

Multi-Oriented Text Detection with Fully Convolutional Networks
Supplementary Material
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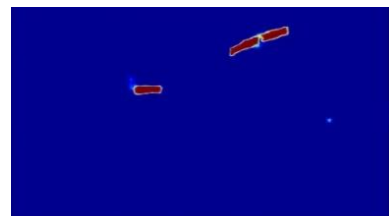
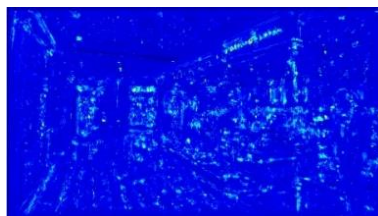
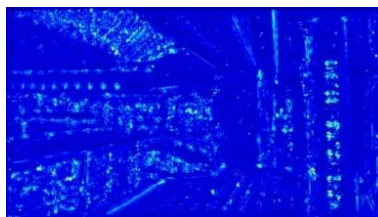
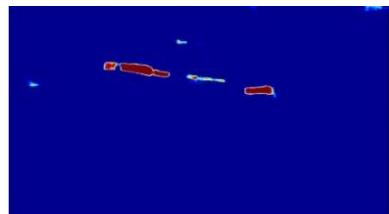
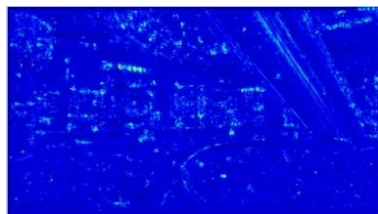
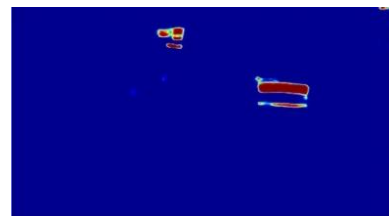
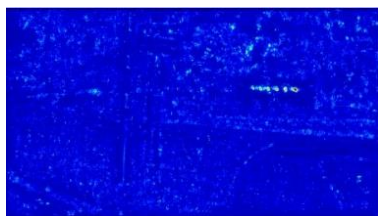
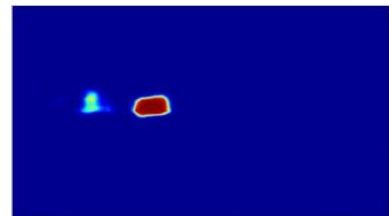
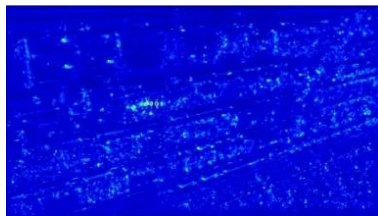
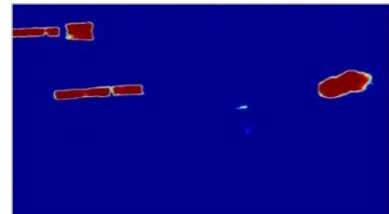
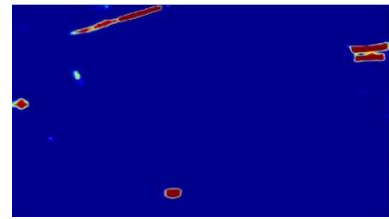
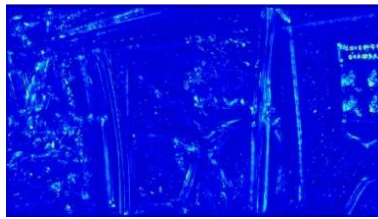
¹ School of Electronic Information and Communications, Huazhong University of Science and Technology

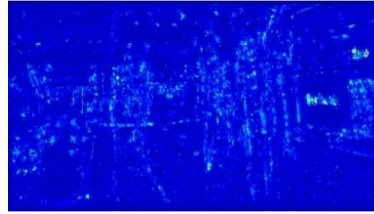
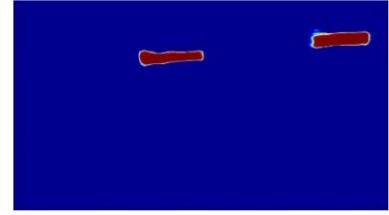
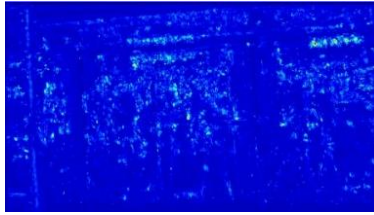
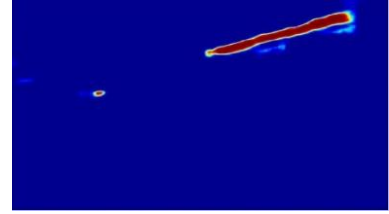
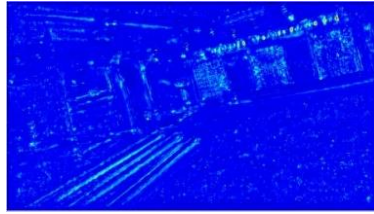
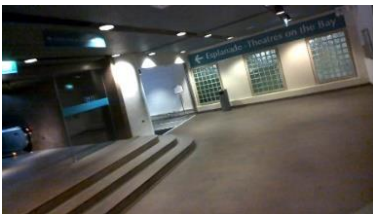
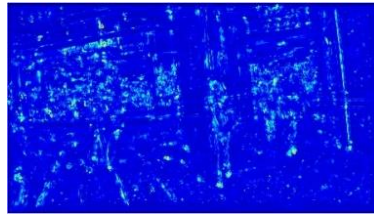
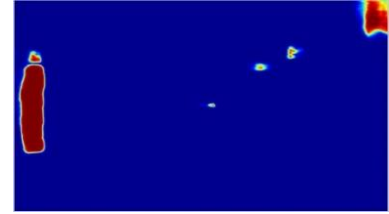
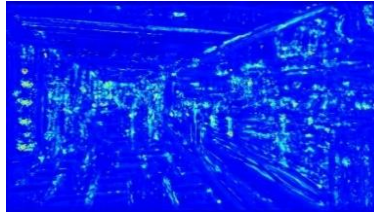
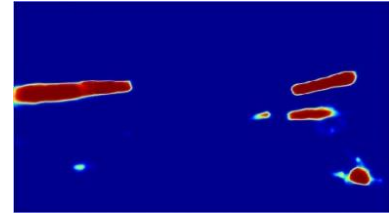
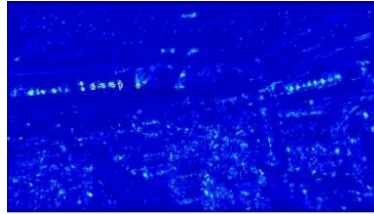
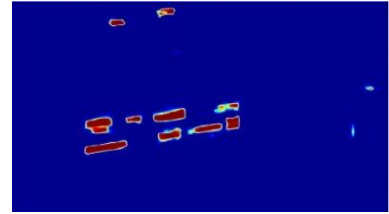
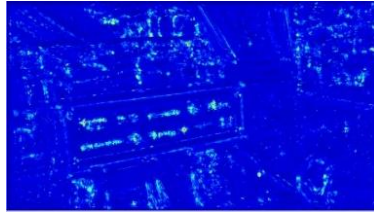
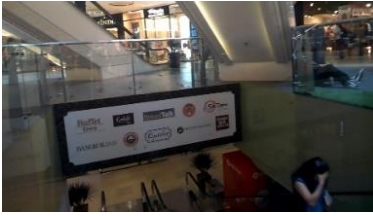
² Key Laboratory of Specialty Fiber Optics and Optical Access Networks, Shanghai University

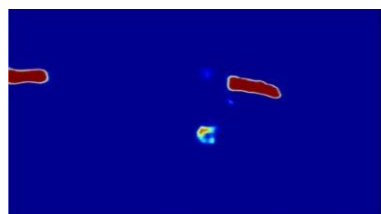
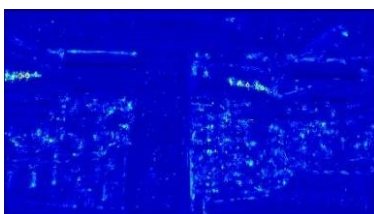
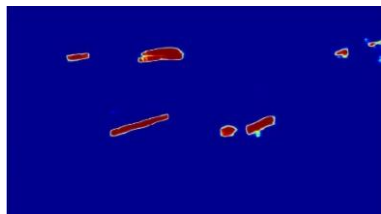
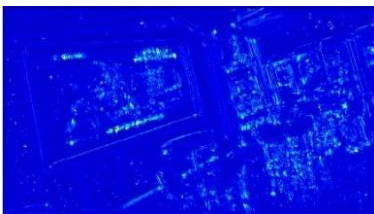
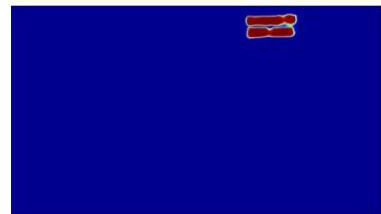
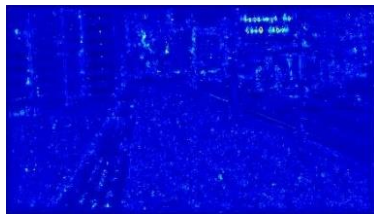
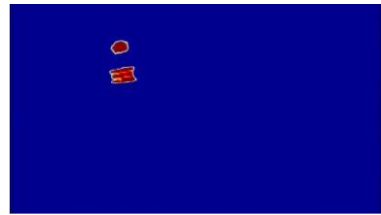
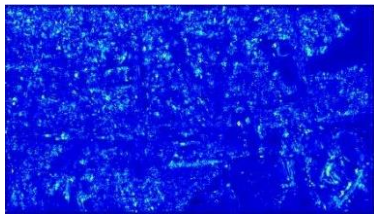
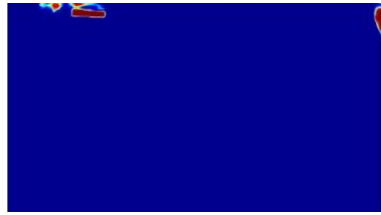
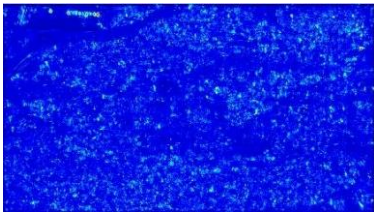
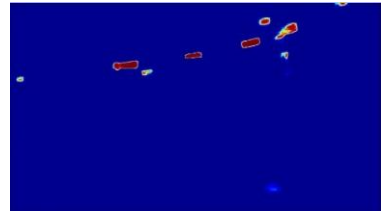
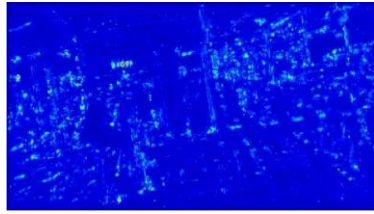
macaroniz1990@gmail.com, zchengquan@gmail.com, xbai@hust.edu.cn

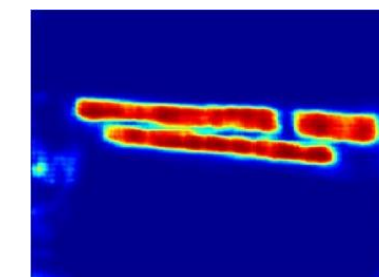
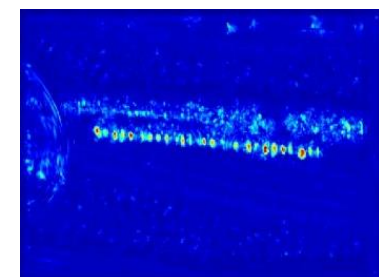
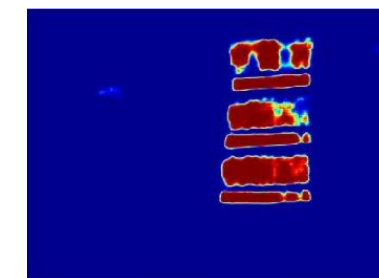
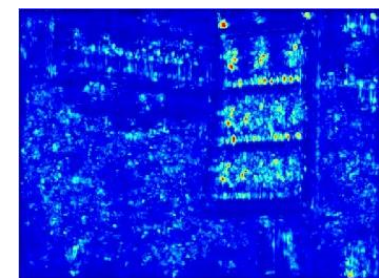
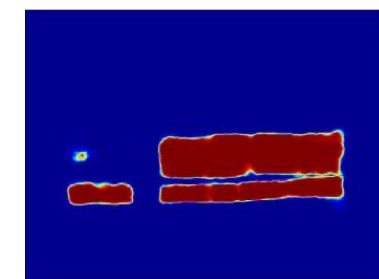
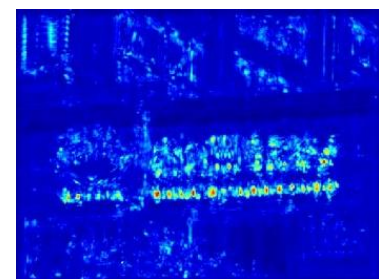
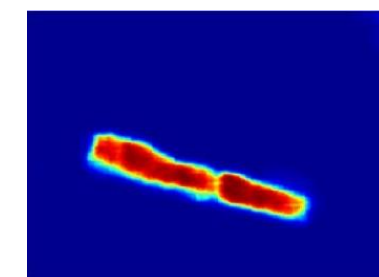
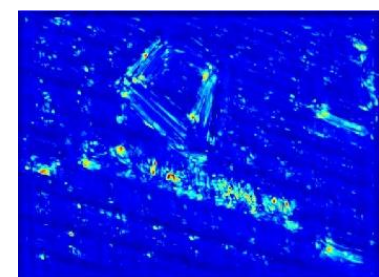
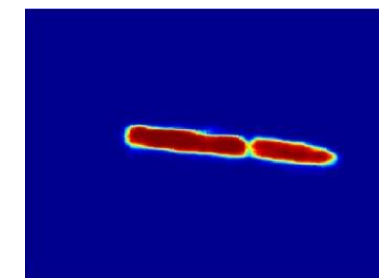
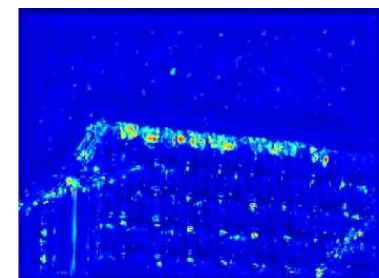
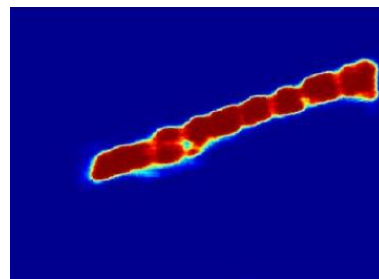
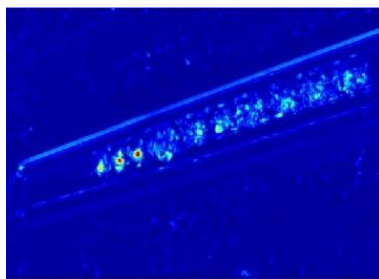
In order to exhibit the efficiency of our proposed method, we present more exemplar results and comparisons to show the robustness and advantages. There are 3 groups of images in this supplementary material:

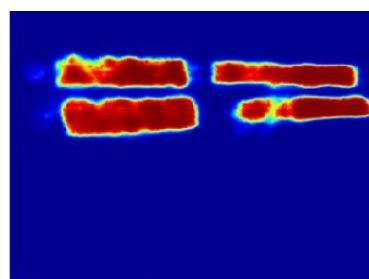
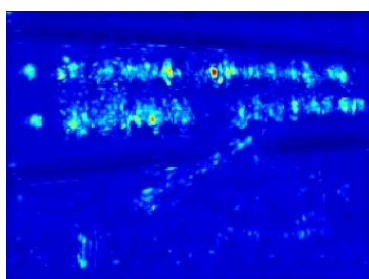
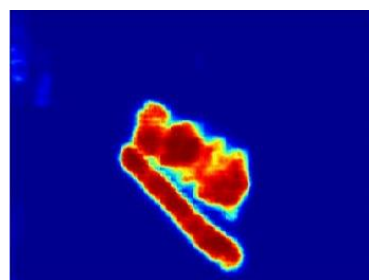
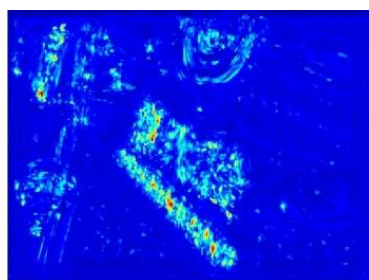
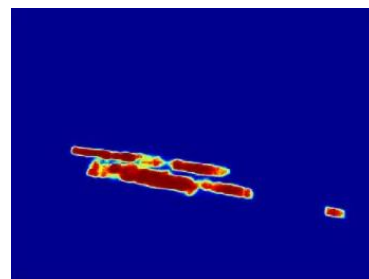
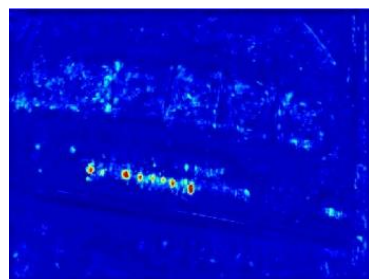
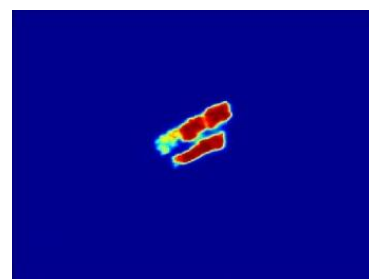
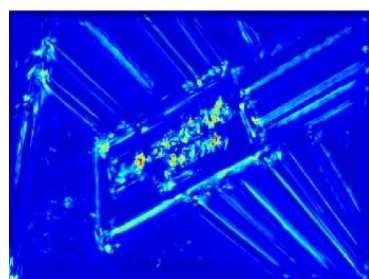
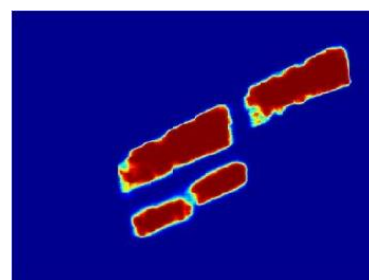
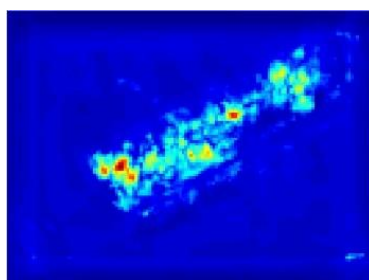
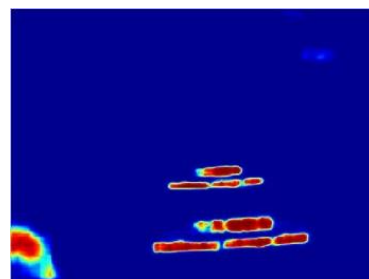
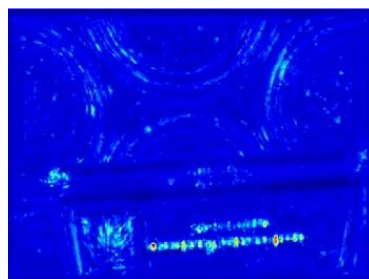
- First, we show the comparison of salient maps between our method and character-based method[8]. The salient maps shown in Fig. 1 demonstrate that our Text-Block FCN is more robust to complex environment such as clutter background, high light intensity, low contrast, blur and noise.
- Second, the probability maps of character centroids shown in Fig. 2 illustrate that the Character-Centroid FCN is powerful to catch the character centroids under some difficult conditions, especially multi-language and blur.
- Finally, we show some text line detection results on several datasets. The detection results in Fig. 3 show our method is robust and efficient to multi-oriented text even with different languages (e.g., English and Chinese).











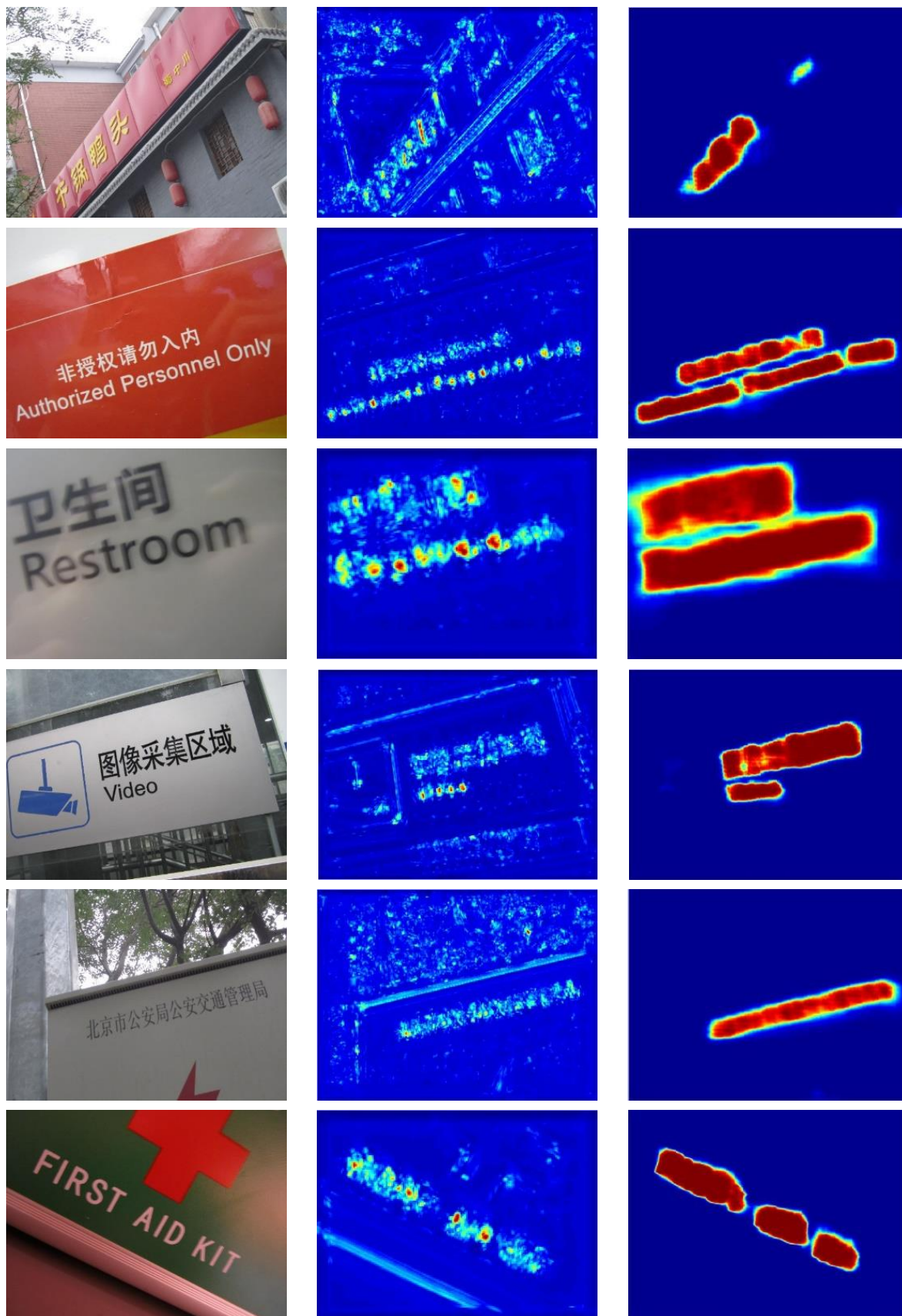


Figure 1. The salient maps of different methods. The first column are original images, the second column are the salient maps generated by character-based method[8], and the third column are the salient maps generated by the Text-Block FCN.



Figure 2. Examples of probability maps predicted by the Character-Centroid FCN. The first and third columns are input images, the second and fourth column are the probability maps of character centroids.

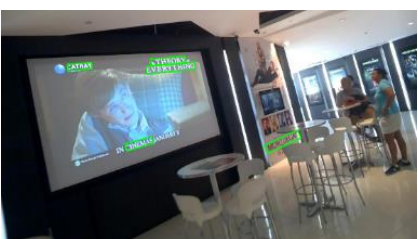
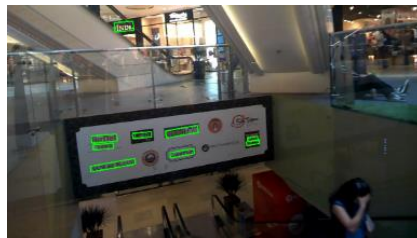




Figure 3. Detection examples of our proposed method on multi-oriented datasets: ICDAR2015 and MSRA-TD500.