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[54] **GRAYSCALE PRINTING SYSTEM**

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[58] **Field of Search** 347/9, 15, 43; 358/298

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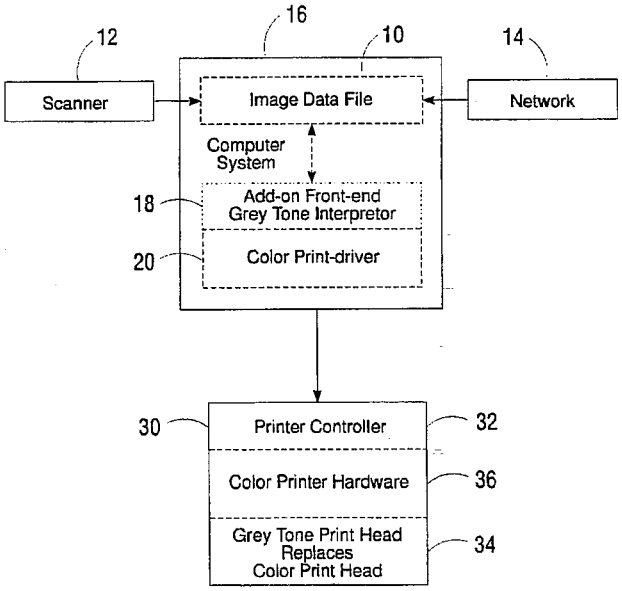
[57] **ABSTRACT**

A system is provided for obtaining enhanced quality grayscale printing using standard printer architecture. An image to be printed is scanned to produce several bit maps for image pixels having different optical intensities. The different bit maps are handled by a standard print engine separately, in the same manner as multicolor bit maps would be handled. The image is then printed using a print head assembly having separate print heads for grayscale printing using different optical intensities. Thus, a printed image having enhanced resolution and quality, because of the optical intensity discrimination, is produced using a printer architecture which is the same as a standard multicolor printer architecture except for the front end, which scans for optical intensity, and the print head assembly, which has different print heads designed to produce different optical intensities. The print heads use either different ink dot sizes, inks having different pigment concentrations, or other suitable techniques for varying the optical intensity.

7 Claims, 17 Drawing Sheets