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Serenyi et al.

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(54) **METHODS AND APPARATUSES FOR TRANSFERRING DATA**

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(73) Assignee: **Apple, Inc.**, Cupertino, CA (US)

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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 716 days.

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G06F 15/16 (2006.01)

(52) **U.S. Cl.** **709/231; 709/217**

(58) **Field of Classification Search** **709/223, 709/231, 224, 225**

See application file for complete search history.

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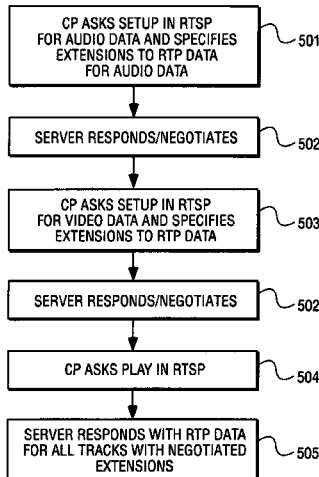
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(57) **ABSTRACT**

The present invention provides several methods and apparatuses for transmitting multimedia data using streaming media protocols such as real-time transfer protocols (RTP) and real-time streaming protocols (RTSP) in a computer network environment. In one exemplary embodiment, a request for RTP data and its associated extension is sent from the caching proxy server to the server. The request may be for one specific type of data or multiple unrelated types of data. The server responds to the request indicating its support for the requested RTP extension data. The caching proxy server determines whether to proceed or terminate the data transmission process based on the response provided by the server. If it is determined to proceed with the data transmission process, the caching proxy informs the server to send the requested and supported RTP data. The server sends the requested data in a variable and extendible header format.

42 Claims, 13 Drawing Sheets



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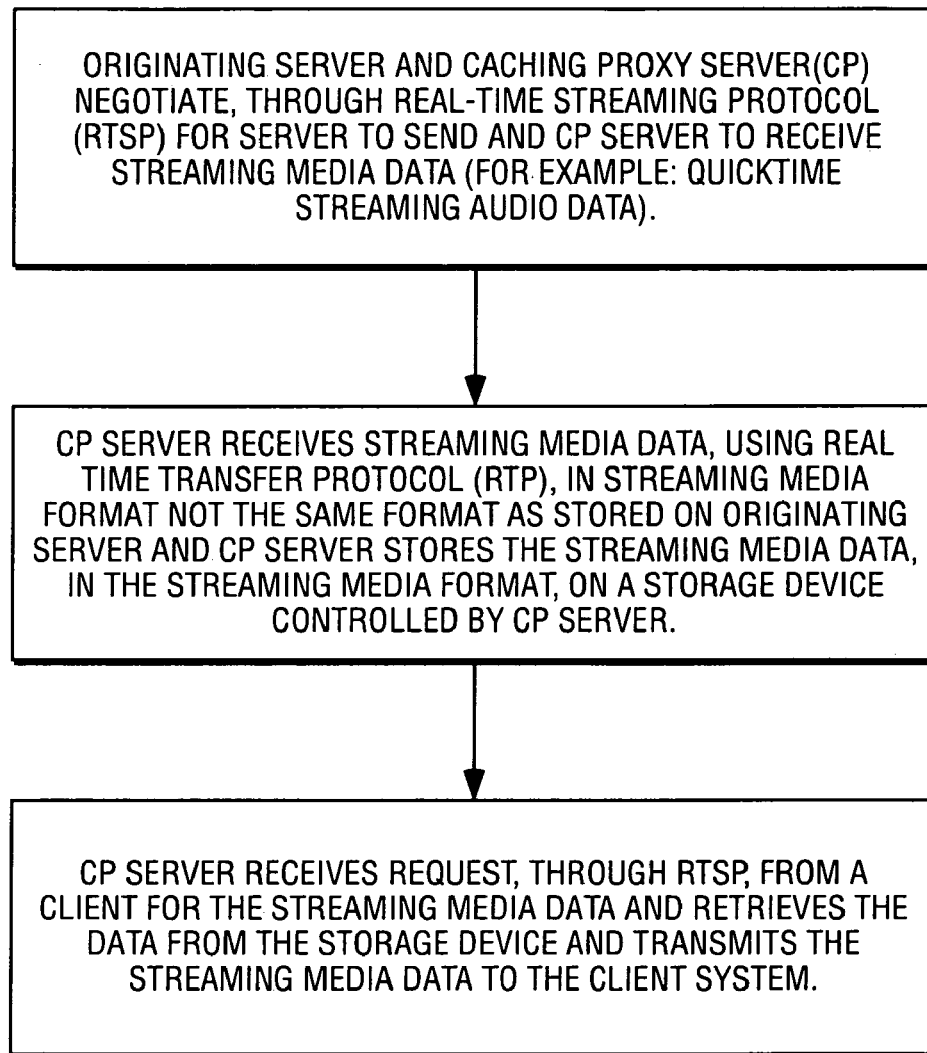
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**FIG. 1A**

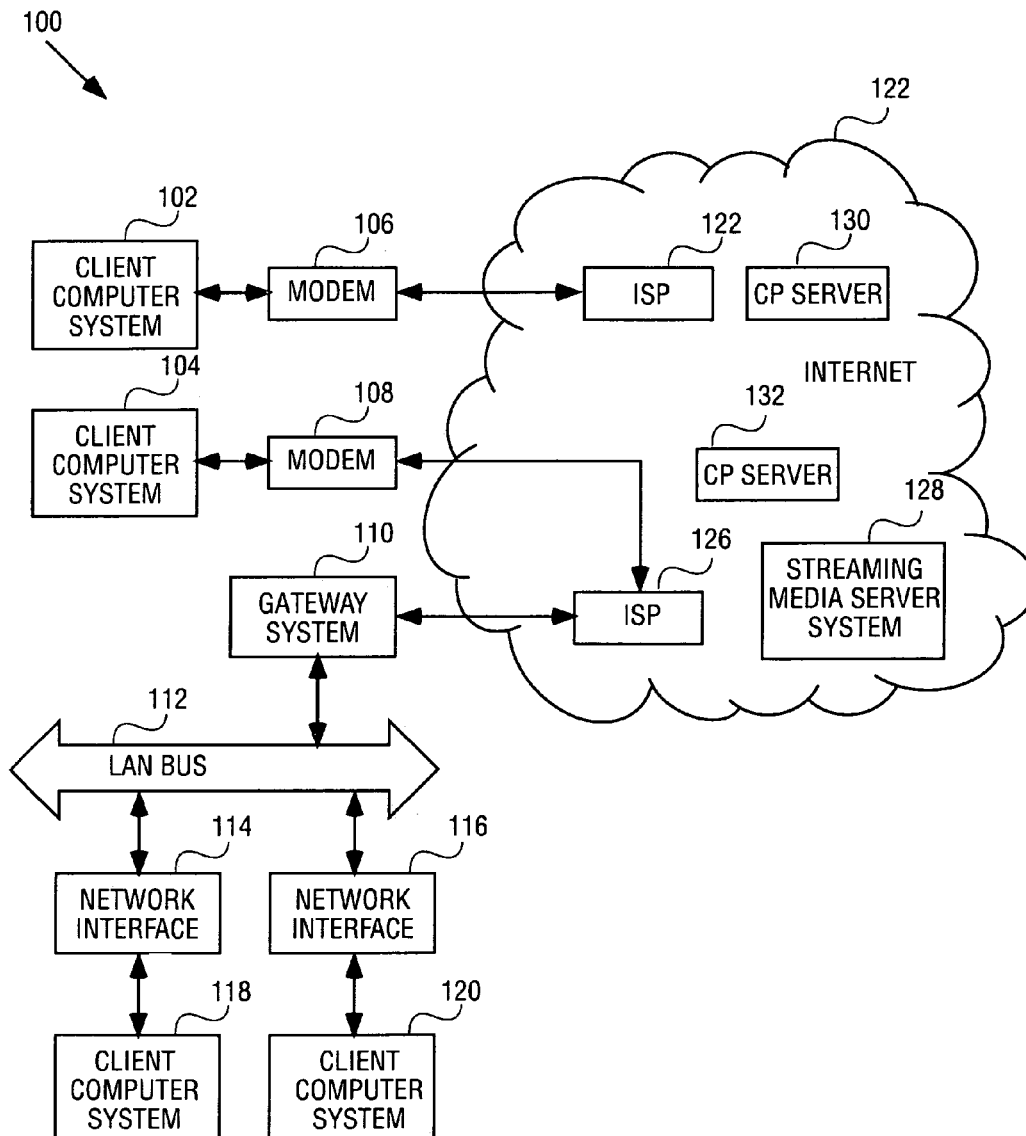


FIG. 1B

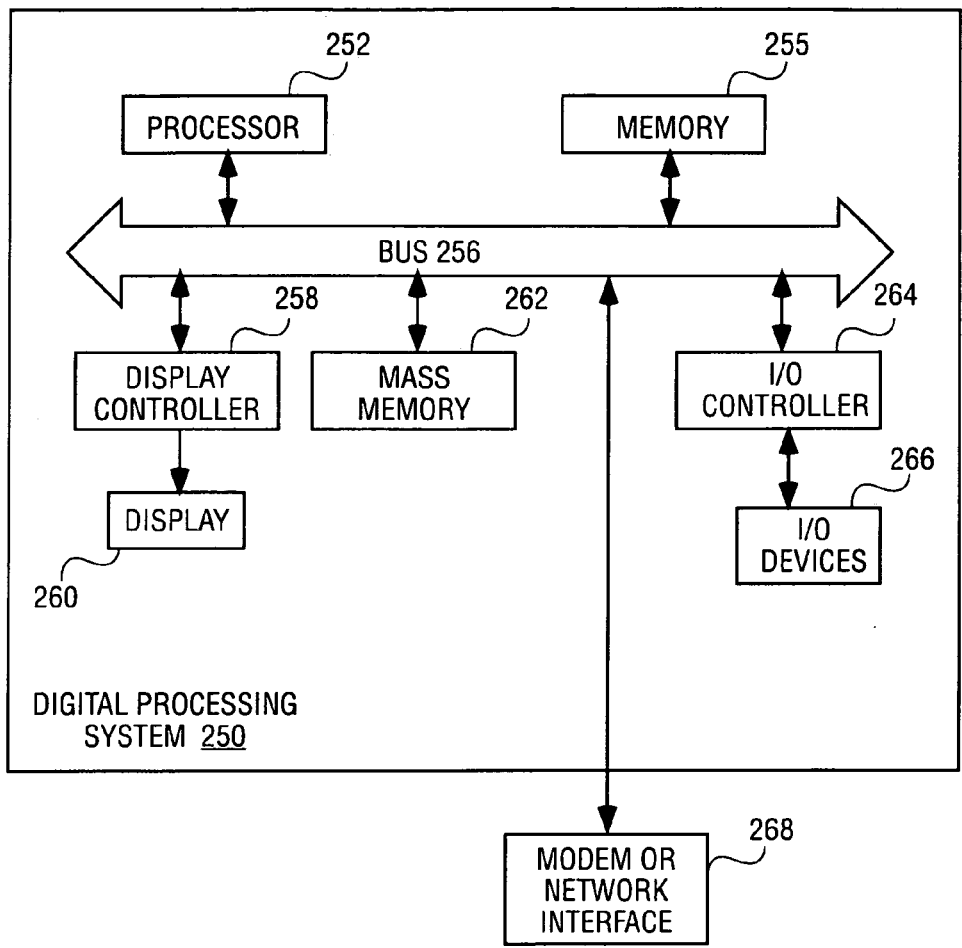


FIG. 2

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