



US007908343B2

(12) **United States Patent**
Levanon et al.

(10) **Patent No.:** **US 7,908,343 B2**
(45) **Date of Patent:** ***Mar. 15, 2011**

(54) **OPTIMIZED IMAGE DELIVERY OVER LIMITED BANDWIDTH COMMUNICATION CHANNELS**

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(*) Notice: Subject to any disclaimer, the term of this patent is extended or adjusted under 35 U.S.C. 154(b) by 0 days.
This patent is subject to a terminal disclaimer.

(21) Appl. No.: **12/619,643**

(22) Filed: **Nov. 16, 2009**

(65) **Prior Publication Data**

US 2010/0064002 A1 Mar. 11, 2010

Related U.S. Application Data

(63) Continuation of application No. 10/035,987, filed on Dec. 24, 2001, now Pat. No. 7,644,131.

(60) Provisional application No. 60/258,488, filed on Dec. 27, 2000, provisional application No. 60/258,489, filed on Dec. 27, 2000, provisional application No. 60/258,465, filed on Dec. 27, 2000, provisional application No. 60/258,468, filed on Dec. 27, 2000, provisional application No. 60/258,466, filed on Dec. 27, 2000, provisional application No. 60/258,467, filed on Dec. 27, 2000.

(51) **Int. Cl.**
G06F 15/16 (2006.01)

(52) **U.S. Cl.** **709/217**; 709/230; 345/625; 382/232; 382/305

(58) **Field of Classification Search** 709/202, 709/203, 217, 230, 246, 247; 345/625; 382/232, 382/305

See application file for complete search history.

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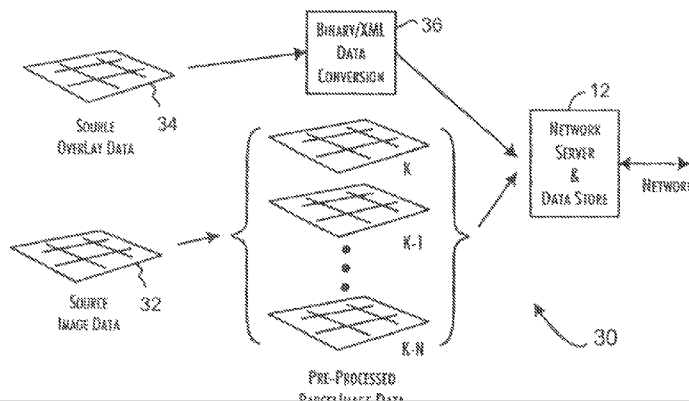
* cited by examiner

Primary Examiner — David Lazaro

(57) **ABSTRACT**

Large-scale images are retrieved over network communications channels for display on a client device by selecting an update image parcel relative to an operator controlled image viewpoint to display via the client device. A request is prepared for the update image parcel and associated with a request queue for subsequent issuance over a communications channel. The update image parcel is received from the communications channel and displayed as a discrete portion of the predetermined image. The update image parcel optimally has a fixed pixel array size, is received in a single and or plurality of network data packets, and is constrained to a resolution less than or equal to the resolution of the client device display.

20 Claims, 5 Drawing Sheets



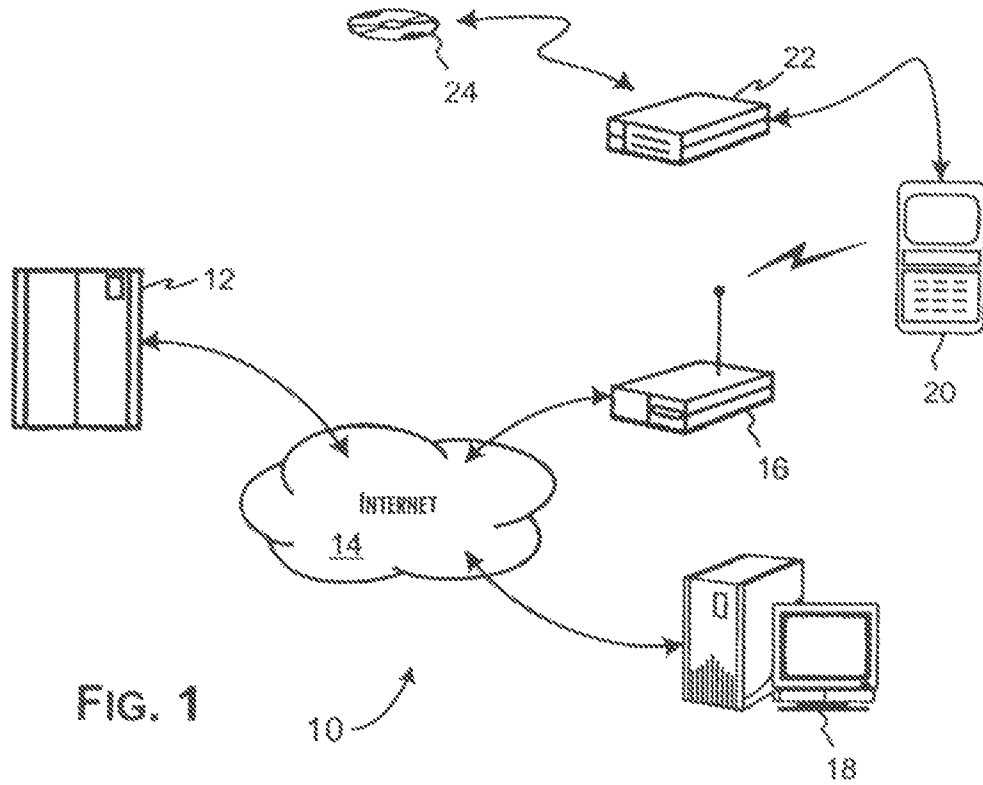


FIG. 1

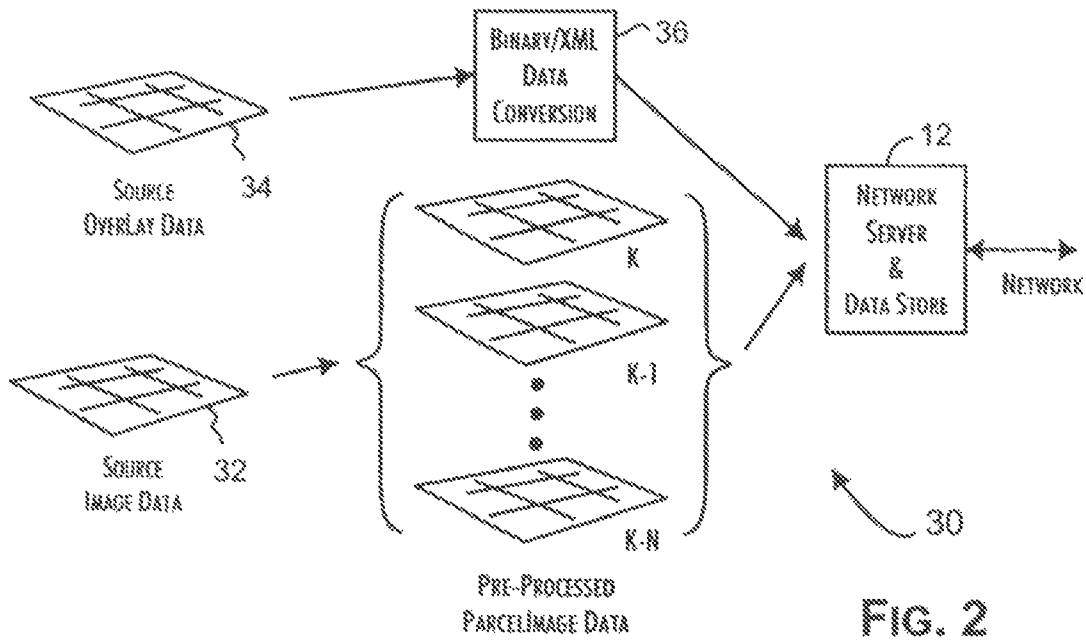


FIG. 2

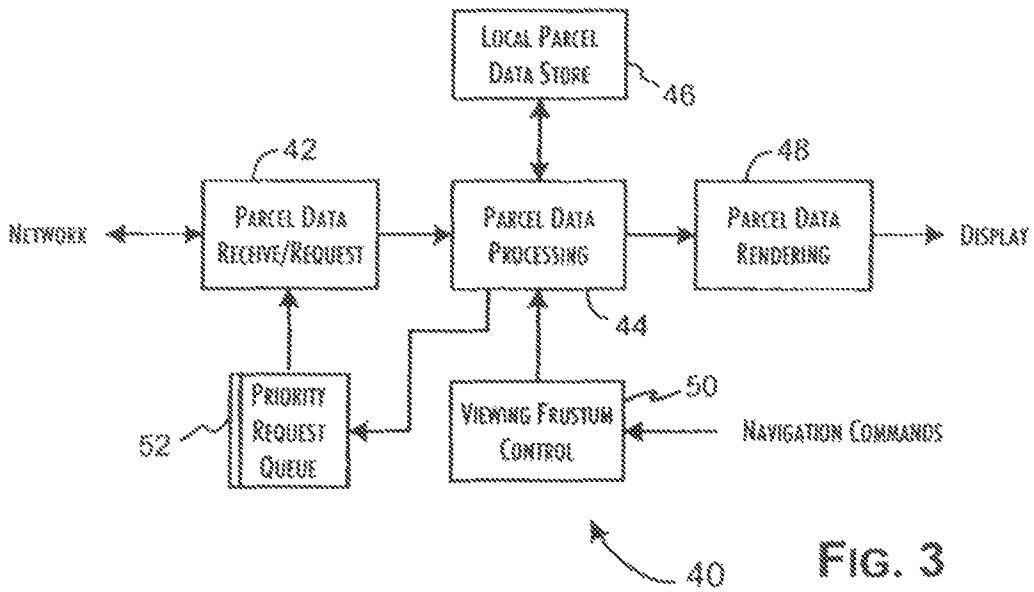


FIG. 3

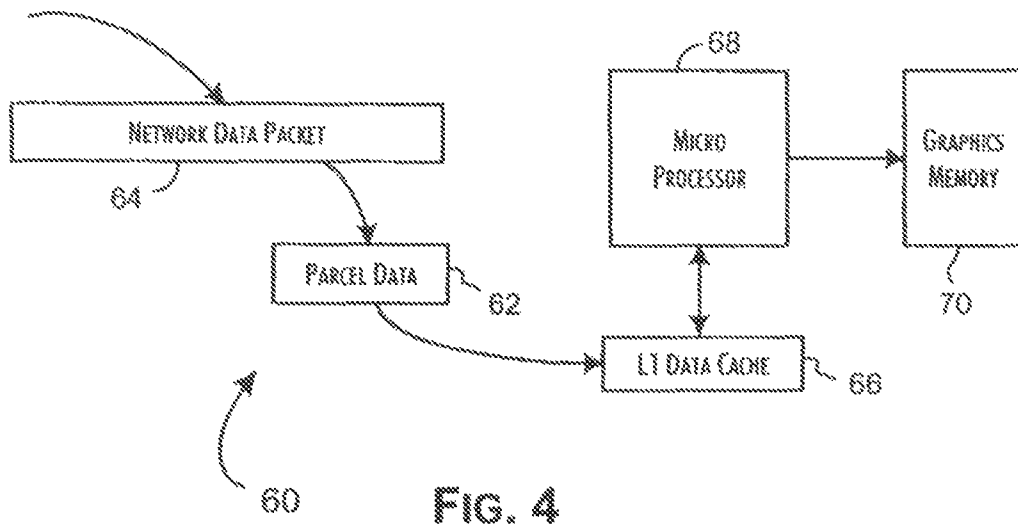
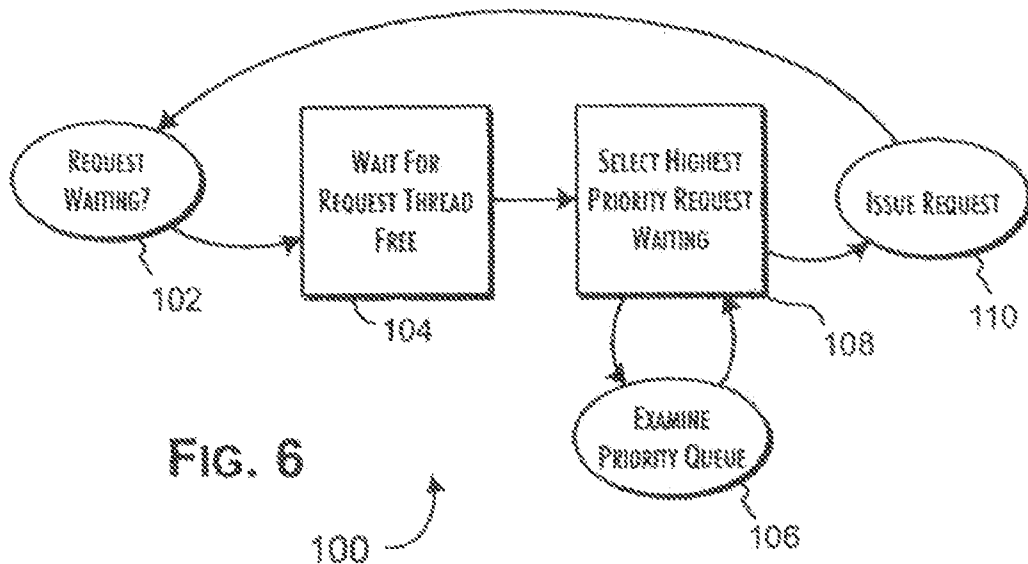
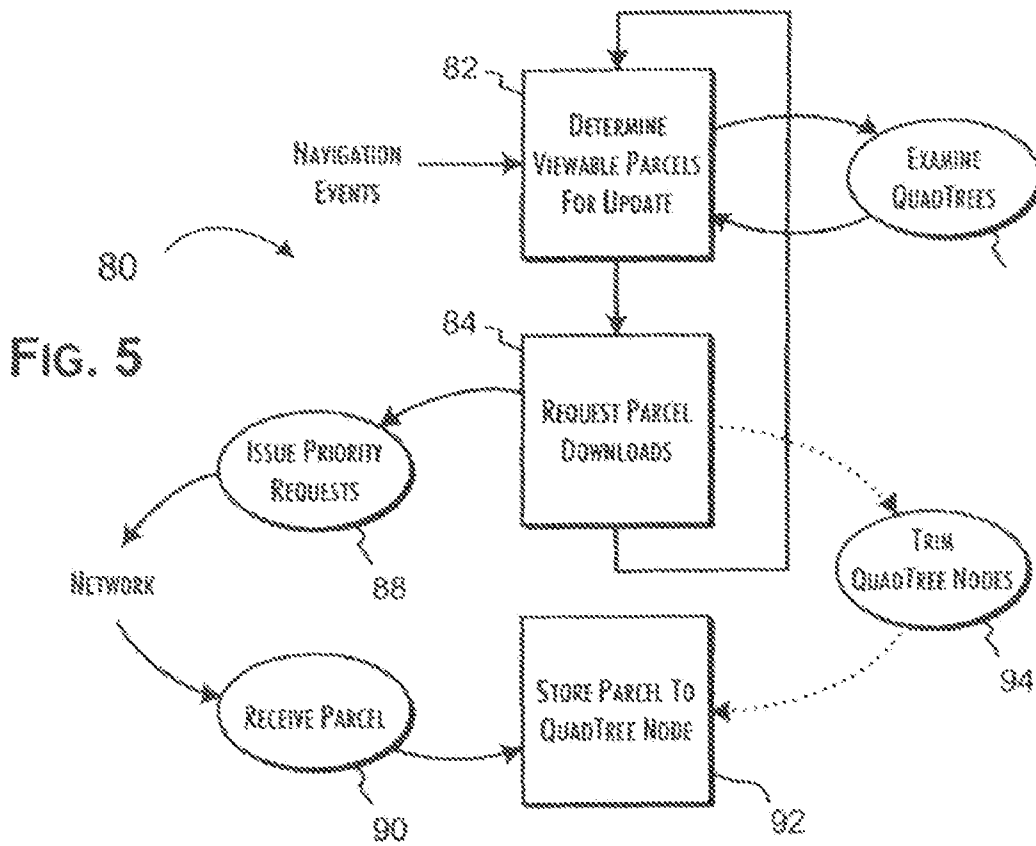


FIG. 4



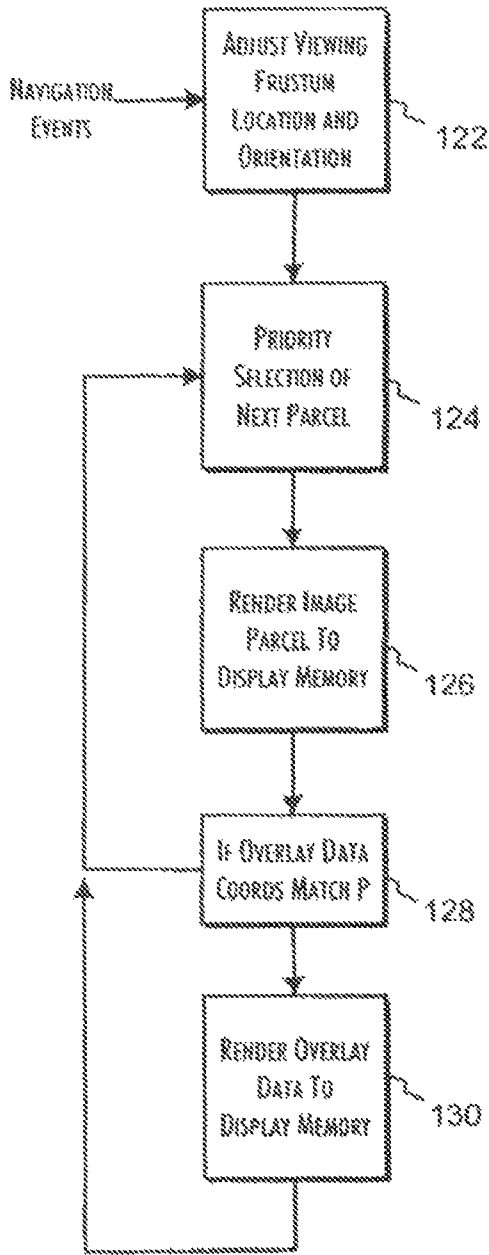
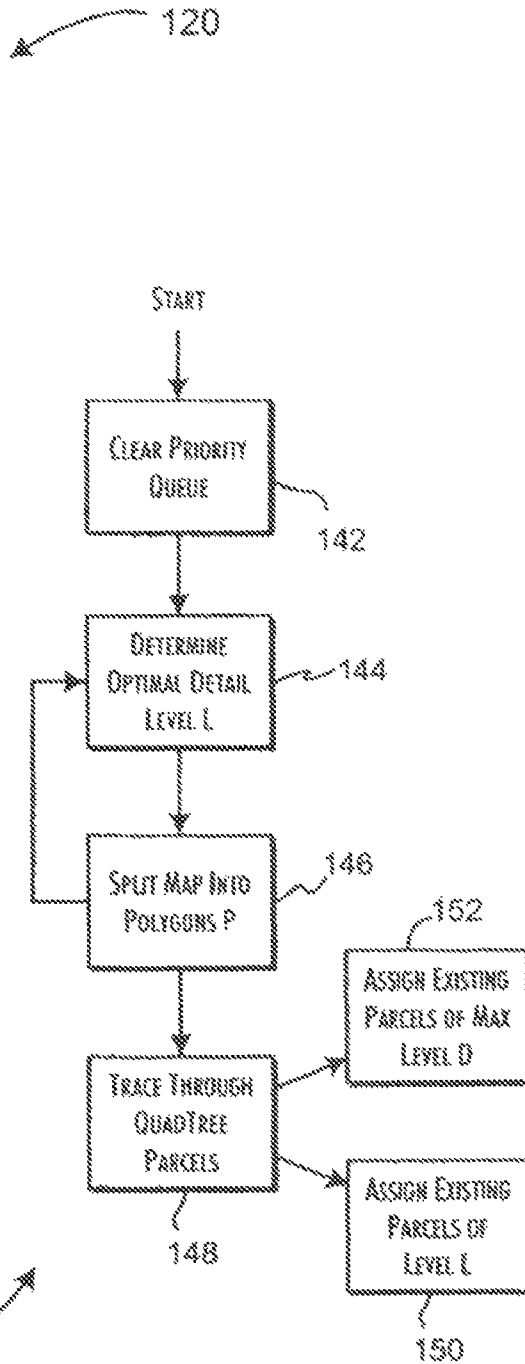


FIG. 8

FIG. 7



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