Ryan Gonzales
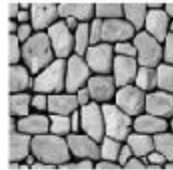
57555019

HW 3: Homography Mosaics

1. Here is the quilted texture of the rock wall using the default settings for tilesize, overlap, and k of 30, 5, and 5, respectively.

Comparison between Original, Pasted, and Quilted

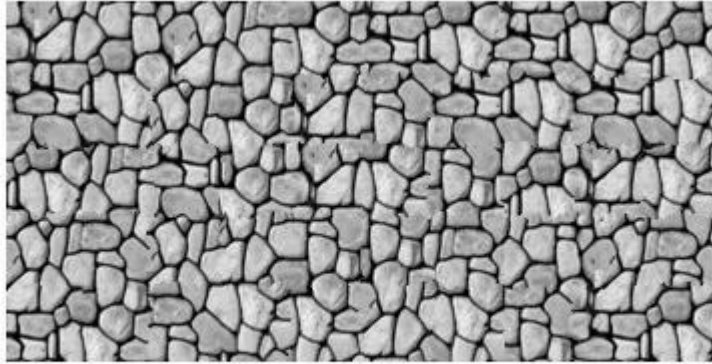
original sample

synthesized, pasted

synthesized, quilted

## Just Quilted

synthesized, quilted

Increase Tile Size

tilesize = 40

Increasing the tile size increases the size of the square tiles that we extract and stitch together. The most noticeable change when compared to the default setting is the increased size of the quilted image. This is due to an increase in the tile size, which cause an increase in general area.

Increase Tile Size

overlap = 10
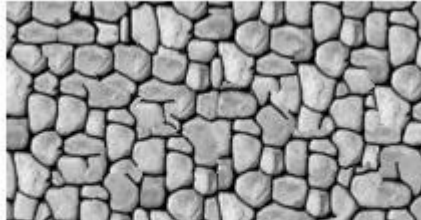
Increasing the overlap increases the overlap area, specifically in the stitch function. As a result, there are less sampling images due to the overlap area being larger. What is also noticeable is that the seams are slightly less visible, which means an improvement of quality. However, that can also be attributed to a loss of resolution.

Decreased Value of K

K = 2
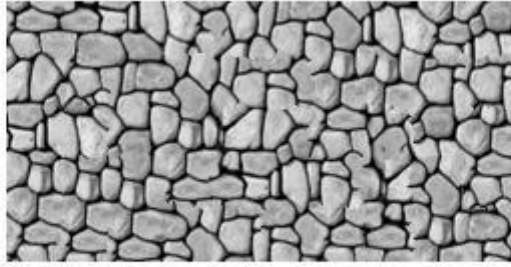
Decreasing K decreases the set of top candidates to choose from. As opposed to randomly choosing from the 5 top candidates (default), we are choosing the top two. While the selection is random, reducing the set of K best fits might leave out a better candidate. The resulting image is more or less the same, but if you compare tiles, especially along a vertical seam, you will notice more repeating patterns.
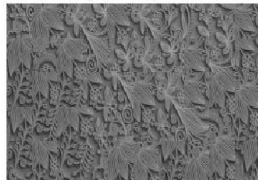
2. Two Additional Textures

Flower Quilt Comparison

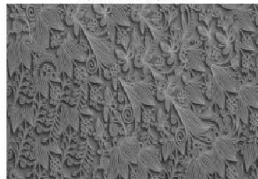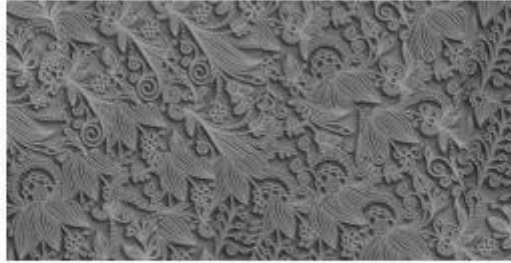original sample

synthesized, pasted

synthesized, quilted

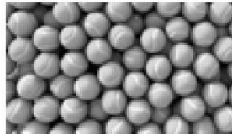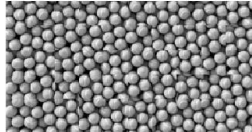# Just Quilted

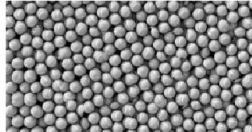synthesized, quilted

Tennis Ball Comparison

original sample

synthesized, pasted

synthesized, quilted

Just Quilted

synthesized, quilted