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United States Patent [19]

La Porta et al.

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[54] **COMMUNICATIONS SIGNALING PROTOCOLS**

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[51] **Int. Cl.**[6] **H04L 12/12**; H04J 3/12

[52] **U.S. Cl.** **370/68.1**; 370/110.1

[58] **Field of Search** 370/60, 60.1, 94.1, 370/110.1, 58.1, 58.2, 58.3, 68.1; 379/220, 229, 230, 240, 165, 350, 352; 395/200.02, 200.03, 600, 700

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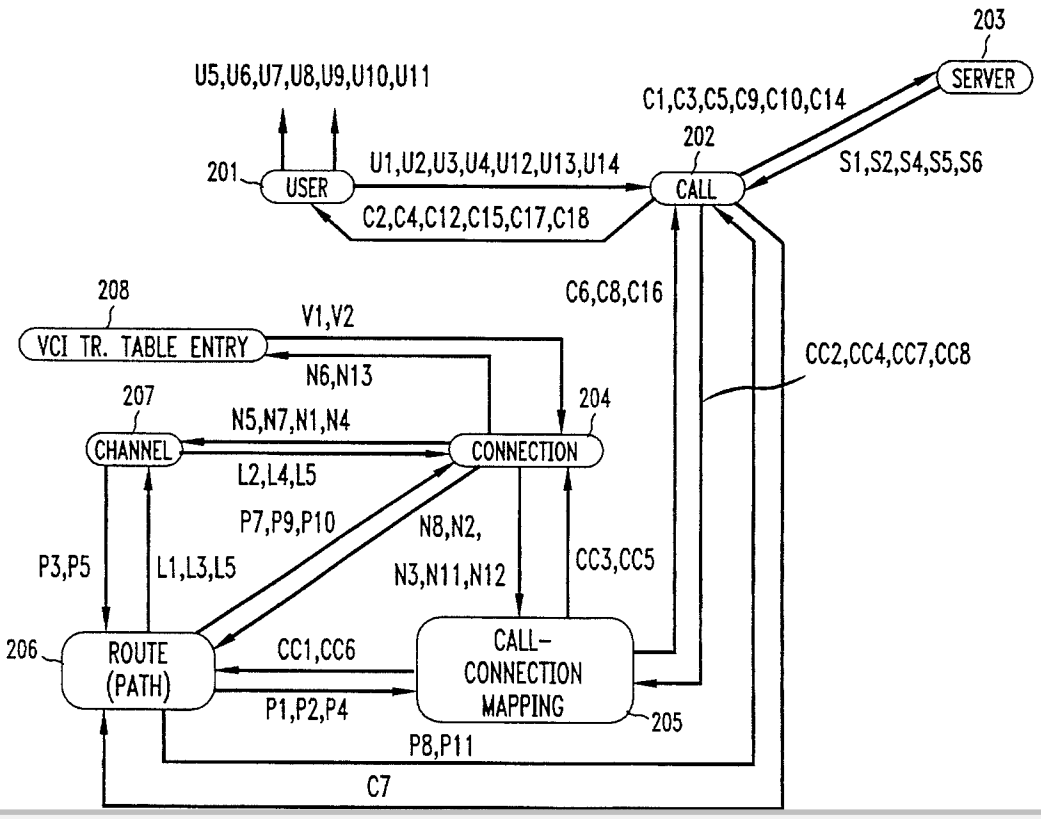
[57] **ABSTRACT**

A modular suite of peer-to-peer protocols that are independent of communications network architecture supported, and the type of switching systems (packet-switched or circuit-switched), is used for a broadband and/or narrowband communications network. The protocols are comprised of client-server-oriented signaling messages that are restricted to include information and parameters associated with only one particular function of traditional call processing.

9 Claims, 5 Drawing Sheets



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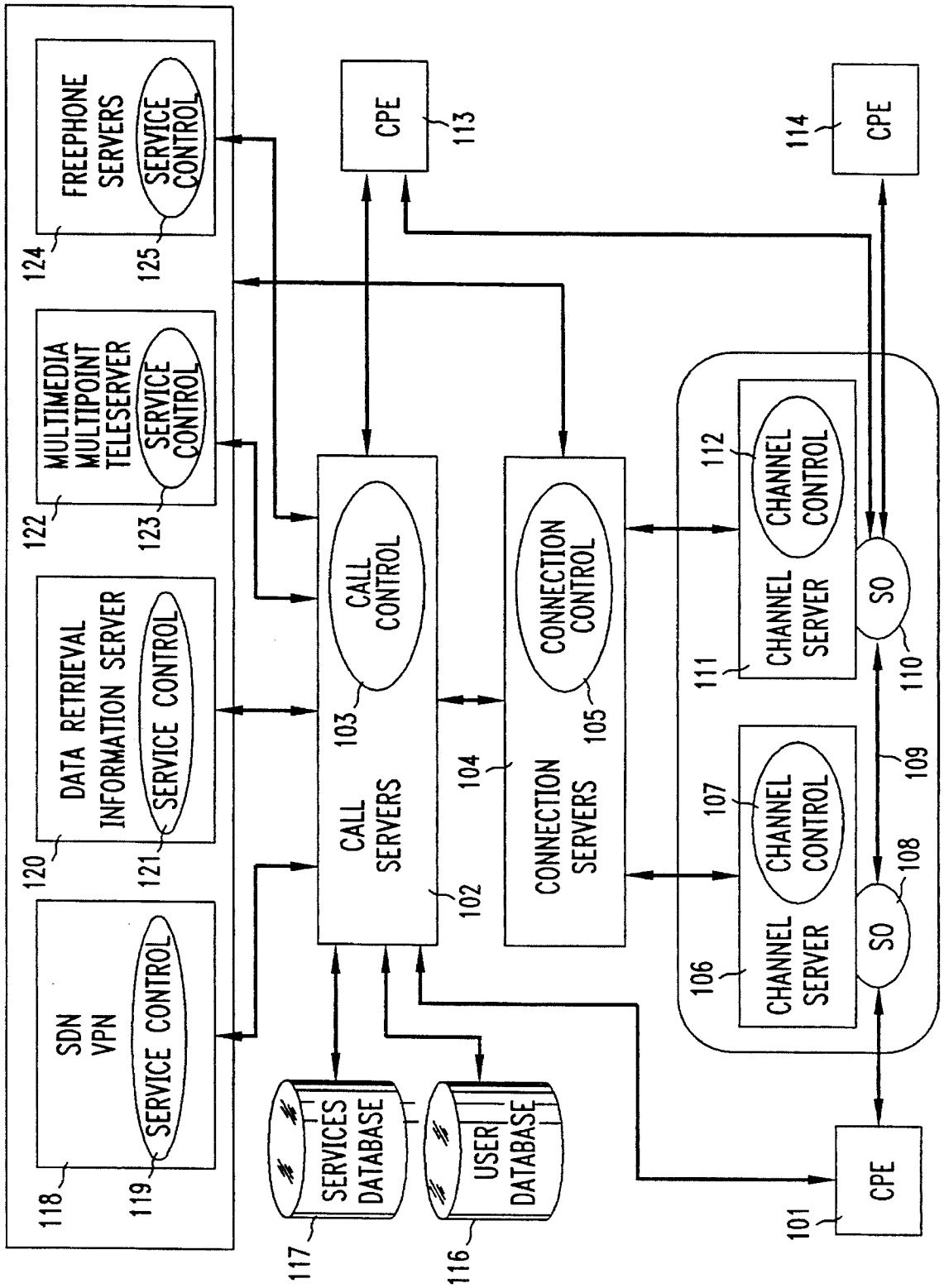

FIG. 1

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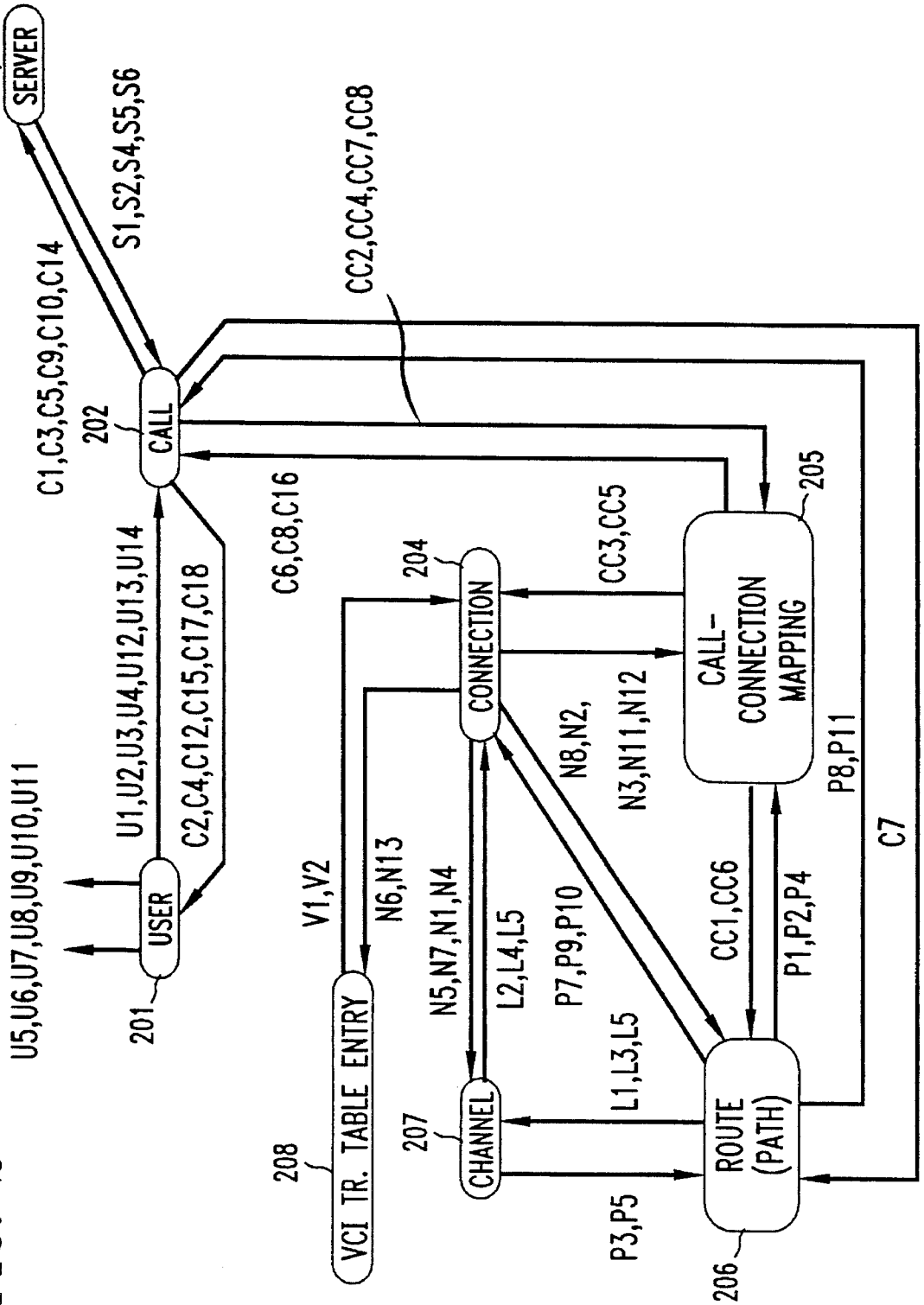

FIG. 2

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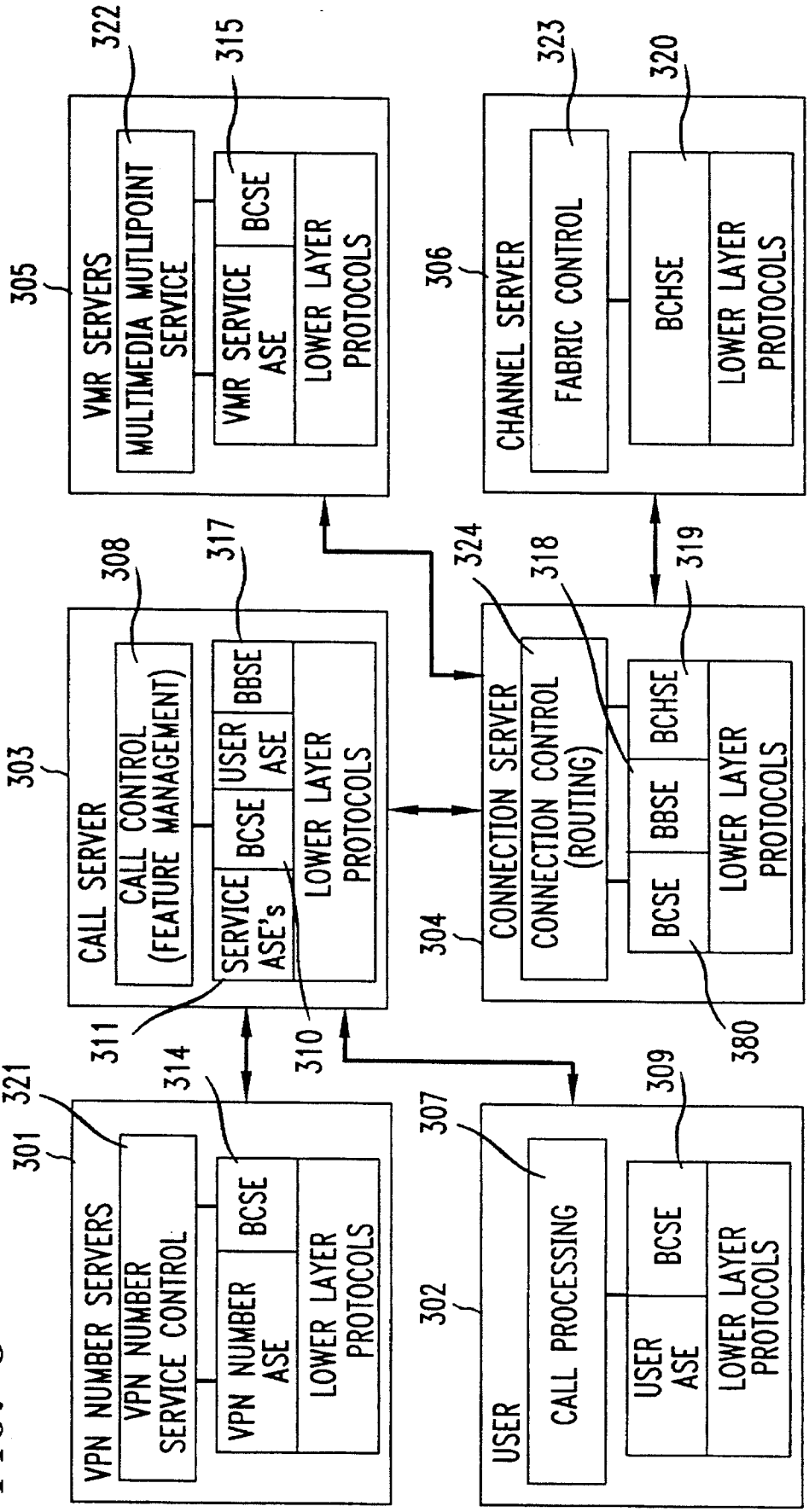

FIG. 3

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FIG. 4

OPERATION	CLASS	EVENTS
SETUP-CALL	C	U1,C4,C15
MODIFY-CALL-OR-REQUEST-INFORMATION	C	U3,C4,C15
RELEASE-CALL	C	U4,C12
PERFORM-NEGOTIATION	C	S1,C3
INTERACT-WITH-CONNECTION-SERVER	C	S2,C9,C14
CONVEY-USER-SERVER-INFORMATION	U	S4
PERFORM-SERVICE-INVOCATION-COORDINATION	U	C1

FIG. 5

OPERATION	CLASS	EVENTS
SETUP-CONNECTIONS	C	C6,CC4,CC2,
RELEASE-CONNECTIONS	C	C8,CC7
MODIFY-EXISTING-CONNECTIONS	C	C7,P11,P8
FIND-PATH	C	CC1,P1,P2
CUT-THRU-CONNECTION	C	CC3,N11,N12
ADD-CHANNEL-TO-CONNECTION	C	P7,N8,N2
DELETE-CHANNEL-FROM-CONNECTION	C	P9,N8,N2
MODIFY-QoS-or-BW	C	P10,N8,P8

FIG. 6

OPERATION	CLASS	EVENTS
RESERVE-CHANNEL	C	PS,L1,L3
COMMIT-CHANNEL	C	N5,L2
MODIFY-CHANNEL	C	N1,L4
DROP-CHANNEL	C	N7,L5
FREE-RESERVED-CHANNELS	C	P5,L5
SETUP-VCI-TRANSLATION-TABLE-ENTRY	C	N6,V1
DROP-VCI-TRANSLATION-TABLE-ENTRY	C	N13,V2
INFORM-NODE-OF-RECEIVE-CHANNEL	U	N4

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