Report

Laplace Mask 1, threshold: 15

For pixel (r, c), calculate gradient by the following mask, (r, c) corresponds to the center of the mask

	1	
1	-4	1
	1	

For zero-crossing edge detection, if gradient(r, c) >= threshold and one of its 8-neighbors' gradient <= -threshold, output(r, c) = 0, else output(r, c) = 255

Laplace Mask 2, threshold: 10

For pixel (r, c), calculate gradient by the following mask, (r, c) corresponds to the center of the mask

$\frac{1}{3}$

1	1	1
1	-8	1
1	1	1

For zero-crossing edge detection, if gradient(r, c) >= threshold and one of its 8-neighbors' gradient <= -threshold, output(r, c) = 0, else output(r, c) = 255

Minimum variance Laplacian, threshold: 20

For pixel (r, c), calculate gradient by the following mask, (r, c) corresponds to the center of the mask

$\frac{1}{3}$

2	-1	2
-1	-4	-1
2	-1	2

For zero-crossing edge detection, if gradient(r, c) >= threshold and one of its 8-neighbors' gradient <= -threshold, output(r, c) = 0, else output(r, c) = 255

Laplace of Gaussian, threshold: 3000

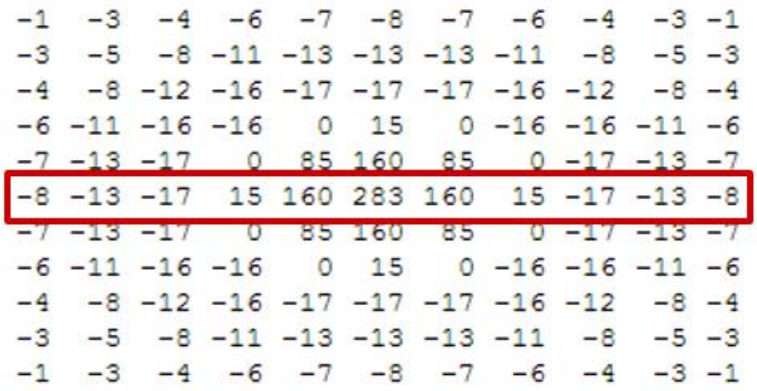
For pixel (r, c), calculate gradient by the following mask, (r, c) corresponds to the center of the mask

0	0	0	-1	-1	-2	-1	-1	0	0	0
0	0	-2	-4	-8	-9	-8	-4	-2	0	0
0	-2	-7	-15	-22	-23	-22	-15	-7	-2	0
-1	-4	-15	-24	-14	-1	-14	-24	-15	-4	-1
-1	-8	-22	-14	52	103	52	-14	-22	-8	-1
-2	-9	-23	-1	103	178	103	-1	-23	-9	-2
-1	-8	-22	-14	52	103	52	-14	-22	-8	-1
-1	-4	-15	-24	-14	-1	-14	-24	-15	-4	-1
0	-2	-7	-15	-22	-23	-22	-15	-7	-2	0
0	0	-2	-4	-8	-9	-8	-4	-2	0	0
0	0	0	-1	-1	-2	-1	-1	0	0	0

For zero-crossing edge detection, if gradient(r, c) >= threshold and one of its 8-neighbors' gradient <= -threshold, output(r, c) = 0, else output(r, c) = 255

Difference of Gaussian, threshold: 1

For pixel (r, c), calculate gradient by the following mask, (r, c) corresponds to the center of the mask



For zero-crossing edge detection, if gradient(r, c) >= threshold and one of its 8-neighbors' gradient <= -threshold, output(r, c) = 0, else output(r, c) = 255