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United States Patent [19]

Sarver

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[54] **METHOD AND APPARATUS FOR VARIABLE BLOCK SIZE INTERPOLATIVE CODING OF IMAGES**

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[73] Assignee: **Eyesys Laboratories, Inc.**, Houston, Tex.

[21] Appl. No.: **44,401**

[22] Filed: **Apr. 8, 1993**

[51] **Int. Cl.**[6] **G06F 15/42**

[52] **U.S. Cl.** **364/413.13**; 364/413.18

[58] **Field of Search** 364/413.16, 413.18, 364/413.13, 413.15; 351/212, 221

[56] **References Cited**

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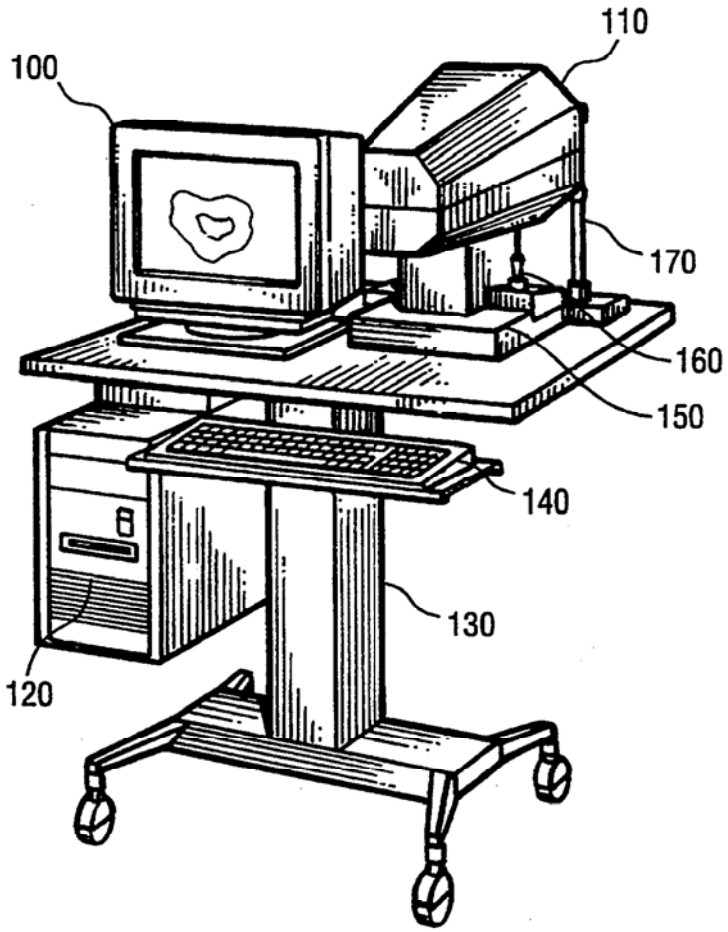
Attorney, Agent, or Firm—Arnold, White & Durkee

[57] **ABSTRACT**

The method and apparatus of the .present invention presents an apparatus and-method for block adaptive image compression. The method and apparatus of the present invention reduces data storage and transmission requirements by sending a subset of the entire pixel data set existing in an image pixel data set. The pixels that are stored are referred to as primary pixels. The remaining pixels that are not transmitted or stored are referred to as secondary pixels. These secondary pixels are estimated from the primary pixels. A high fidelity image can be reproduced utilizing only the primary pixels. The method and apparatus of the present inventions estimates the secondary pixel values from the primary pixel values by predicting that a secondary pixel will look like the surrounding primary pixels, or by interpolating a value for the secondary pixels by summing the surrounding primary pixels and averaging them to obtain a valuc for the secondary pixel.

18 Claims, 14 Drawing Sheets

Microfiche Appendix Included
(31 Microfiche, 1 Pages)



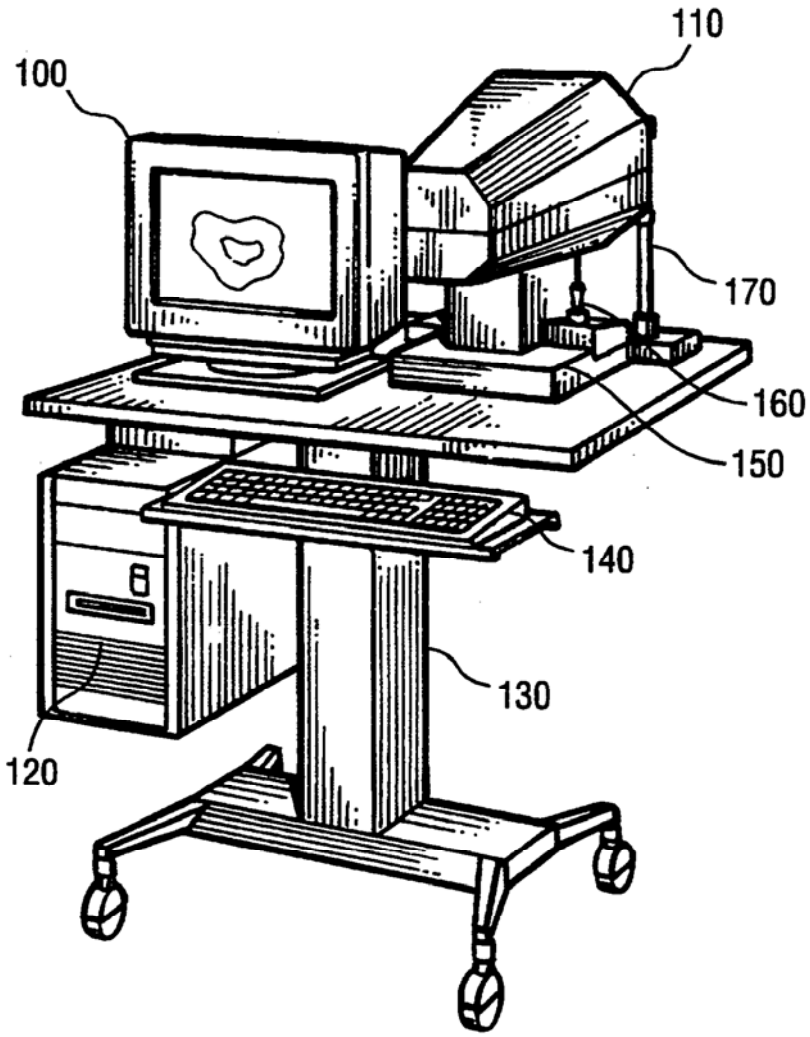


FIGURE 1A

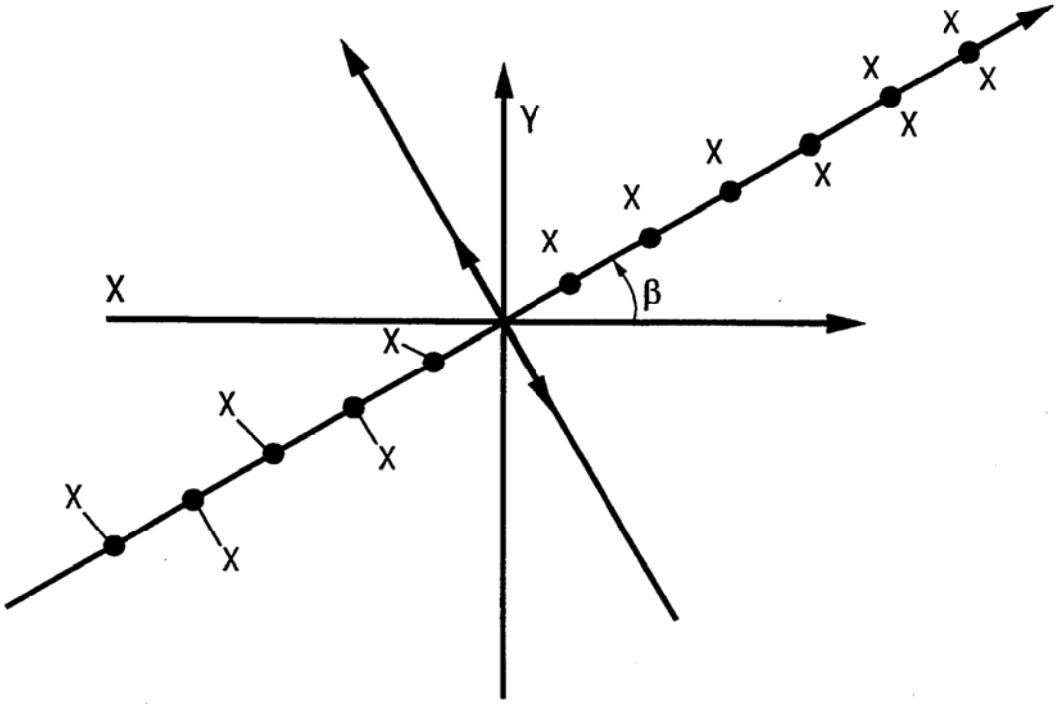


FIGURE 1B

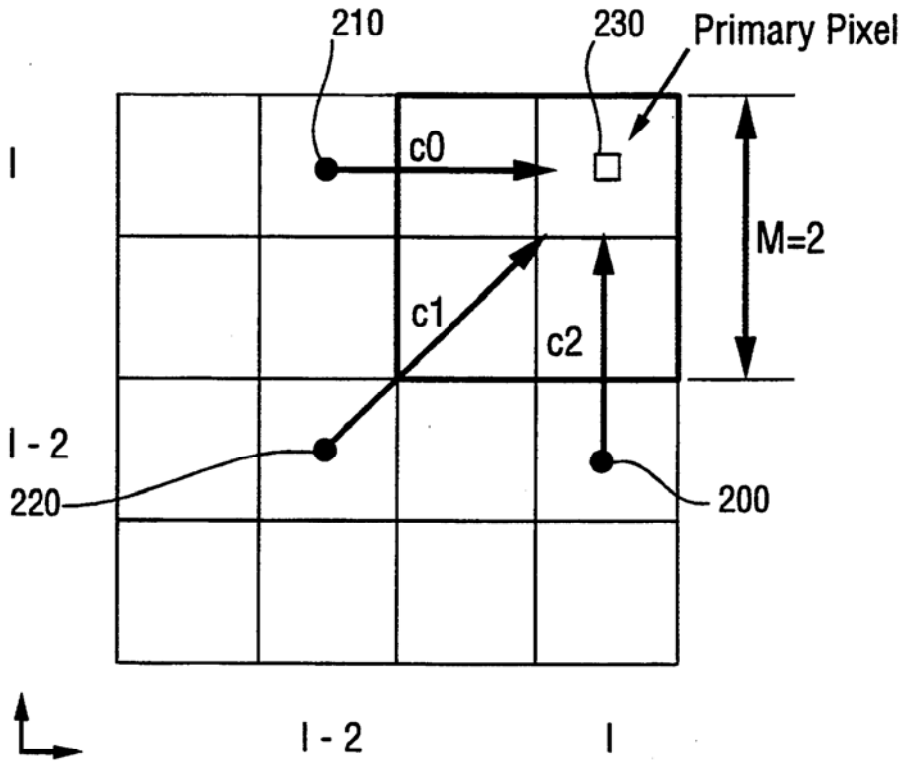


FIGURE 2

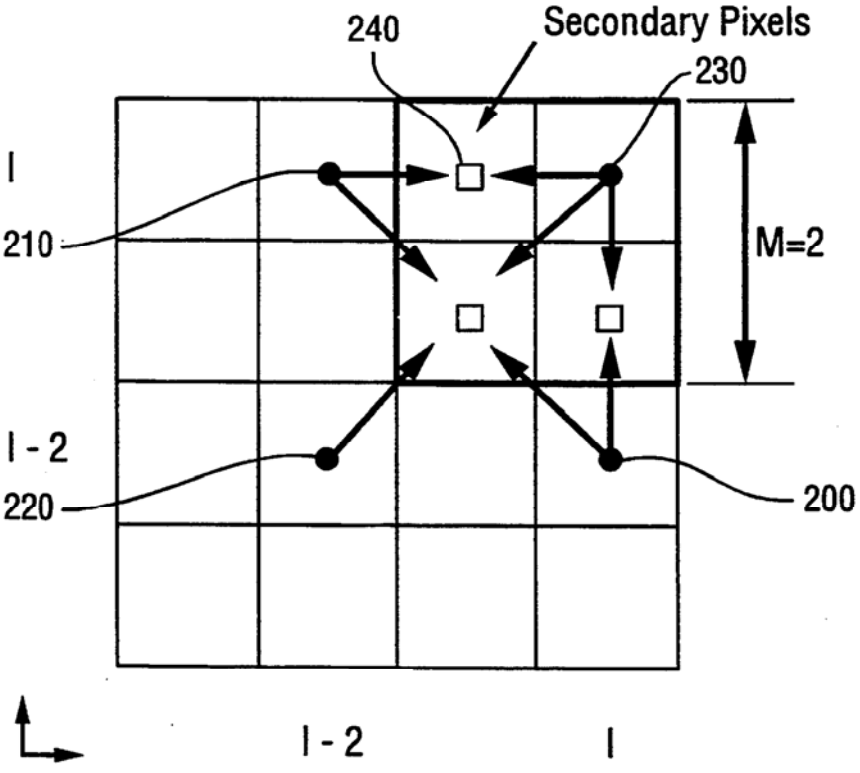


FIGURE 3

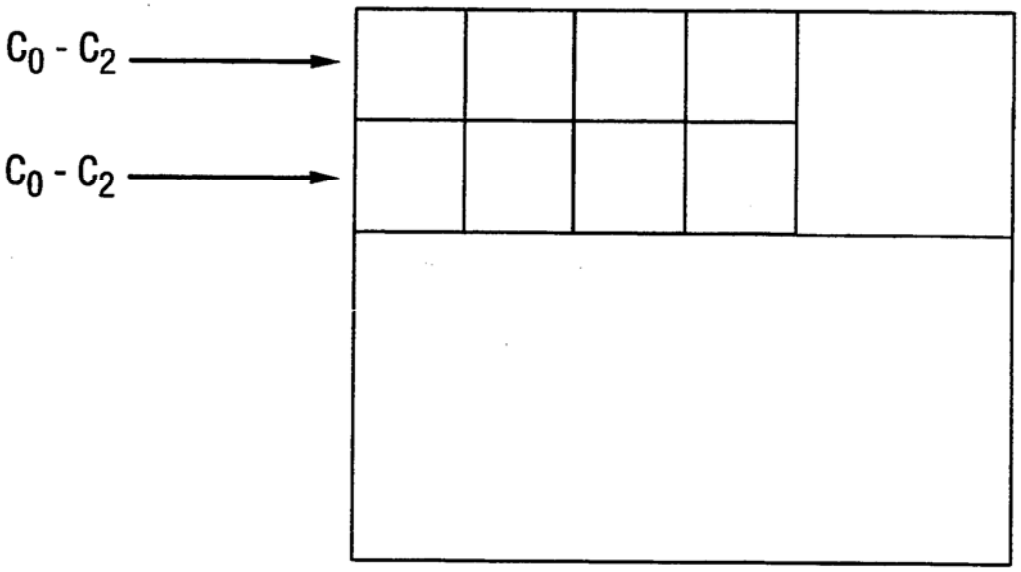


FIGURE 4

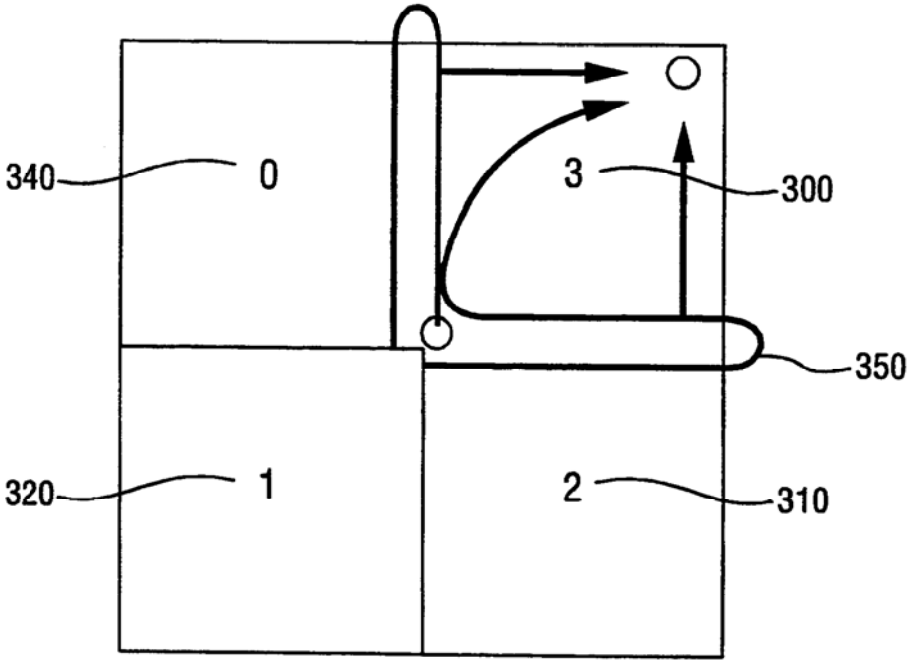


FIGURE 5

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