[54] **DISTRIBUTED PROCESSING ARCHITECHTURE FOR CONTROL OF BROADBAND AND NARROWBAND COMMUNICATIONS NETWORKS**

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Related U.S. Application Data

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[51] **Int. Cl.^{6}** **H04J 3/12; H04L 12/16**
[52] **U.S. Cl.** **370/58.2;** 370/62; 370/68.1; 370/110.1; 379/157; 379/165
[58] **Field of Search** 370/58.1, 58.2, 58.3, 370/60, 60.1, 62, 68.1, 110.1; 379/94, 157, 158, 165, 202

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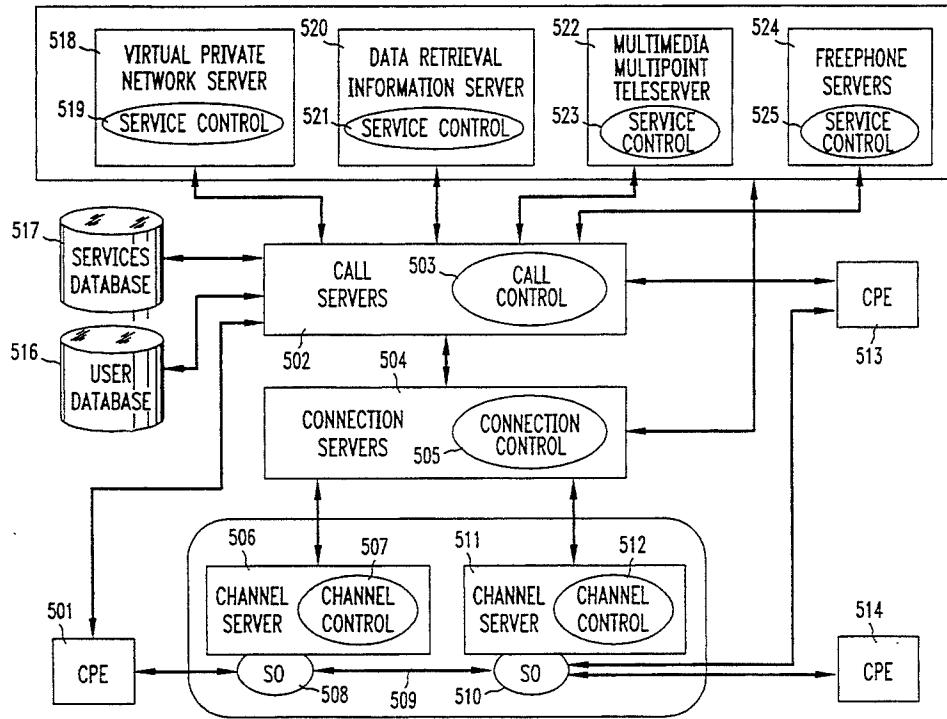C. Woodworth, M. J. Karol, R. D. Gitlin, "A Flexible Broadband Packet Switch for a Multimedia INtegrated Network", Proceedings International Conference on Communications, Jun. 23–26, 1991, Denver, pp. 3.2.1–3.2.8.

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[57] **ABSTRACT**

A distributed, server-based communications network architecture delivers broadband and narrowband communications services. In the architecture, various traditional call processing functions, such as switching fabric or channel control, call control, and connection control are separated into distinct application processes with clearly defined interfaces for communications between these application processes. Those distinct application processes may be implemented in separate physical or logically partitioned nodes. The well-defined interfaces allow communications among: a) physical or logically partitioned nodes within a network and b) physical or logically partitioned nodes of other networks.

12 Claims, 5 Drawing Sheets

FIG. 1

| OBJECT	IDENTIFYING ATTRIBUTES	NON-IDENTIFYING ATTRIBUTES
CALL	CALL REFERENCE VALUE	SERVER IDENTIFIERS(R) USER IDENTIFIERS(R)
CONNECTION	VIRTUAL CHANNEL CONNECTION IDENTIFIER	CONNECTION PERFORMANCE ATTRIBUTES AAL PROTOCOL TYPE(BEARER CAPABILITY) DIRECTIONALITY AND SYMMETRY USER IDENTIFIERS(R) SWITCH IDENTIFIERS(R) CHANNEL IDENTIFIERS(R)
CHANNEL	USER IDENTIFIER SWITCH IDENTIFIER TWO PORT NUMBERS VPCI/VCI	ATM LAYER BEARER CAPABILITY CHANNEL PERFORMANCE ATTRIBUTES
ROUTE	ROUTE NUMBER	PERFORMANCE ATTRIBUTES BANDWIDTH DIRECTIONALITY AND SYMMETRY USER IDENTIFIERS(R) SWITCH IDENTIFIERS(R) CHANNEL IDENTIFIERS(R)
CALL CONNECTION MAPPING	CRV VCCI	
VCI TRANSLATION TABLE ENTRY	CHANNEL IDENTIFIER CHANNEL IDENTIFIER	VCCI(R)
USER-CALL-INTERACTION (SERVER-CALL-INTERACTION)	CRV USER IDENTIFIER (SERVER IDENTIFIER)	VCCIs CONNECTION ATTRIBUTES SERVICE IDENTIFIERS SERVICE-SPECIFIC PARAMETERS USER IDENTIFIERS USER-SPECIFIC PARAMETERS DIVERGENCE FLAG SYNCHRONIZATION FLAG NEGOTIATION OPTIONS MODIFICATION MANDATORY OR OPTIONAL ADD USER FLAG DELETE USER FLAG CHANGE QOS OR BW FLAG SUCCESS FLAG FAILURE FLAG

FIG. 2
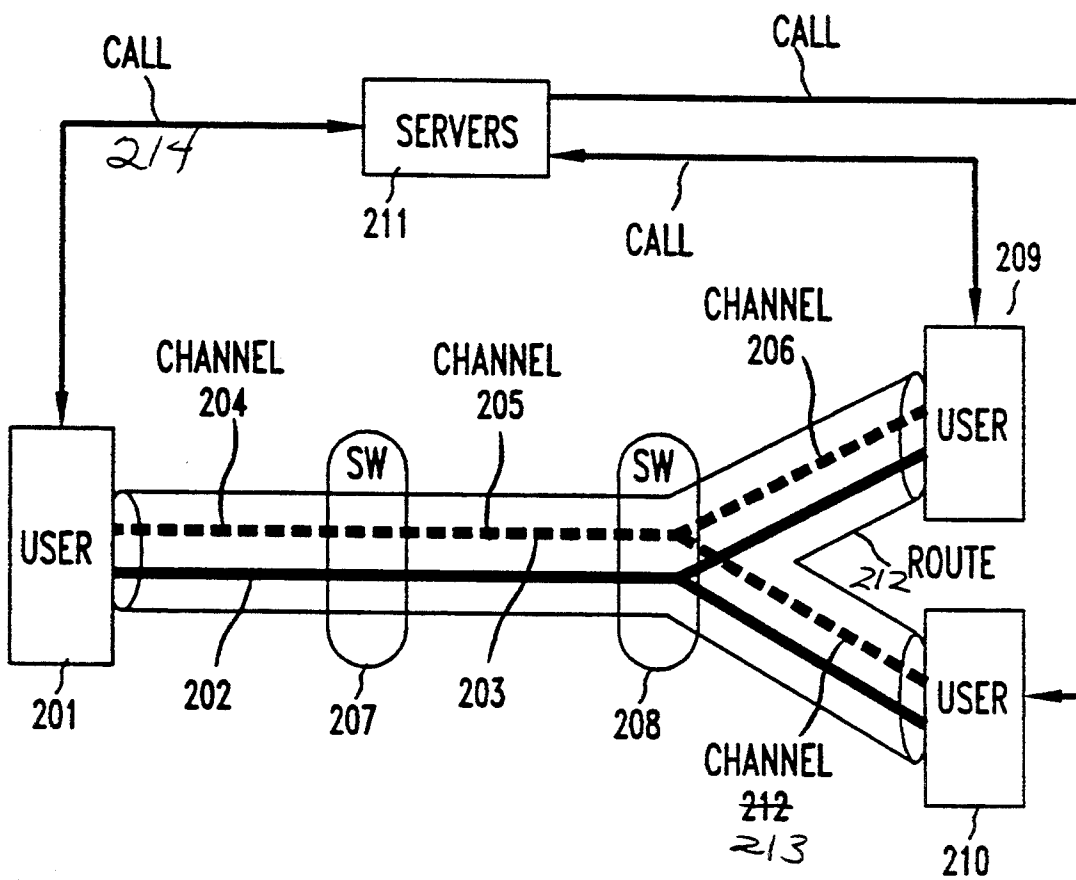
FIG. 3
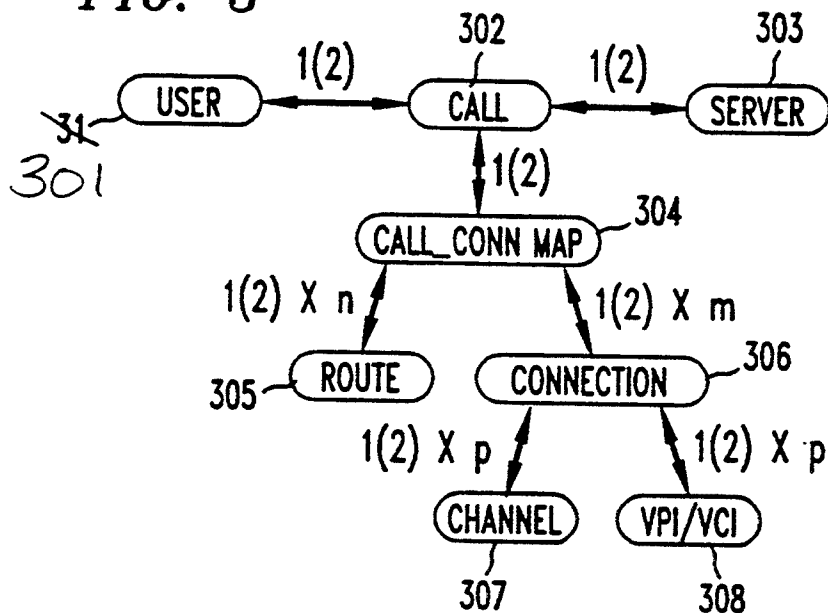
FIG. 4
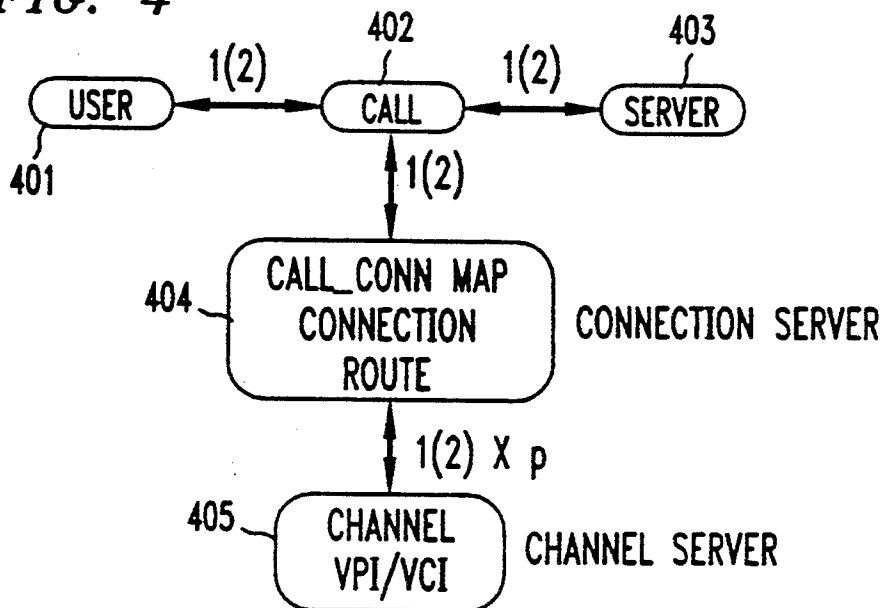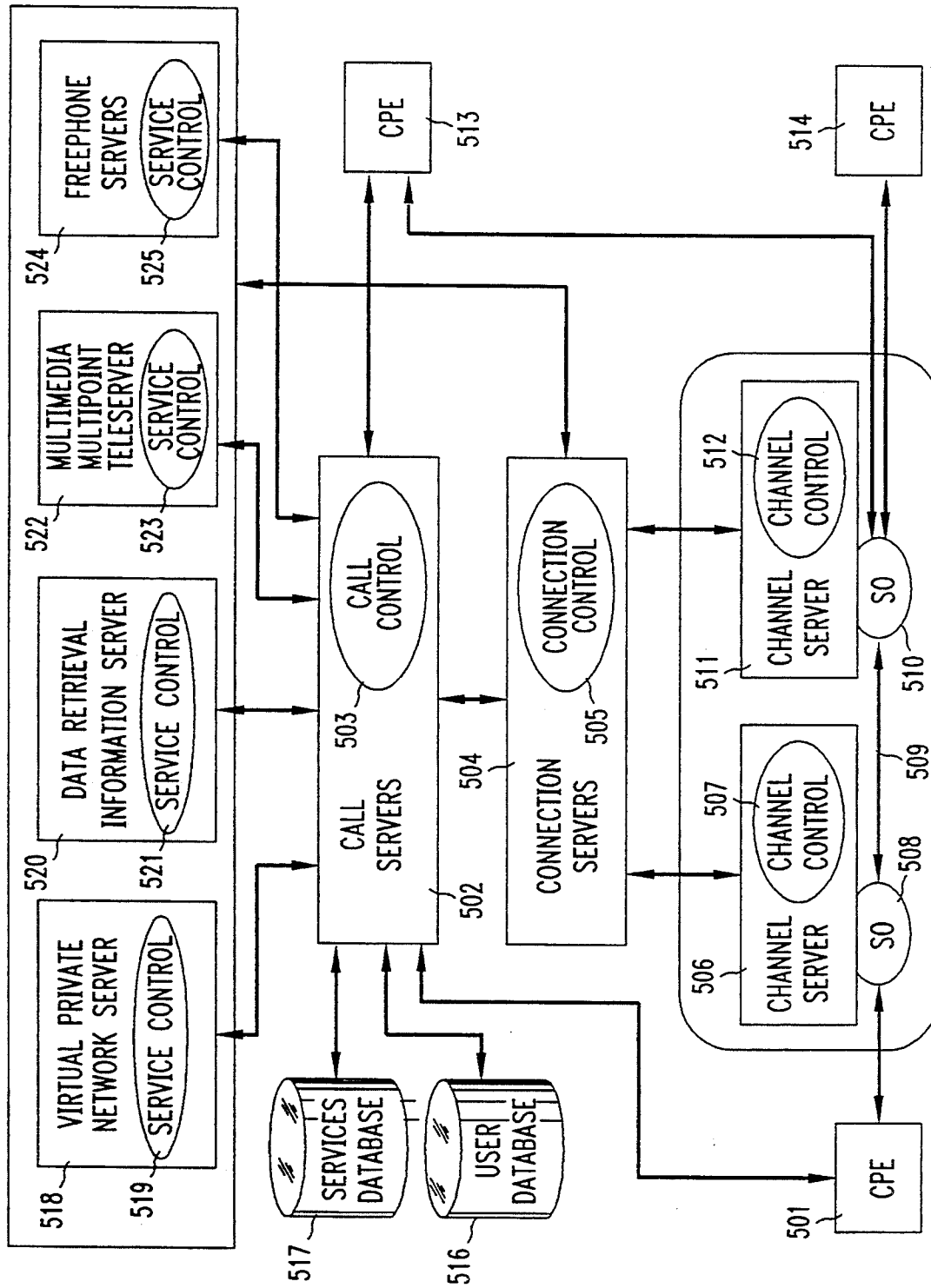
FIG. 5

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