A discrete pattern, formed by dots discretely arranged in two dimensions, is provided wherein the dots are generated in a low discrepancy sequence. The dots are preferably generated in a discrete pattern wherein the square of discrepancy D satisfies the formula,

$$D \leq 0.13N^{-1.15}$$

Further, the method provides for generation of, and the apparatus provides implementation of, a discrete pattern even when the filling factor rapidly changes by automatically generating or deleting dots.

31 Claims, 49 Drawing Sheets