

PRINT ENHANCEMENT SYSTEM FOR ENHANCING DOT PRINTER IMAGES

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5 ABSTRACT OF THE DISCLOSURE

A method and apparatus for enhancing the quality of images printed by dot printers or dot displays are disclosed. Image irregularities caused by quantization are smoothed by using a set of rules to transform an
10 initial pattern (Fig. 2A) into an enhanced pattern (Figs. 2E, 2F) for printing. The initial pattern (Fig. 2A) may consist of a matrix of bits representing an image having X dots per inch along an intended direction of printing. An intermediate pattern (Fig. 2B) is formed
15 by replicating columns of bits from the initial pattern (Fig. 2A). Image enhancement rules (Fig. 2C) are applied to the intermediate pattern (Fig. 2B) to invert (Fig. 2D) one or more bits in the intermediate pattern (Fig. 2B) to create an enhanced pattern (Figs. 2E, 2F). The enhanced
20 pattern (Figs. 2E, 2F) is printed (Fig. 2F) at $n \times X$ dots per inch along the direction of printing where $n > 1$.

(Figs. 2A - 2F)