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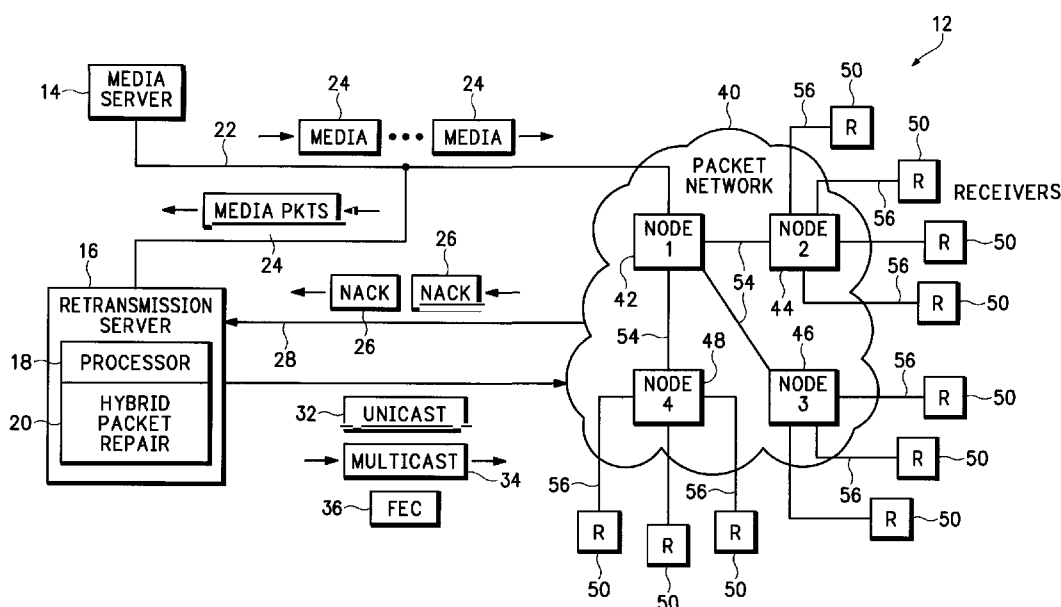
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[Continued on next page]

(54) Title: HYBRID CORRECTION SCHEME FOR DROPPED PACKETS



(57) Abstract: In one embodiment, a hybrid packet repair scheme (12) adaptively switches among unicast retransmission (32), multicast retransmission (34), and Forward Error Correction (36) depending on the receiver population and the nature of the error prompting the repair operation. The NACK patterns (26) are used to heuristically determine the degree of correlation among packet losses. In an additional embodiment, wasting bandwidth and processing on retransmissions of FEC (36) that will fail to correct the errors is avoided by evaluating the nature of the error and the bandwidth needed to optimally repair it. Unicast retransmission (32), multicast retransmission (34), or FEC repair is then dynamically performed according to the loss patterns derived from the NACK arrivals and other network conditions.

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A. CLASSIFICATION OF SUBJECT MATTER

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USPC: 714/748,749,750,751,18

According to International Patent Classification (IPC) or to both national classification and IPC

B. FIELDS SEARCHED

Minimum documentation searched (classification system followed by classification symbols)

U.S. : 714/748,749,750,751,18

Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched
IEEE

Electronic data base consulted during the international search (name of data base and, where practicable, search terms used)
EAST, WEST

C. DOCUMENTS CONSIDERED TO BE RELEVANT

Category *	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
x	US 6,782,490 B2 (Maxemchuk et al.) 24 August 2004 (24.8.2004), figure 3, column 3, lines 45-64; col. 14, lines 9-25; col. 3 lines 56 through column 4 line 4; col. 7, lines 15-38; col. 17, lines 55 through col. 18 line 26	1-20



Further documents are listed in the continuation of Box C.



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Special categories of cited documents			
"A"	document defining the general state of the art which is not considered to be of particular relevance	"T"	later document published after the international filing date or priority date and not in conflict with the application but cited to understand the principle or theory underlying the invention
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"L"	document which may throw doubts on priority claim(s) or which is cited to establish the publication date of another citation or other special reason (as specified)	"Y"	document of particular relevance, the claimed invention cannot be considered to involve an inventive step when the document is combined with one or more other such documents, such combination being obvious to a person skilled in the art
"O"	document referring to an oral disclosure, use, exhibition or other means	"&"	document member of the same patent family
"P"	document published prior to the international filing date but later than the priority date claimed		

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