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Fan

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(54) **SYSTEMS AND METHODS FOR REDUCING BOUNDARY ARTIFACTS IN HYBRID COMPRESSION**

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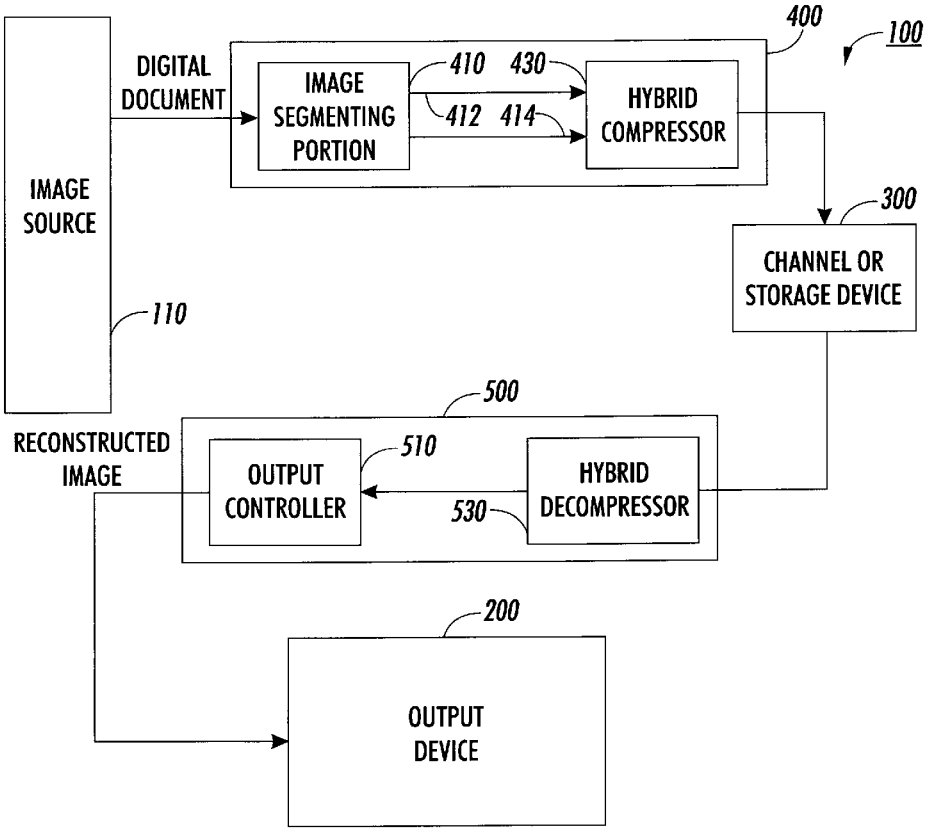
(57) **ABSTRACT**

A recursive dilation method and apparatus reduces the boundary artifacts occurring in hybrid compression. Documents containing both pictures and text are most efficiently compressed using a first compression standard for the picture region and a second compression standard for the text region, and thus inherently produce boundary blocks of both types, but such boundary blocks are most efficiently compressed when they contain only picture data and completely contain picture data, or only text data and completely contain text data. The non-picture data or non-text data in such boundary blocks can be considered "missing" data. The recursive dilation method and apparatus assigns the values of the boundary pixels to the neighboring pixels which have missing data.

20 Claims, 9 Drawing Sheets