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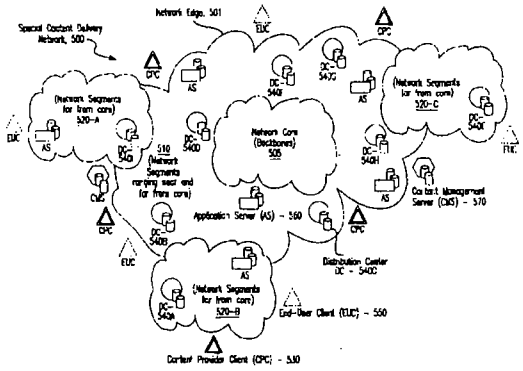
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[Continued on next page]

(54) Title: METHOD AND APPARATUS FOR LARGE PAYLOAD DISTRIBUTION IN A NETWORK





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ACTION

(57) Abstract: Large payload files are selectively partitioned in blocks and theblocks distributed to a plurality of distribution stations at theedge of the network qualified to have the data. Each qualified station decides how much and what portion of the content to save locally, based on information such as network location and environment, usage, popularity, and other distribution criteria defined by the content provider. Different pieces of a large payload file may be available from different nodes, however, when a user requests access to the large payload file, for example, through an application server, a virtual file control system creates an illusion that the entire file is present at the connected node. However, since only selective portions of the large payload file may actually be resident at that node's storage at the time of request, a cluster of distribution servers at the distribution station may download the non-resident portions of the file as the applicationserver is servicing the user. The download may be in parallel andusually from the least congested nodes. New nodes added to the network learn from other nodes in the network what content they should have and downlaod the required content, in a desired amount, onto their local storage devices from the nearest and least congested nodes without interrupting network operation. Each node manages its local storage and decides what content to prune based on information such as usage patterns.

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