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Brown et al.

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(54) **SYSTEM AND METHOD FOR GENERATING A VIEWABLE VIDEO INDEX FOR LOW BANDWIDTH APPLICATIONS**

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(57) **ABSTRACT**

(21) Appl. No.: **10/785,890**

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(51) **Int. Cl.**
G06K 9/00 (2006.01)
H04N 5/225 (2006.01)

(52) **U.S. Cl.** **382/103**; 348/169

(58) **Field of Classification Search** 382/103, 382/107, 154, 194, 224, 243, 142; 348/143, 348/169, 700; 375/241.1, E7.004, E7.011, 375/E7.012, E7.076, E7.078; 380/212

See application file for complete search history.

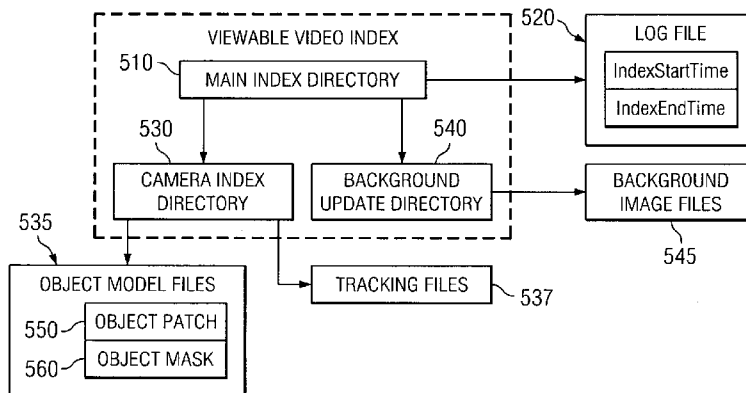
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A system and method for generating a viewable video index for low bandwidth applications are provided. The exemplary aspects of the present invention solve the problems with the prior art systems by incorporating information for generating a viewable representation of the video data into the index, thus generating a viewable video index. The viewable video index contains information for generating a visual representation of moving objects in the video data, a visual representation of the background of the video capture area, i.e. the scene, a representation of the object trajectory, a representation of the object attributes, and a representation of detected events. The result is that the viewable video index may be transmitted to a low bandwidth application on a client device and may be used along with associated object and background models to generate a representation of the actual video data without requiring that the original video data itself be streamed to the client device.

26 Claims, 4 Drawing Sheets



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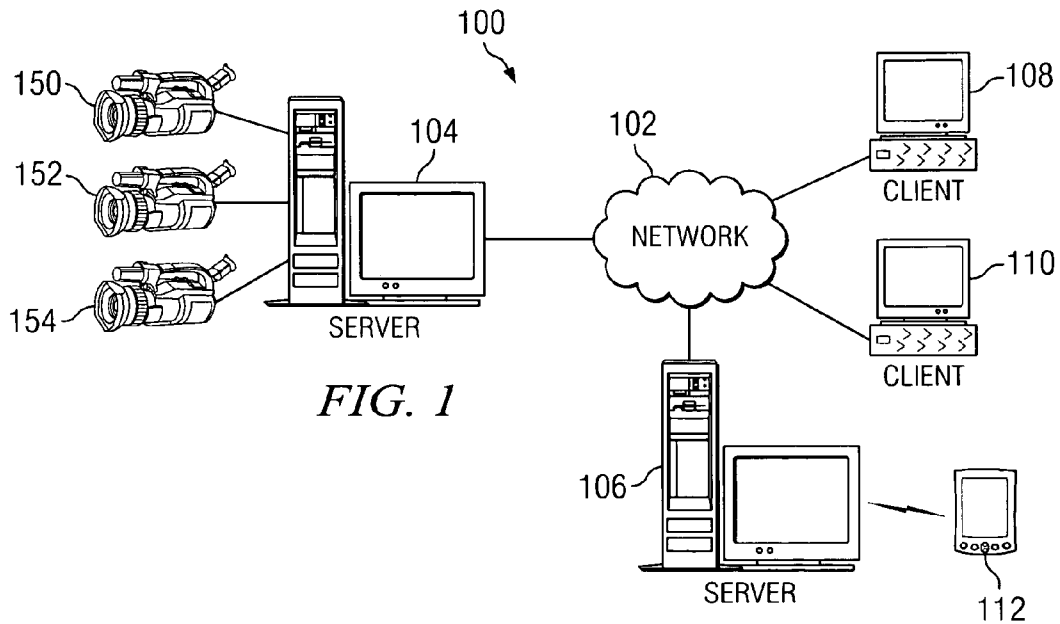


FIG. 1

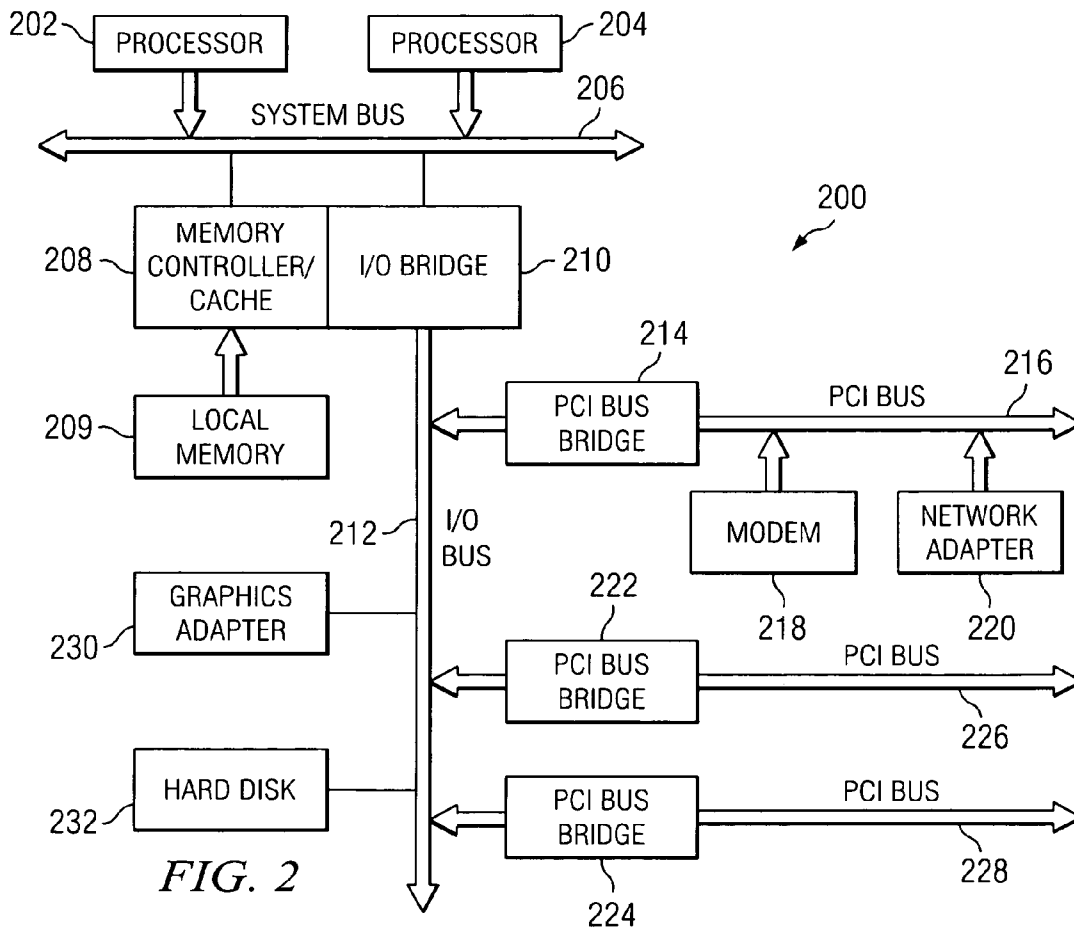
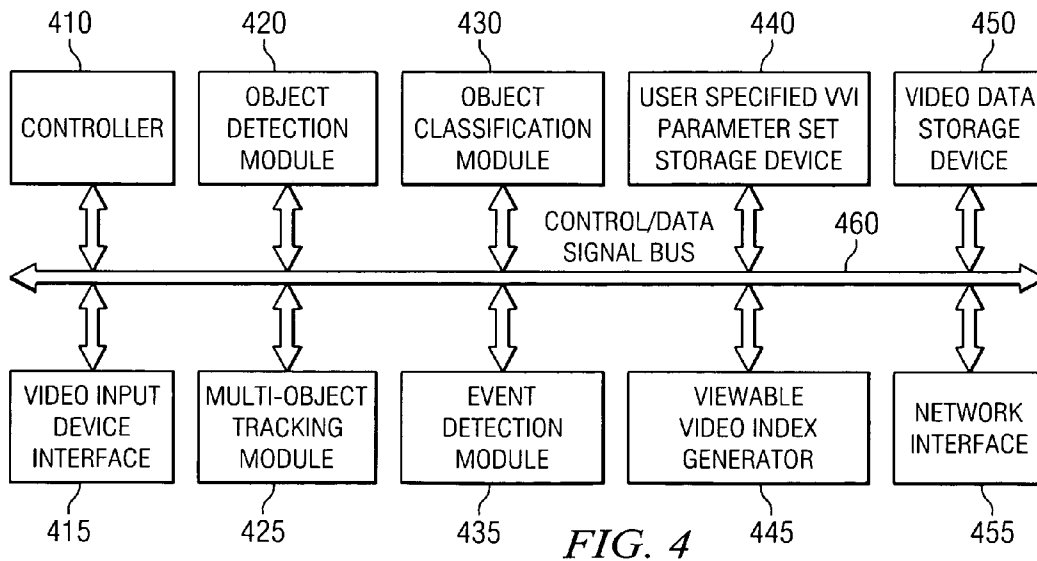
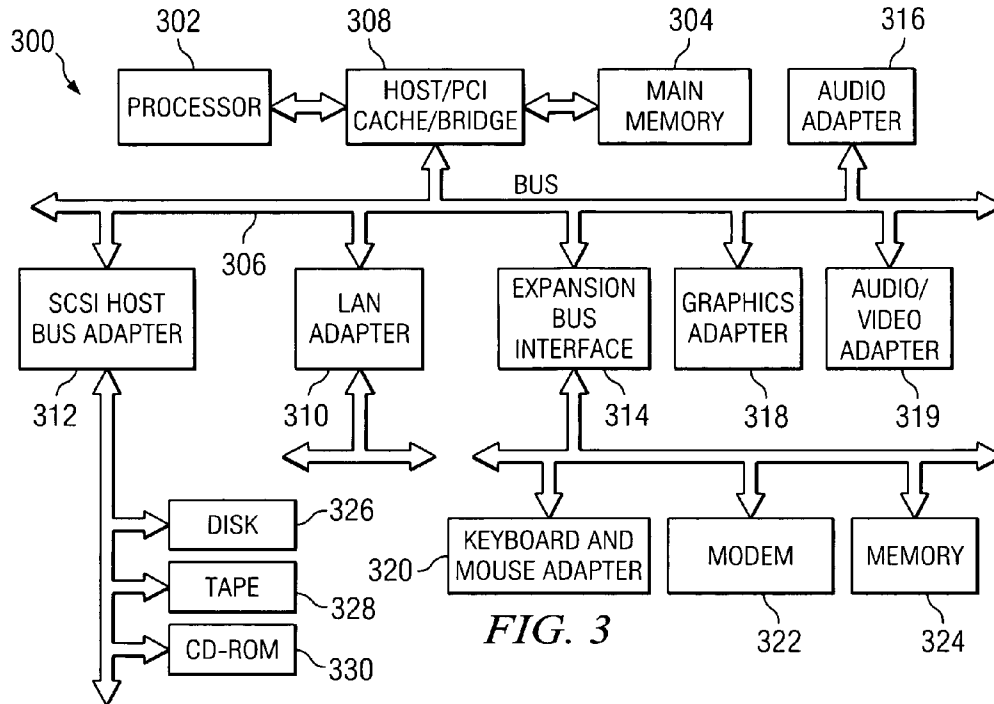


FIG. 2



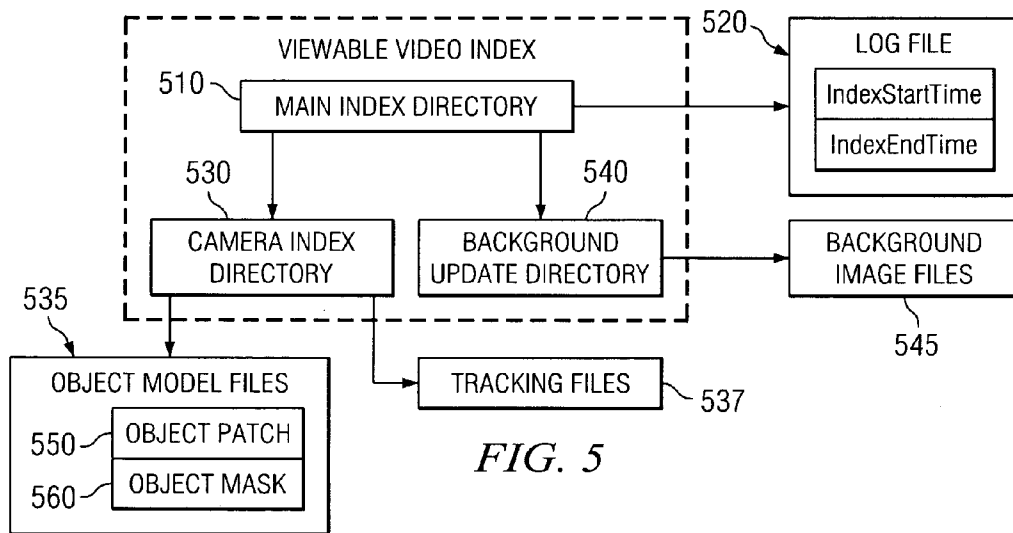
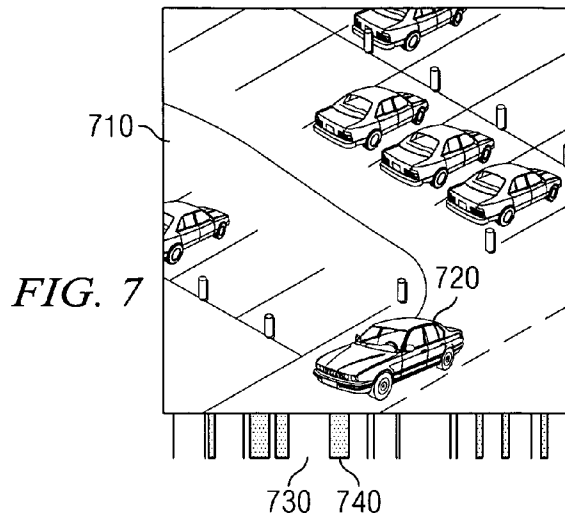


FIG. 5

FIG. 6

| Index Data per Frame | |
|----------------------|---|
| 610 | StartFrame |
| 615 | History |
| 620 | TimeStamp 0000000073-2003-09-08-21-16-41-819 73 |
| 630 | Centroid 71.8 181.1 |
| 640 | Area 328.0 |
| 650 | Bounding Box 62 85 23 22 |
| 660 | Missing Pixel Count 0 |
| 670 | OcclusionFraction 0.000000 |
| 680 | Class -1 UnKnown |
| 690 | ModelFollows 0 |
| 695 | EndFrame |

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