CLICK'N'CUT: CROWDSOURCED INTERACTIVE SEGMENTATION WITH OBJECT CANDIDATES

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ABSTRACT

Click'n'Cut is a novel web tool for interactive object segmentation designed for crowdsourcing tasks. Click'n'Cut combines bounding boxes and clicks generated by workers to obtain accurate object segmentations. These segmentations are created by combining precomputed object candidates in a light computational fashion that allows an immediate response from the interface. Click'n'Cut has been tested with a crowdsourcing campaign to annotate images from publicly available datasets. Results are competitive with state-of-the-art approaches, especially in terms of time needed to converge to a high quality segmentation.
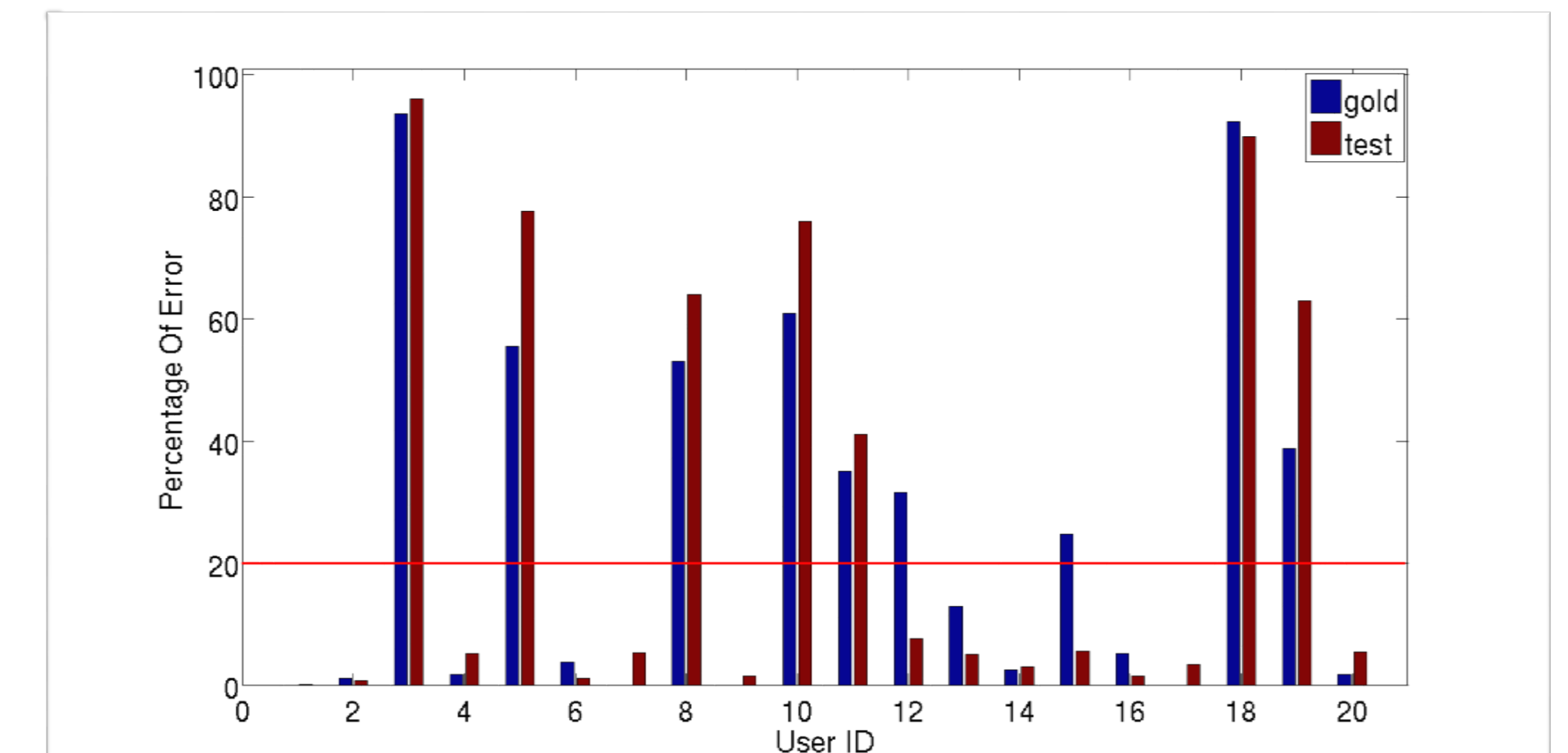
CLICK'N'CUT SEGMENTATION TOOL

DATASET

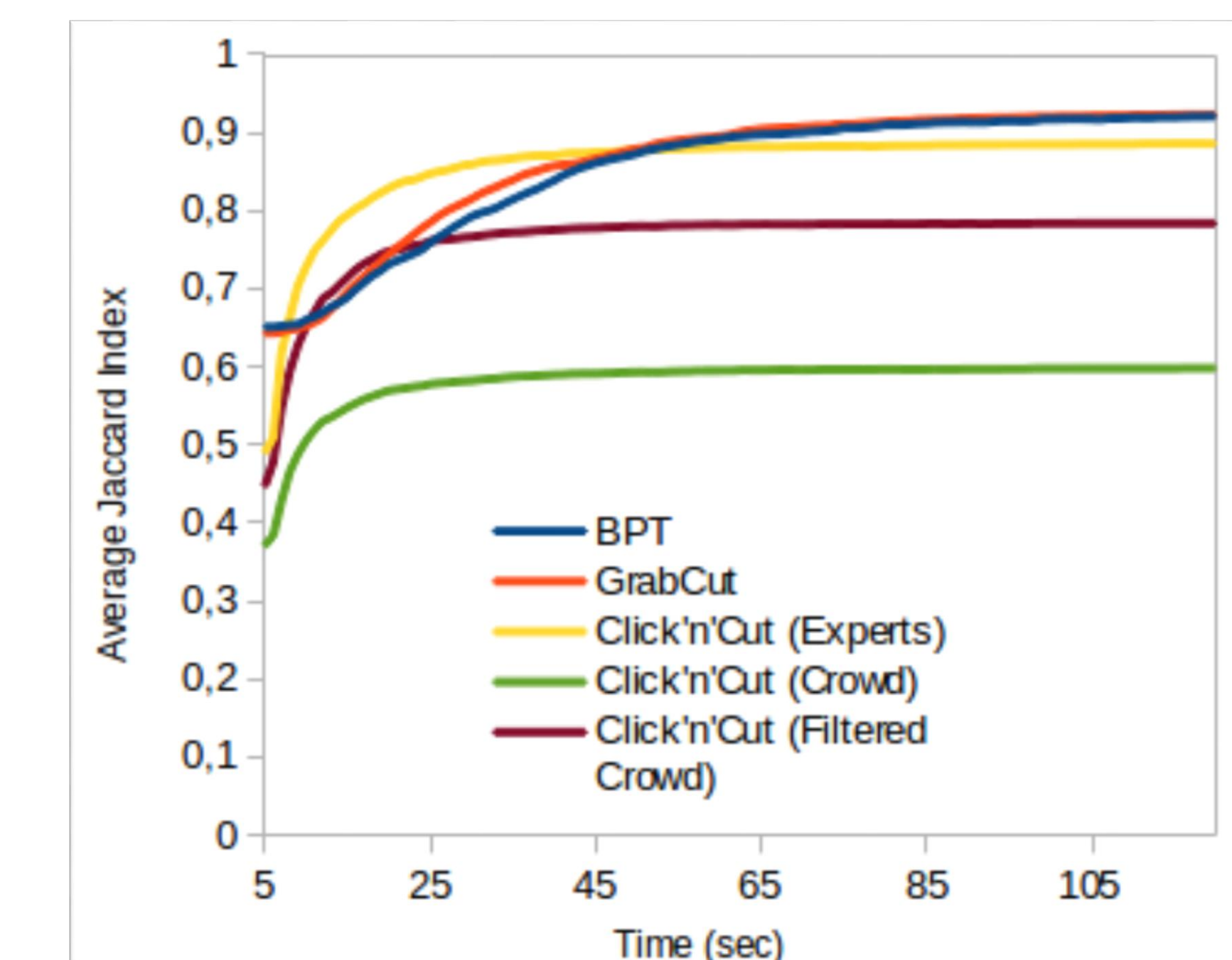96 images with associated ground truth from the Berkeley-DCU Dataset
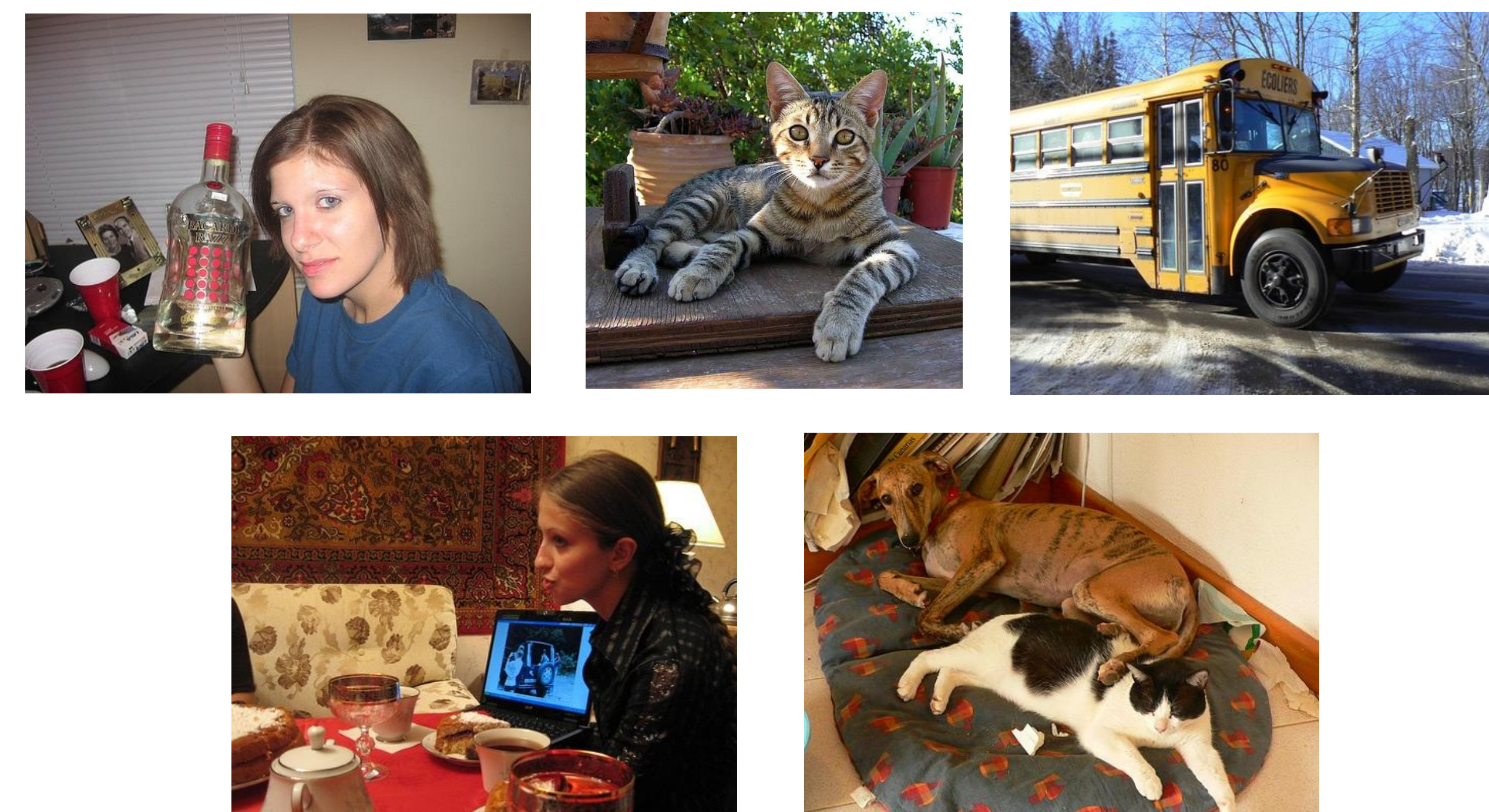
5 images from PASCAL VOC 2012 were added to perform gold standard techniques.

RESULTS

Error percentage of users from the crowd in 'test' and 'gold' images.

Segmentation accuracy VS time. Click'n'Cut is compared to the Interactive Segmentation Tool presented in [2].

WEBSITE

Click'n'Cut is available online. Scan the QR code to try it:

REFERENCES

[1] Pablo Arbelaez, Jordi Pont-Tuset, Jonathan T Barron, Ferran Marques, and Jitendra Malik, "Multiscale combinatorial grouping," in CVPR, 2014.

[2] Kevin McGuinness and Noel O'Connor, "A comparative evaluation of interactive segmentation algorithms". in Pattern Recognition, 43(2), 434-444, 2010.

CONCLUSIONS

- New interactive segmentation tool which has been tested with a crowdsourcing campaign to annotate images from publicly available datasets.

- Competitive results against state-of-the-art interactive segmentation approaches have been shown.

- Fast convergence towards a good segmentation result (within the first ~30s).

- The challenge lies in the post-processing and filtering of the traces.