TEXT DETECTION FOR SEGMENTATION-FREE WORDSPOTTING

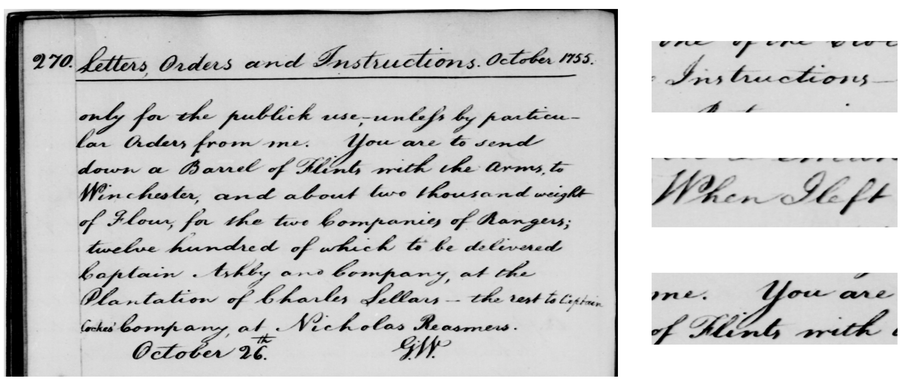
Eugen Rusakov and Gernot A. Fink
(in collaboration with Leonard Rothacker, Sebastian Sudholt, and Matthias Kasperidus [1])
Department of Computer Science, TU Dortmund University, Germany

technische universität dortmund

Abstract

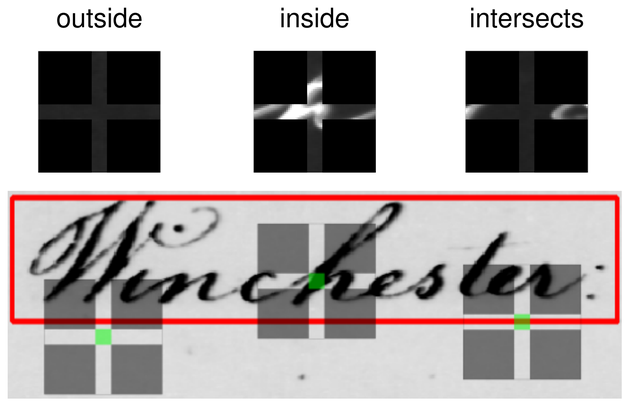
The generation of word hypotheses for segmentation-free word spotting on document level is usually subject to heuristic expert design. This involves strong assumptions about the visual appearance of text in the document images. The local region classificator generates detection scores, which are processed by a extremal region approach to generate hypotheses. Afterwards the Query is matched with the most similar hypotheses classified by the PHOCNet [1].

Historical Documents

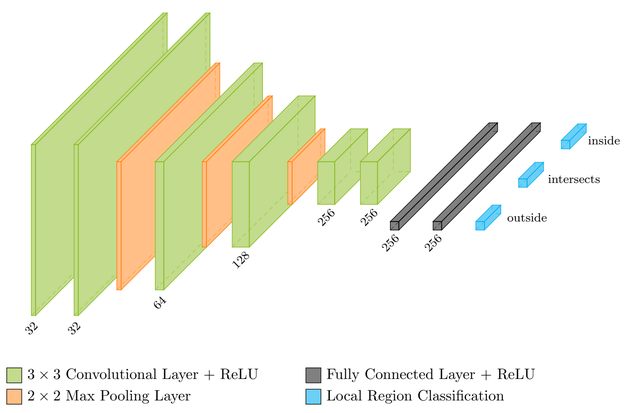


Method

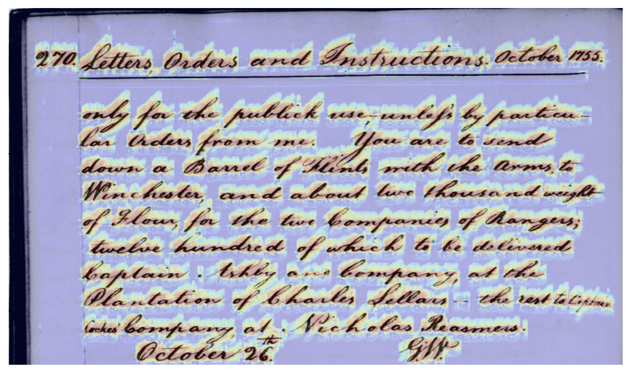
1. Local Region Training



2. Local Region Network



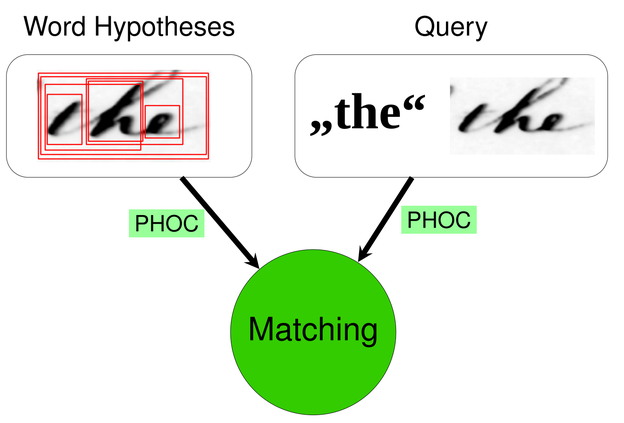
3. Detection Scores



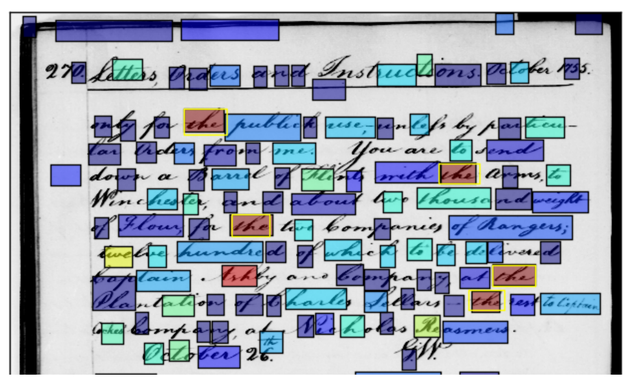
System Context

4. Word hypotheses

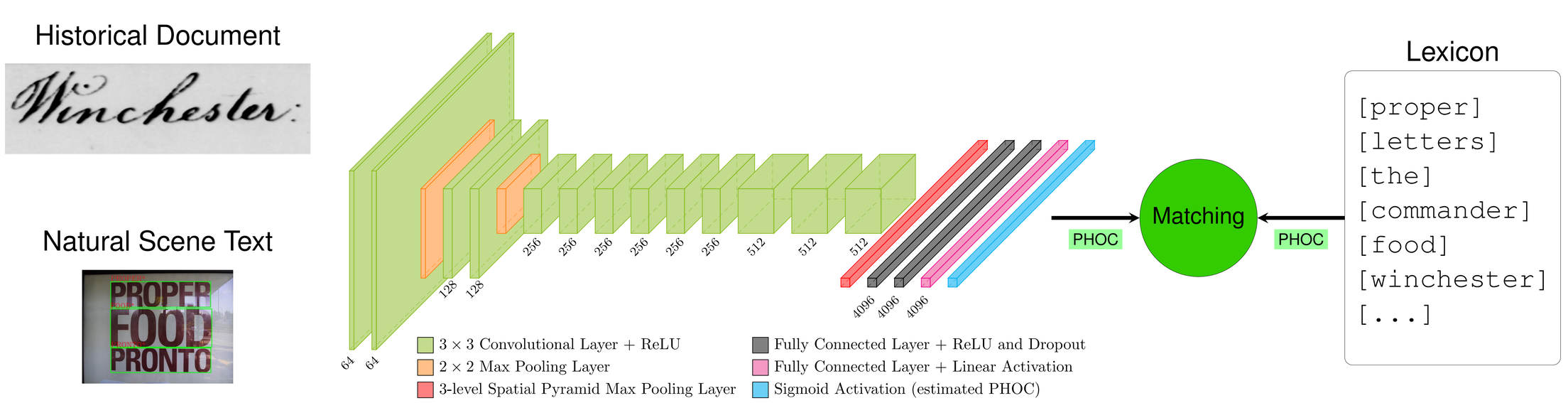
5. Matching



6. Retrieval Result



Future Research



References

[1] L. Rothacker, S. Sudholt, E. Rusakov, M. Kasperidusa and G. A. Fink, ”Word Hypotheses for Segmentation-free Word Spotting in Historic Document Images”, in *Document Analysis and Recognition (ICDAR)*, 2017

[2] S. Sudholt and G. A. Fink, ”PHOCNet: A Deep Convolutional Neural Network for Word Spotting in Handwritten Documents, in *International Conference on Frontiers in Handwritting Recognition*, 2016, pp. 277-282