Weekly Report

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Period: 2018.8.5-8.12

***Abstract*—This week I mainly put my effort on using traditional methods to extract buildings in SAR images.**

I. SAR CONTEST

IN this contest, we only have 10 training images with the size of 1500*1500. At first, we tried RefineNet, and we got the F1 score of 0.57. So this week we tried traditional methods to see the result. And the traditional methods got 0.61 accuracy on the 10 images, but only got 0.51 accuracy on the test set.

- At first, we use Gaussian filter to remove some noise and make images smoother.
- Then we adopt Otsu's method to binarize the gray image, and get the binarization image. With the binarization image, we apply dilation, erosion, open, close, etc., to refine the boundary.
- After that, we get all contours of the binarization image, except very small ones, which we consider as non-building. To get the full building, we use rectangle to bound these contours.
- At last, we fill these rectangles with white pixels and consider them as buildings.

Fig. 1 is the traditional methods result. Fig. 2 is the ground truth image.

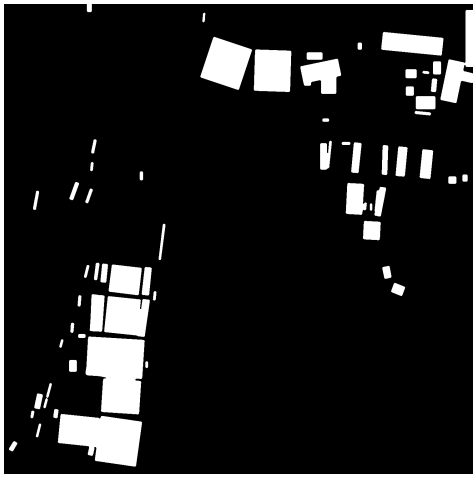

Fig. 1: Traditional methods result

Fig. 2: Ground truth