

[54] METHOD OF TRANSCODING DOCUMENTS  
IN A NETWORK ENVIRONMENT USING A  
PROXY SERVER

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G06F 17/00

[52] U.S. Cl. .... 395/200.47; 395/200.33;  
395/200.49; 395/200.58; 395/200.59; 395/200.76;  
395/187.01

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395/200.36, 200.47–200.5, 200.56–200.59,  
500, 200.76–200.79, 185.01, 185.05, 187.01,  
584–685

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Primary Examiner—Parshotam S. Lall

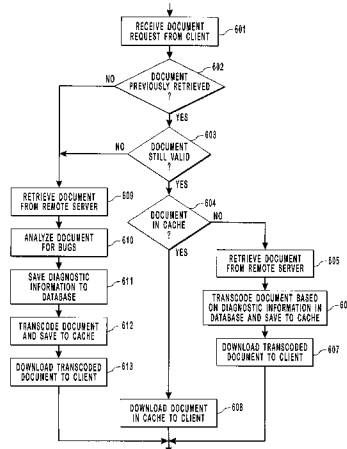
Assistant Examiner—Bharat Barot

Attorney, Agent, or Firm—Workman, Nydegger, Seeley

[57] ABSTRACT

A method of providing a document to a client coupled to a  
server is provided. The server provides a number of Internet  
services to the client, including functioning as a caching  
proxy on behalf of the client for purposes of accessing the  
World Wide Web. The proxying server includes a persistent  
document database, which stores various attributes of all  
documents previously retrieved in response to a request  
from a client. When a Web document is retrieved from a  
remote server in response to a request from the client, the  
database is consulted and the stored information relating to  
the requested document is used by the server in transcoding  
the document. The document is transcoded for various  
purposes, including to circumvent bugs or quirks found in  
the document, to size the document for display on a televi-  
sion set, to improve transmission efficiency of the document,  
and to reduce latency. The transcoder makes use of the  
document database to perform these functions. The docu-  
ment database is also used for prefetching previously  
requested documents and images and for reducing latency  
when downloading images to the client.

13 Claims, 12 Drawing Sheets



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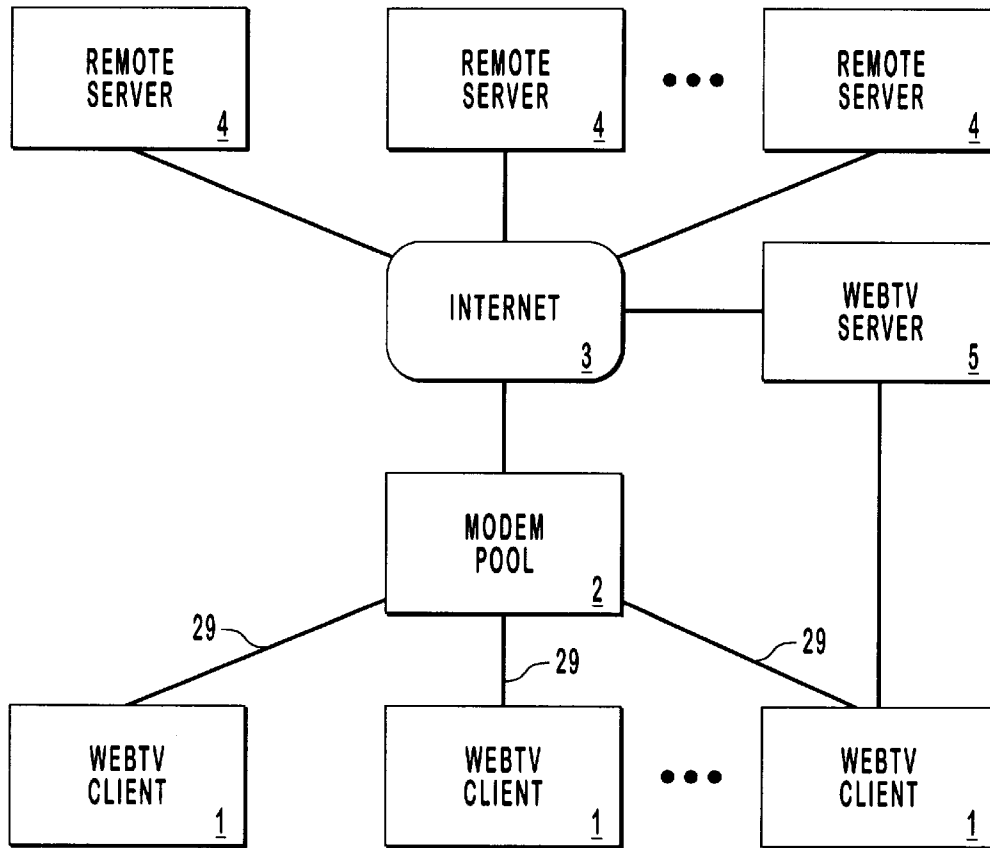


FIG. 1

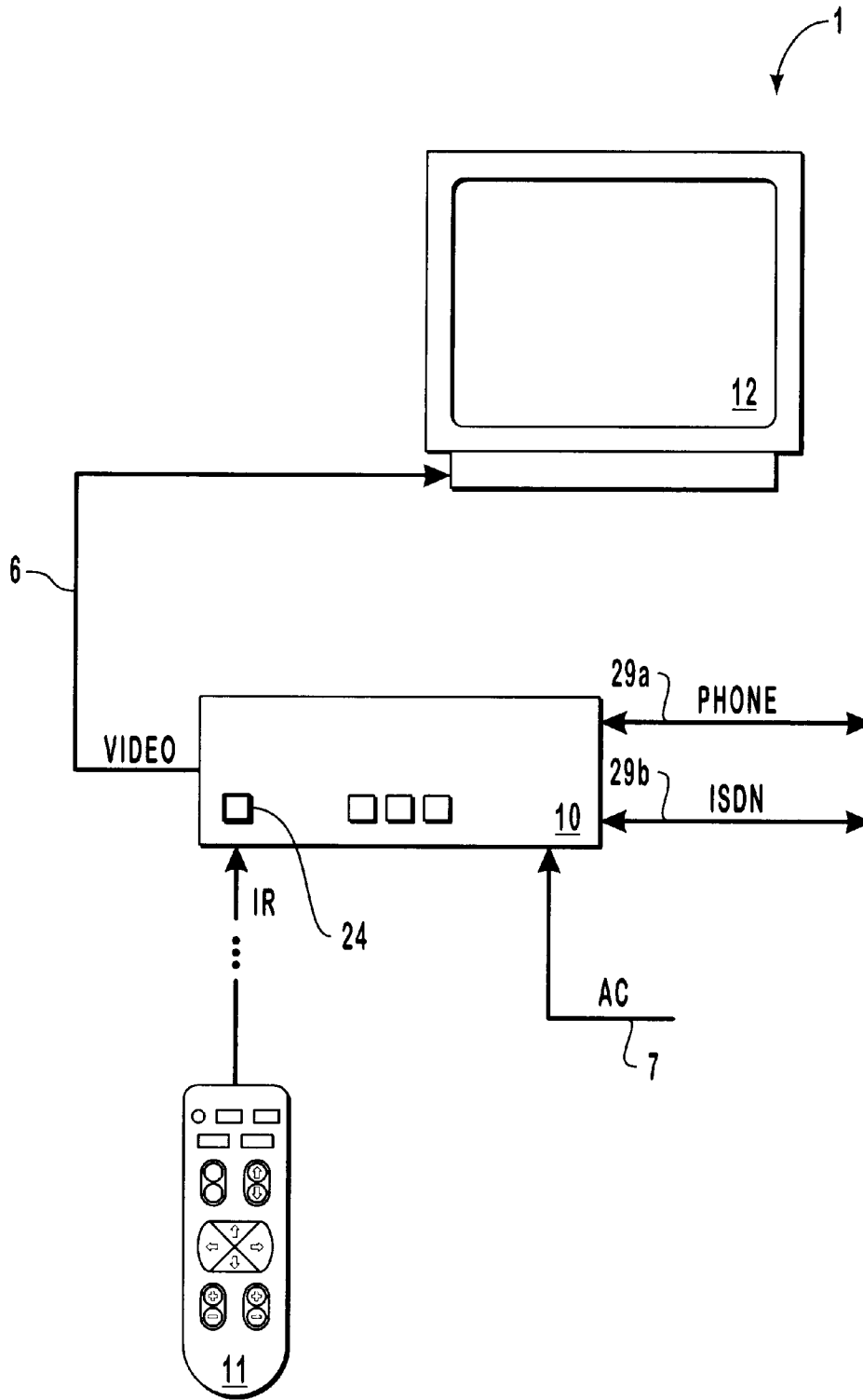


FIG. 2

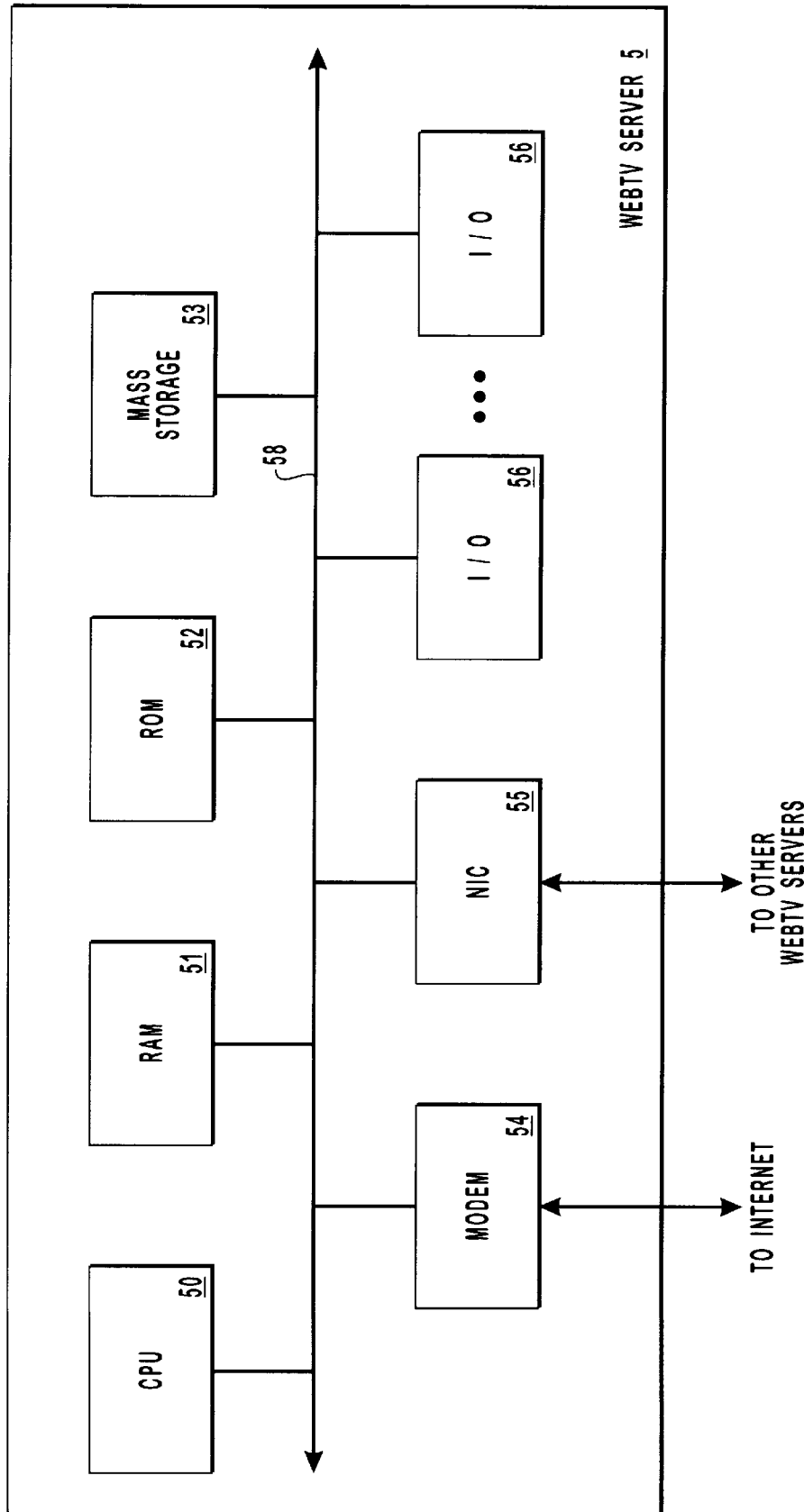


FIG. 3

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