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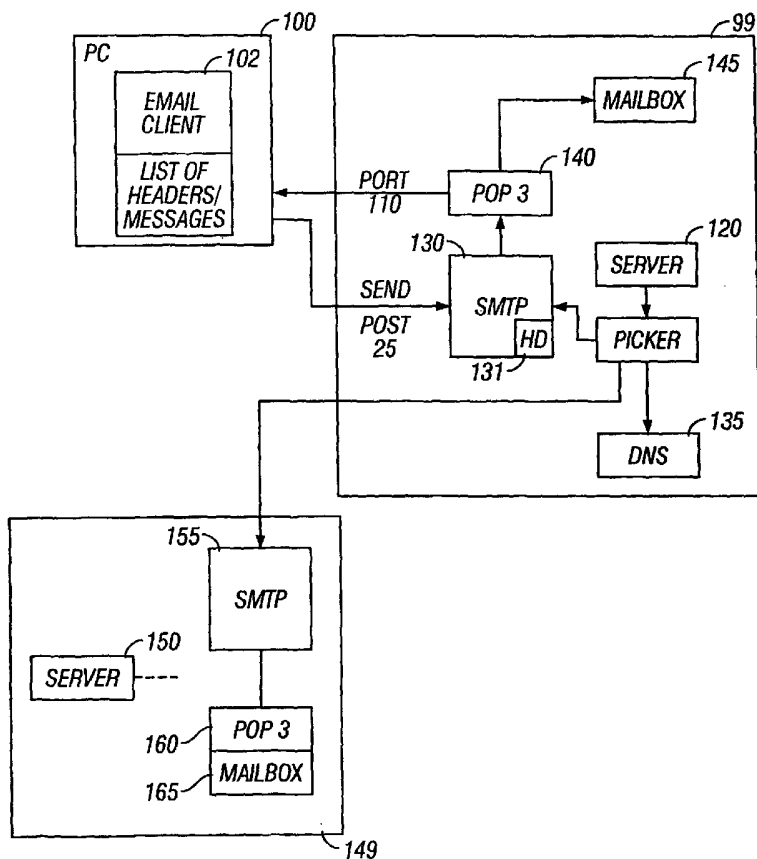
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(54) Title: EMAIL USING QUEUES IN NON-PERSISTENT MEMORY



(57) Abstract: An e-mail processing system that preferably operates solely within nonpersistent storage such as random access memory. Queues of e-mails are formed within the random access memory, where each queue includes a pointer to personalized information about the e-mail, directed to a specific domain. In order to send the e-mail, a channel is opened to the domain, and while open, e-mails within the queue are sent. A special recovery agent periodically takes snapshots of the state of processing within the system. Since the processing is occurring within nonpersistent storage, a failure within the system can be recovered by using the snapshots to recover where each e-mail is processing. In one aspect, the feed rate to the other e-mail servers is adjusted based on the rate of those e-mail servers. Also, the system asynchronously looks up information such as DNS information while it is processing information for other e-mails.

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 IPC(7) : G06f 15/16,13/00; H04M 1/00; H04Q 7/20
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 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)
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Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched

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

C. DOCUMENTS CONSIDERED TO BE RELEVANT

Category *	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
Y,P	US 6,526,436 B1 (SHIRAIISHI et al) 25 February 2003 (25.02.2003), col. 2, line 65-col. 6, line 17.	1-83
Y,E	US 6,850,968 B1 (PFEFFER et al.) 01 February 2005 (01.02.2005) col. 3, line 33-col.10, line 60.	1-83
Y,P	US 6,577,860 B1 (YOSHIDA) 10 June 2003 (10.06.2003), col. 2, line 35-col. 20, line 68)	1-83
Y	US 6,519,471 B1 (YAMAGUCHI) 11 February 2003, (11.02.2003) col. 6, line 40-col. 40, line 68.	1-83

Further documents are listed in the continuation of Box C. See patent family annex.

* Special categories of cited documents:	Symbol
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