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Merritt et al.

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(54) **NETWORK-BASED SYSTEM ENABLING IMAGE COMMUNICATIONS**

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(21) Appl. No.: **09/040,719**

(22) Filed: **Mar. 18, 1998**

Related U.S. Application Data

(63) Continuation-in-part of application No. 08/636,200, filed on Apr. 22, 1996, now abandoned, which is a continuation of application No. 08/175,022, filed on Dec. 2, 1993, now abandoned.

(51) **Int. Cl.^{7}** **H04M 11/00**

(52) **U.S. Cl.** **379/93.17**; 379/93.15; 379/100.13

(58) **Field of Search** 379/93.15, 100.13, 379/88.13, 88.14, 100.08, 100.09, 93.08; 707/523, 526

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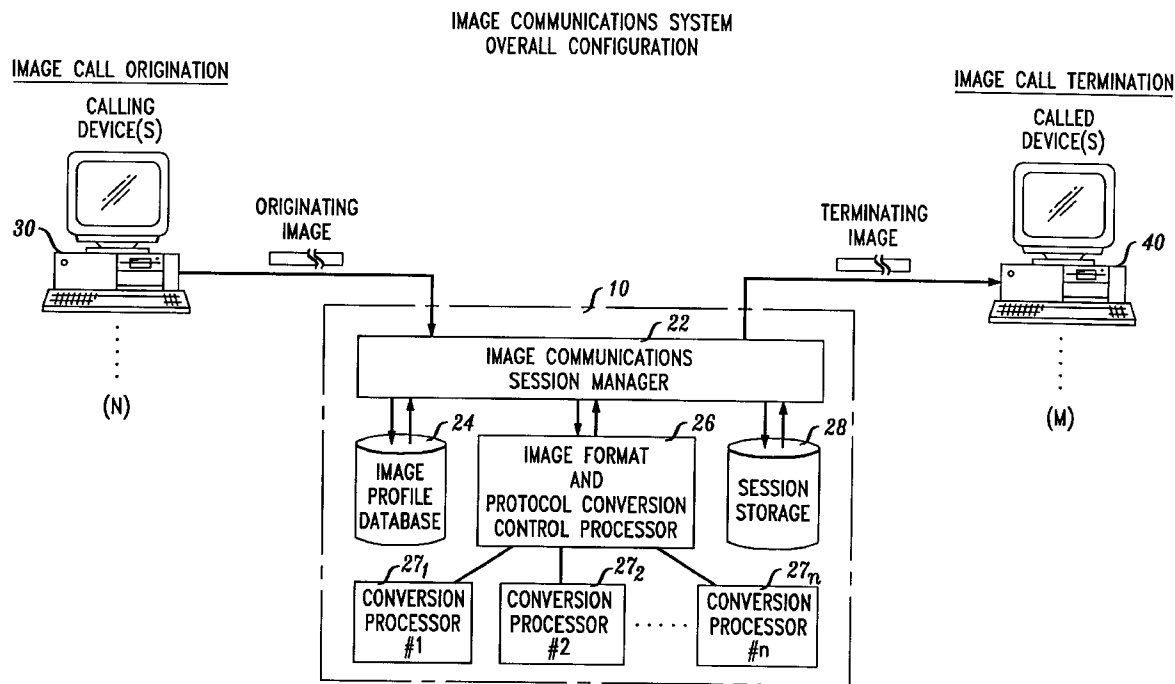|					
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(57) **ABSTRACT**

A system is disclosed which enables a multitude of dissimilar end-system devices, appliances, and platforms to interchange image information. The inventive method utilizes a directory database of end-user profiles, a session manager, a conversion manager, individual conversation processors, a queuing database, and a store-and-forward file-folder database. The system accommodates pre-subscribed end-users as well as non-subscription users. The system handles both real-time and store-and-forward communications modes. The present invention may be practiced as either a one-node or a multi-node distributed architecture, scalable as required, and may be either network-based or premises-based, or a hybrid combination of these. Communications transport both into and out of the node(s) can range from voiceband telephone on analog circuits to high speed channel or fact-packet protocol communications modes.

25 Claims, 9 Drawing Sheets

IMAGE COMMUNICATIONS SYSTEM
OVERALL CONFIGURATION

FIG. 1A

NETWORK—BASED IMAGE PROTOCOL
AND
FILE FORMAT DATABASE

FIG. 1B

ENTER

101
CALLER INITIATES
IMAGE COMMUNICATION

103
COMMUNICATION ROUTED
TO NETWORK NODE

105
QUERY DATABASE FOR
SUBSCRIBER INFORMATION

107
MATCH?

YES

NO

109
CONVERT IMAGE

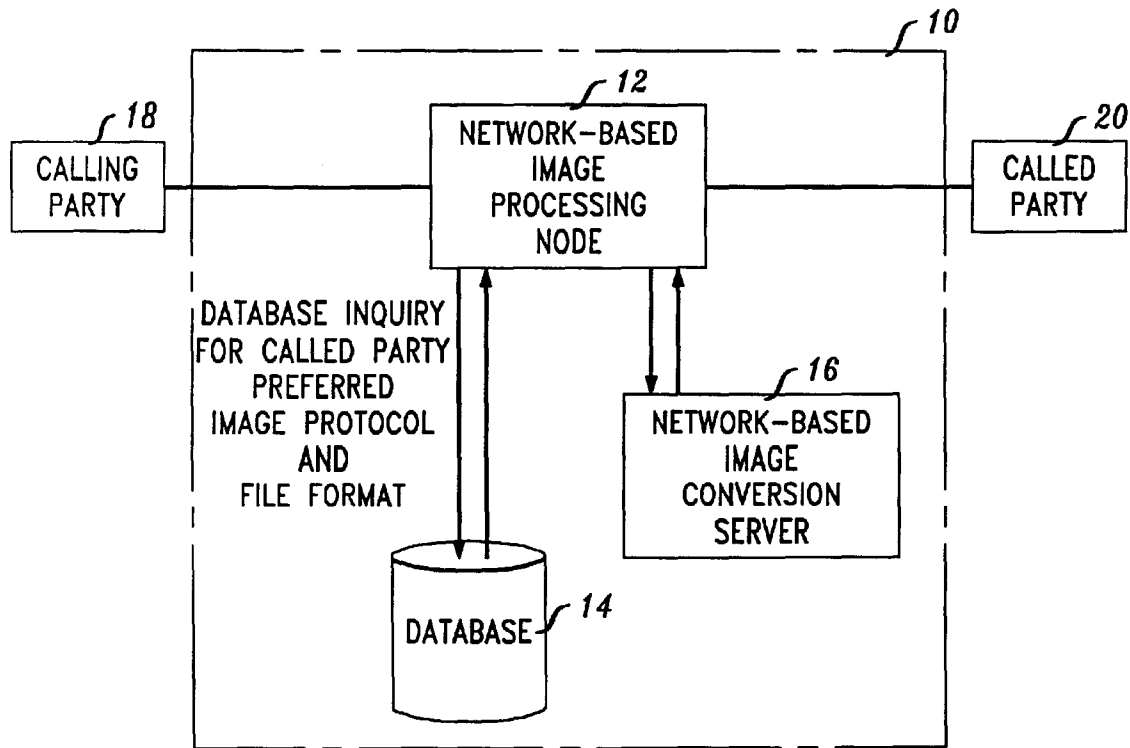*111*
COMMUNICATE IMAGE
TO DESTINATION
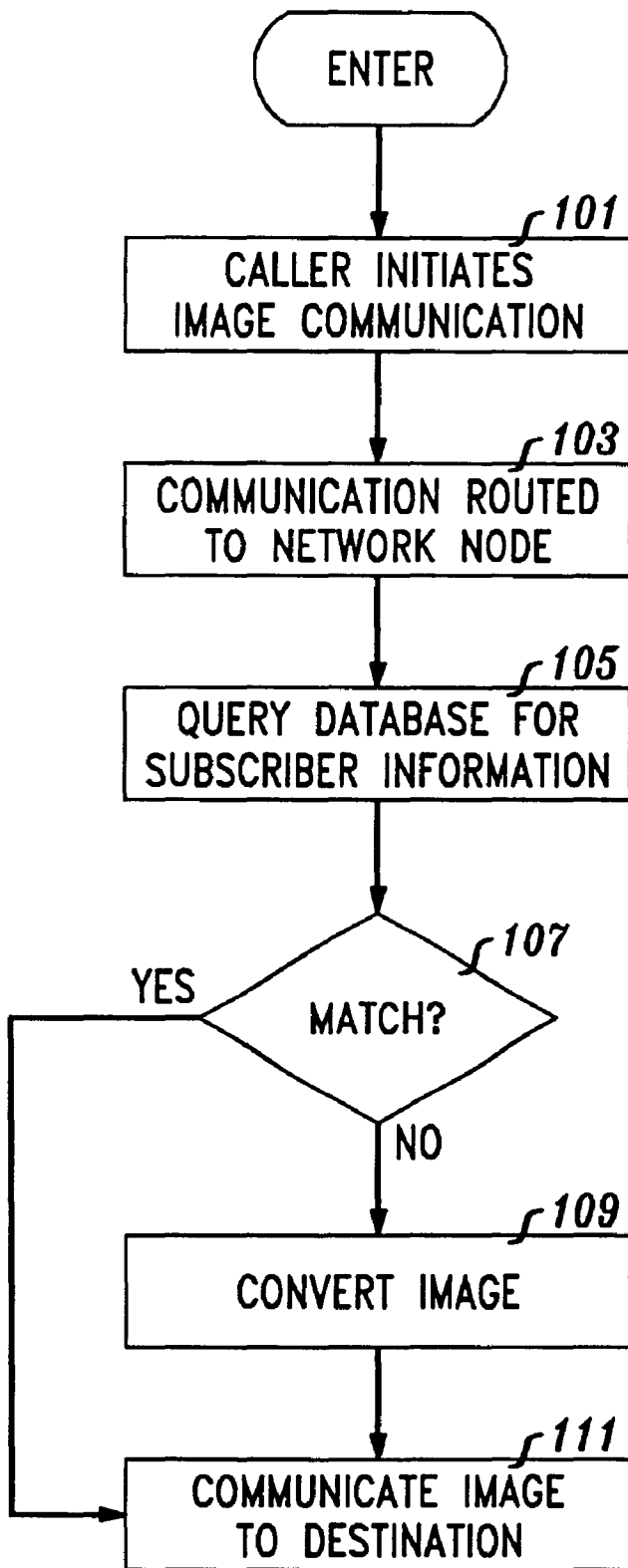
FIG. 2

IMAGE COMMUNICATIONS SYSTEM
OVERALL CONFIGURATION

IMAGE CALL ORIGINATION

CALLING
DEVICE(S)

30

ORIGINATING
IMAGE

TERMINATING
IMAGE

(N)

10

22

IMAGE COMMUNICATIONS
SESSION MANAGER

24

IMAGE
PROFILE
DATABASE

26

IMAGE FORMAT
AND
PROTOCOL CONVERSION
CONTROL PROCESSOR

28

SESSION
STORAGE

27_1

CONVERSION
PROCESSOR
#1

27_2

CONVERSION
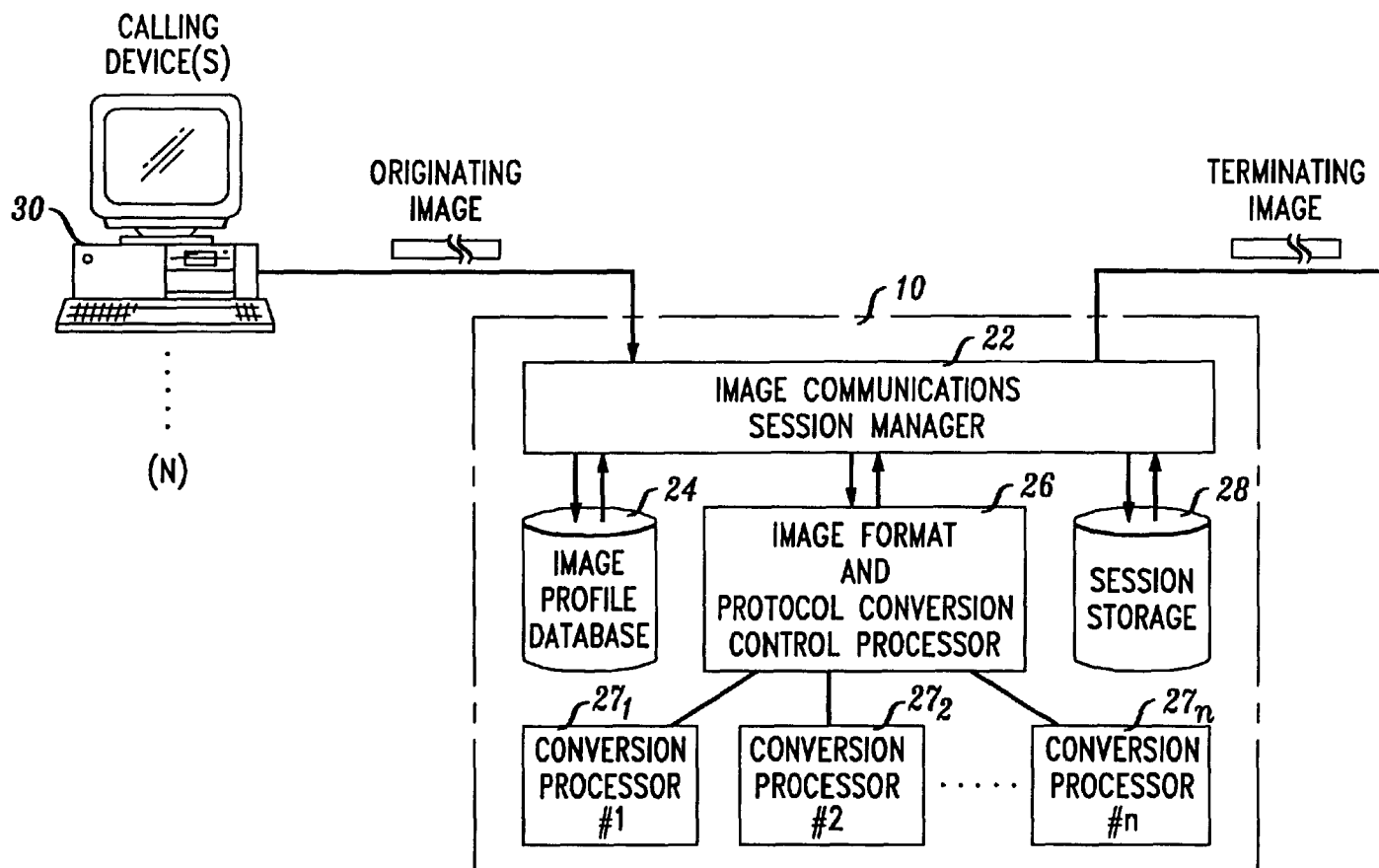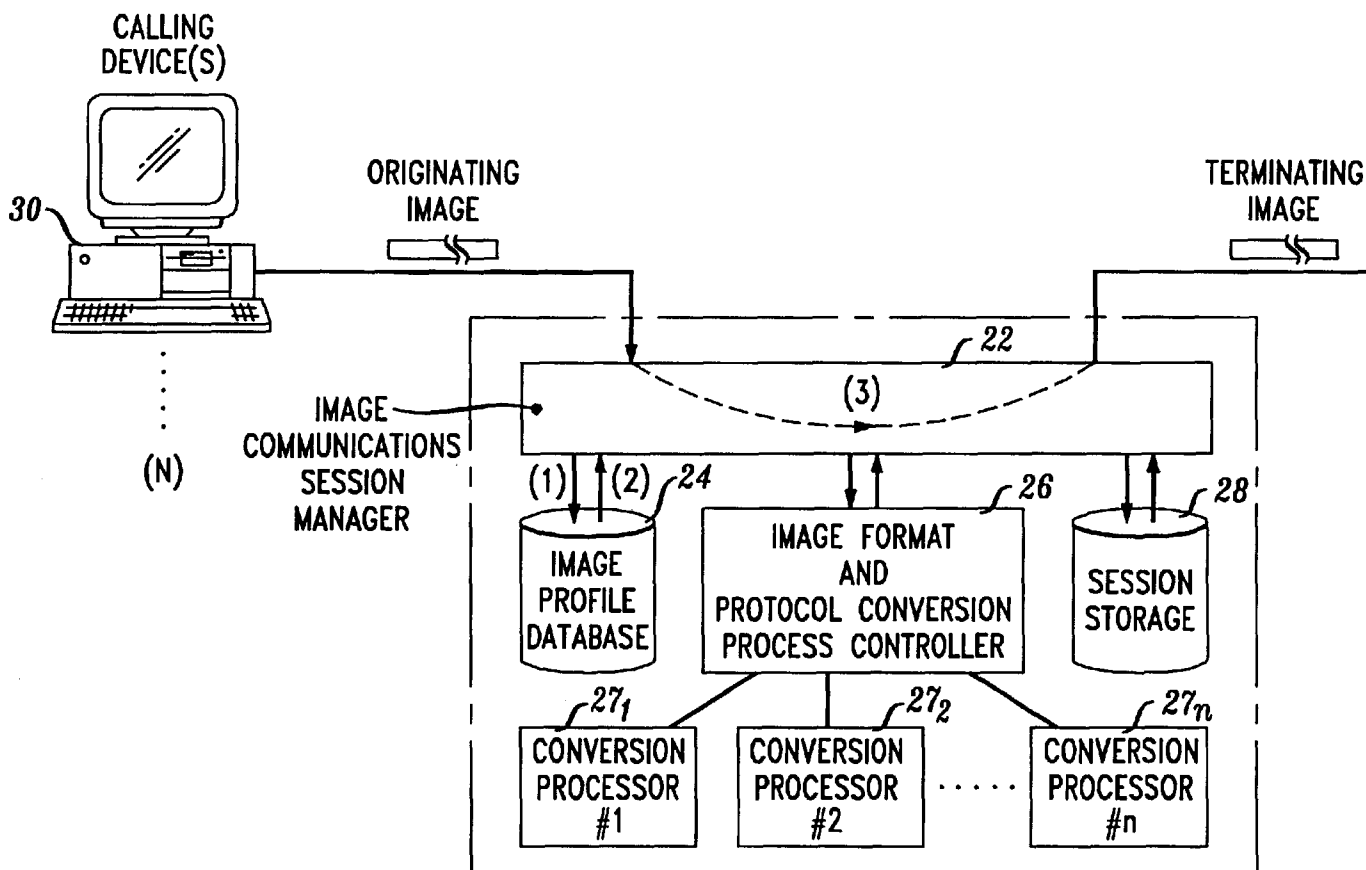PROCESSOR
#2

· · · · ·

27_n

CONVERSION
PROCESSOR
#n

FIG. 3A

IMAGE COMMUNICATIONS SYSTEM
CASE 1: CALLING SUBSCRIBER WITH IMAGE FILE MATCH
AND
REAL-TIME COMMUNICATIONS

IMAGE CALL ORIGINATION

CALLING DEVICE(S)

30

ORIGINATING IMAGE

TERMINATING IMAGE

IMAGE COMMUNICATIONS SESSION MANAGER

22

(3)

(N)

(1) (2)

24

26

28

IMAGE PROFILE DATABASE

IMAGE FORMAT AND PROTOCOL CONVERSION PROCESS CONTROLLER

SESSION STORAGE

27₁

27₂

27ₙ

CONVERSION PROCESSOR #1

CONVERSION PROCESSOR #2

CONVERSION PROCESSOR #n

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