visualizations: region-averages, region-outlines, bounding boxes.
- Supports online algorithm parameter selection
- Includes batch processing mode to allow segmentation of groups of images of video sequences in a single step

Algorithms

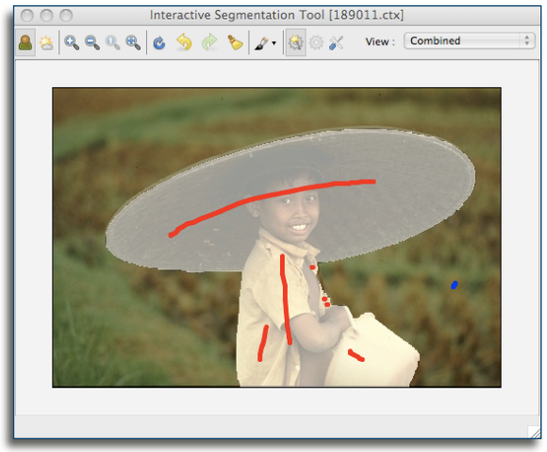
- Statistical region merging (SRM)
- Two variants of the modified RSST algorithm
  - MRSST and RBAS

Visit

- http://kspace.cdvp.dcu.ie/platform/platform.html
- Firefox, Safari, Opera and Internet Explorer

Interactive Segmentation Tool

Overview



- Application that enables users to extract objects from images using a scribble based interaction paradigm
- Users mark foreground and background areas by drawing with the mouse. Each interaction updates the segmentation
- User can choose one of four built-in interactive segmentation algorithms; interaction paradigm and tools available remain the same

Visualize

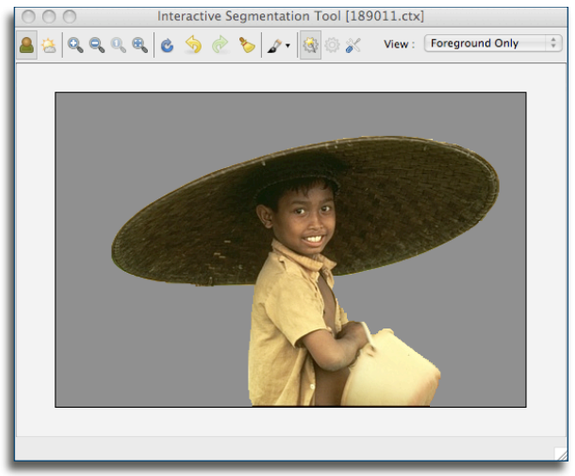
- *Combined view*: displays the current markup and semi-transparently highlights the selected object.
- *Foreground view*: removes the background and markup only showing the selected object
- *Outline view*: shows the outline of the selected object overlaid on the image
- *Mask view*: shows the binary segmentation mask that has been generated

Algorithms

- Seeded region growing
- Interactive graph cuts
- Simple interactive object extraction
- Binary partition trees

Features

- Undo & redo support
- Brush size calibration
- Algorithm parameter tuning
- Zoom-in & Zoom out support



Experiment

- Built-in experiment mode for evaluation tasks and user experiments
- Task-driven timed experiments
- Segmentation mask is stored for evaluation after each interaction
- Several built in accuracy measures

Download

- http://kspace.cdvp.dcu.ie/pubic/interactive-segmentation
- Supported platforms: Window, Linux, OS X

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