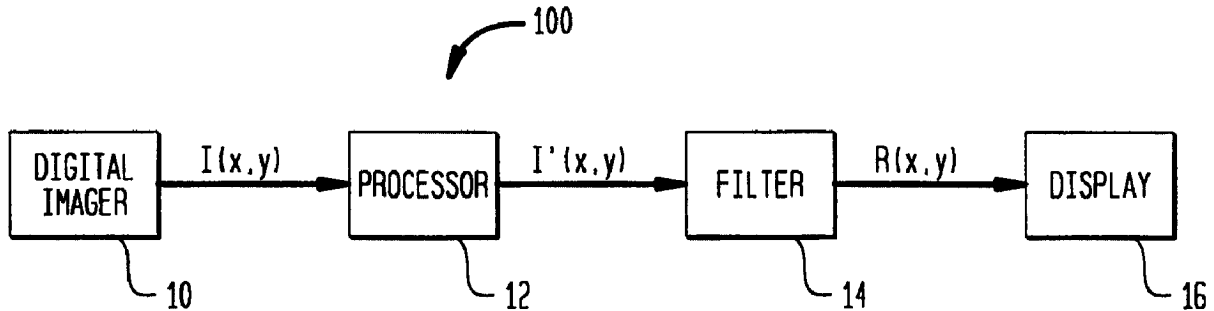




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 (54) Title: METHOD OF IMPROVING A DIGITAL IMAGE



(57) **Abrégé/Abstract:**

A method of improving a digital image is provided. The image is initially represented by digital data indexed to represent positions on a display. The digital data is indicative of an intensity value $I_i(x,y)$ for each position (x,y) in each i -th spectral band. The intensity value for each position in each i -th spectral band is adjusted to generate an adjusted intensity value for each position in equation (1), each i -th spectral band in accordance with where S is the number of unique spectral bands included in said digital data, W_n is a weighting factor and $*$ denotes the convolution operator. Each surround function $F_n(x,y)$ is uniquely scaled to improve an aspect of the digital image, e.g., dynamic range compression, color constancy, and lightness rendition. The adjusted intensity value for each position in each i -th spectral band is filtered with a common function and then presented to a display device. For color images, a novel color restoration step is added to give the image true-to-life color that closely matches human observation.