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Gross et al.

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(54) **SYSTEM, METHOD AND COMPUTER PROGRAM PRODUCT FOR DIAGNOSTIC SUPERVISION OF INTERNET CONNECTIONS**

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(52) U.S. Cl. **714/47**; 714/4; 714/25; 714/43; 709/224
(58) Field of Search 714/47, 4, 25, 714/43, 48, 44, 56, 46, 57; 709/224

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(57) **ABSTRACT**

A system, method and computer program product for managing diagnostic and performance information for communications system terminal endpoints (TEs) communicating over an Internet Protocol (IP) network. The TEs communicate by connections that are voice, modem, facsimile, video, data transmissions, or the like. A Diagnostic Supervisor (DS) transmits Diagnostic Configuration Messages (DCMs) to the TEs. The TE's generate Diagnostic Messages (DMs) based on diagnostic information, including error statistics, voice statistics, facsimile statistics, video statistics, data statistics, or the like, concerning IP network connections in which the TEs participate. The DCMs instructs the TEs how to format and when to transmit DMs. The DMs are transmitted by the TEs to the DS. In a system with more that one DS, the TEs can transmit DMs to the plural DSs, other TEs or any network devices. The DS can be programmed locally or remotely to send various types of DCMs. The DS can also be programmed locally or remotely to provide diagnostic reports based on DMs to network users or to the network administrator. Diagnostic information is used for disconnect supervision, answer detection, attendant supervision, billing management, rerouting of IP connections to the PSTN, and the like.

54 Claims, 13 Drawing Sheets
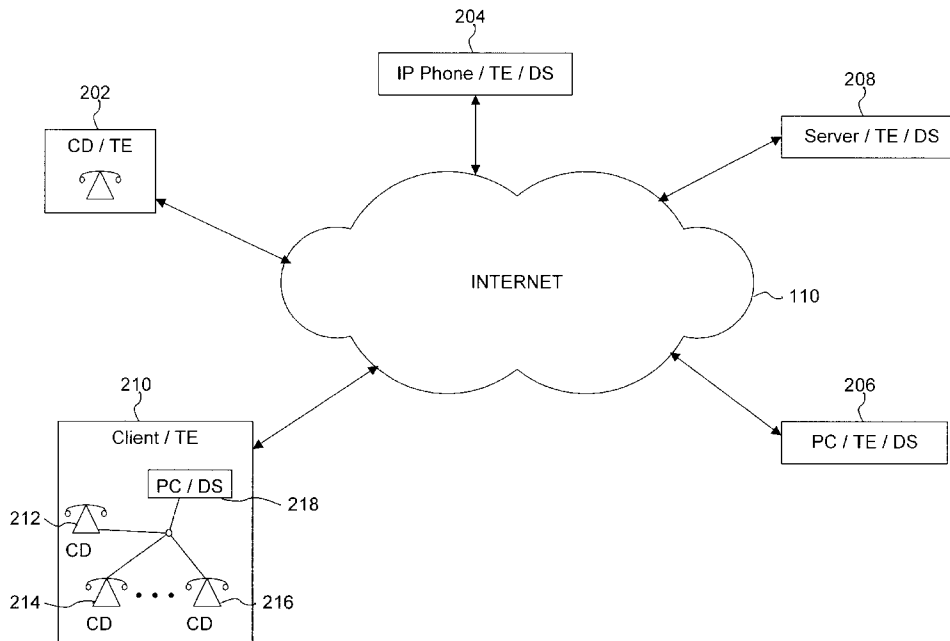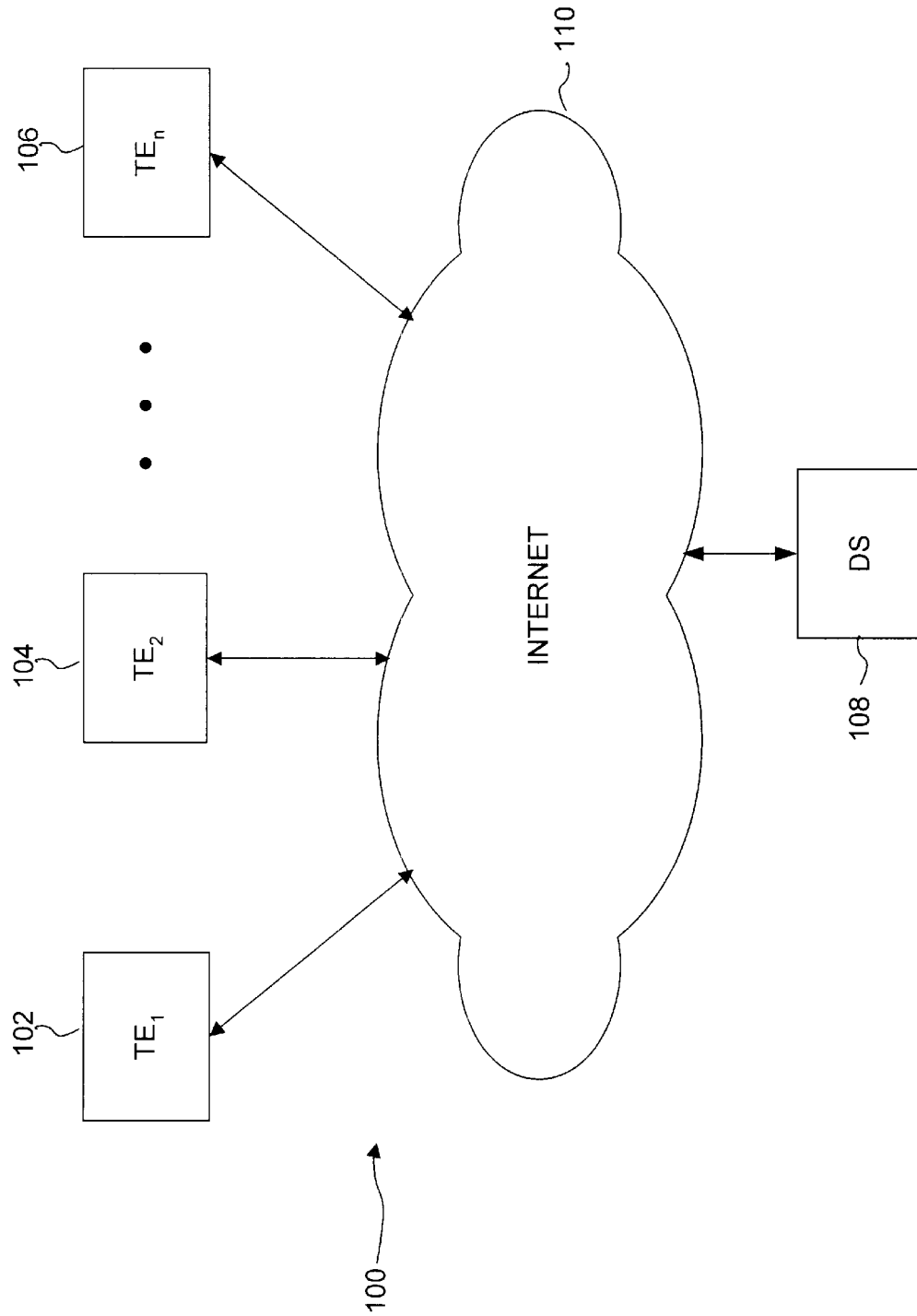
FIG. 1

FIG. 2

FIG. 3

FIG. 4

DOCKET ALARM
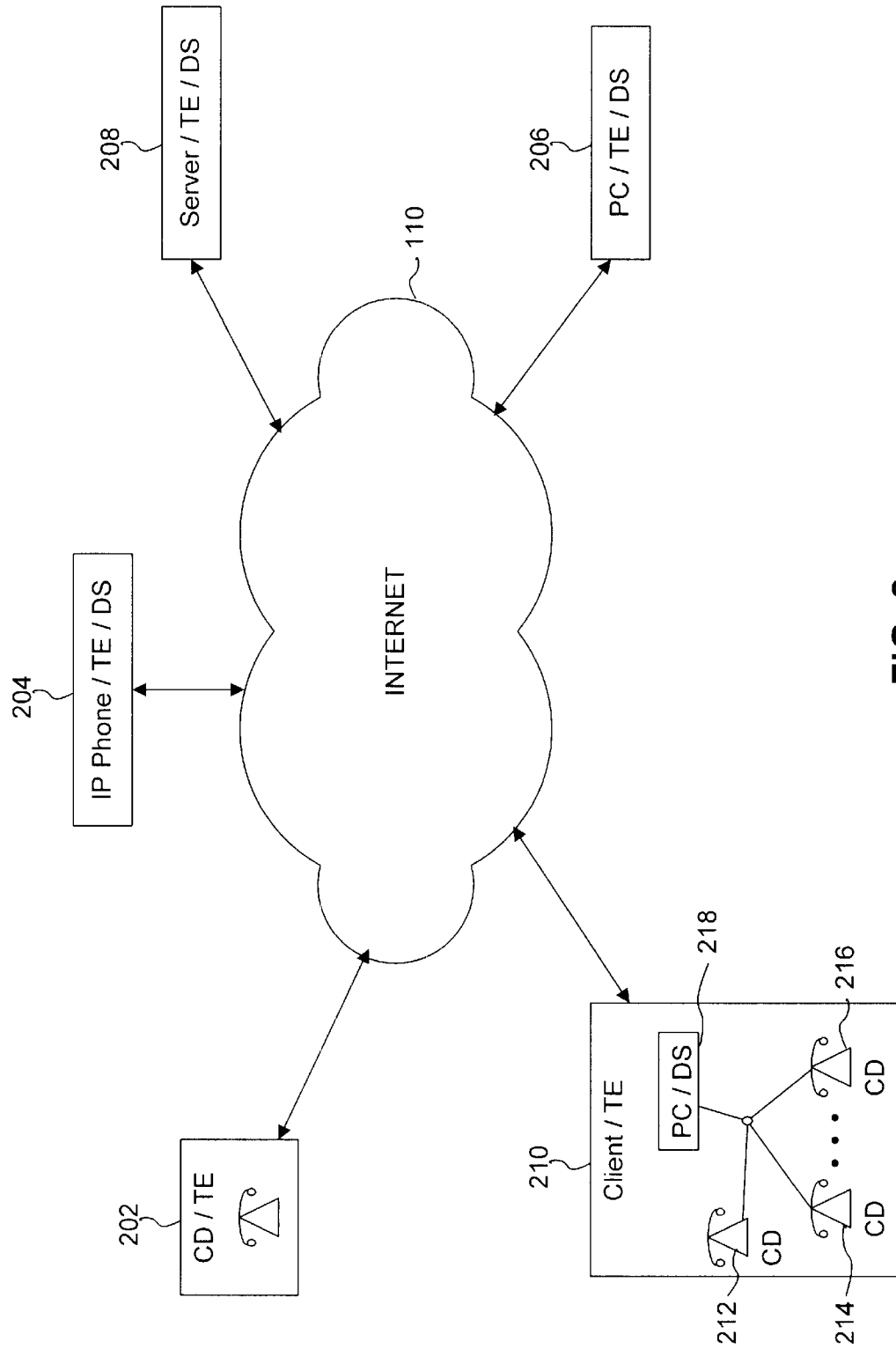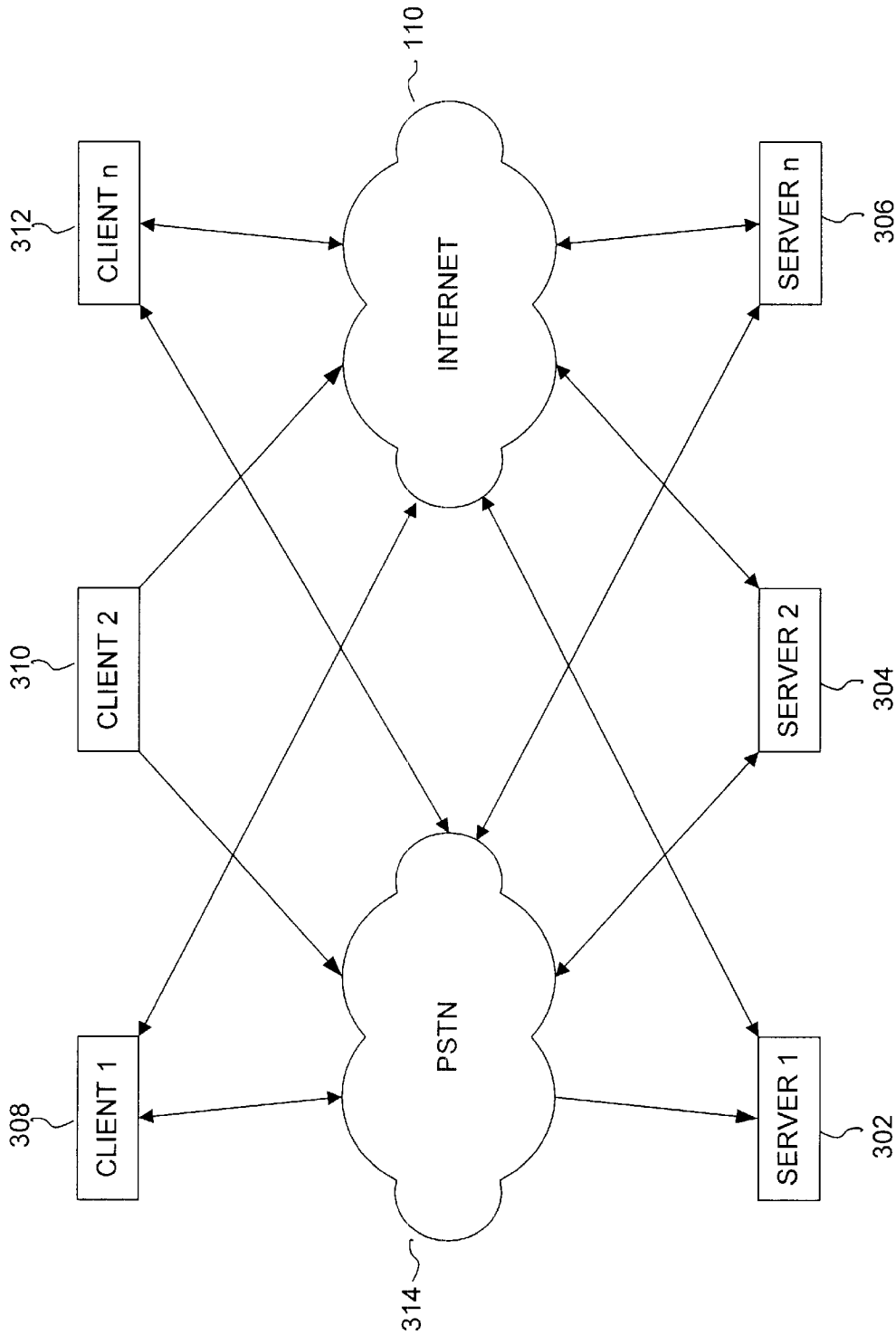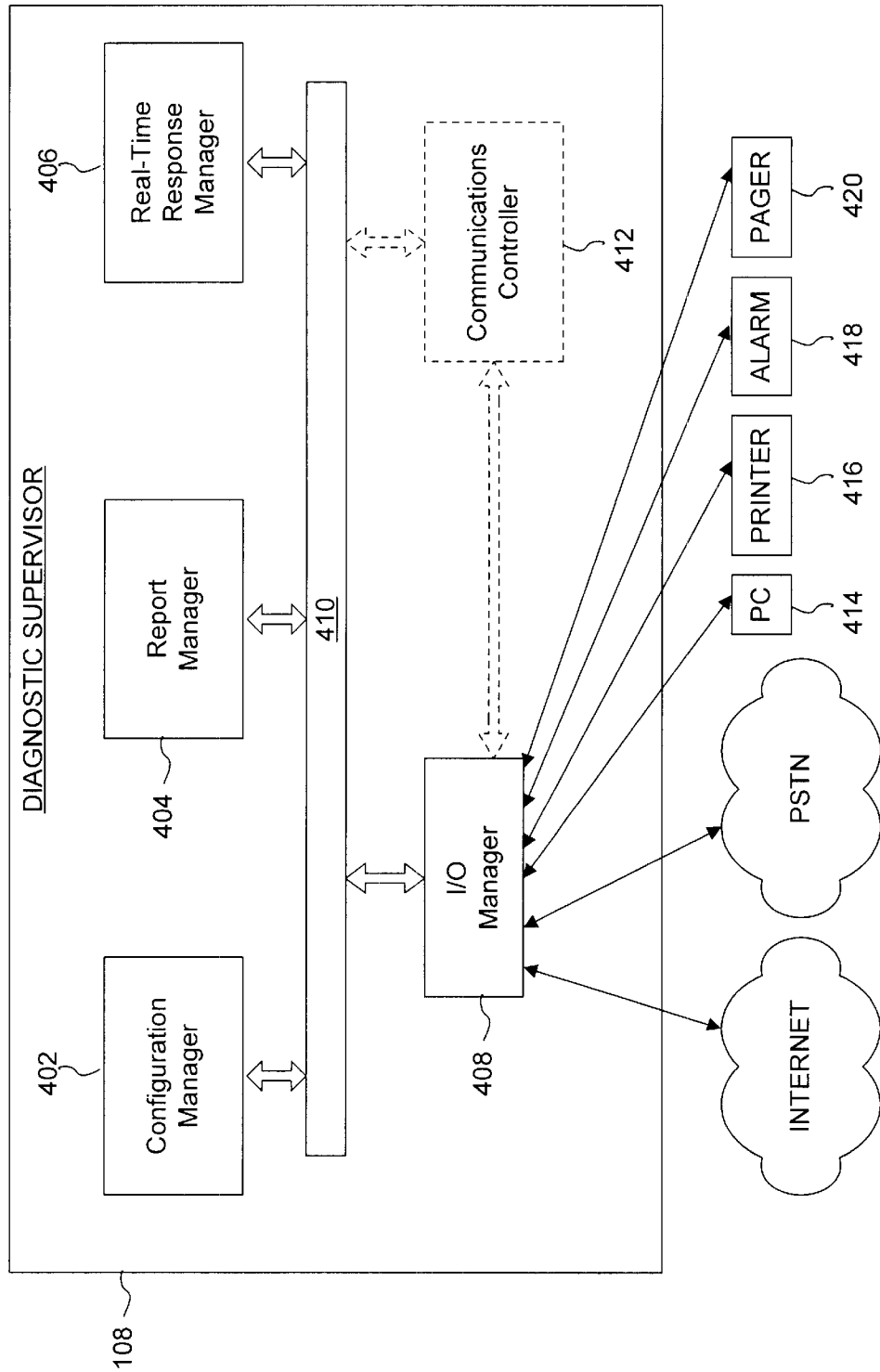
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