

METHOD AND APPARATUS FOR INTERCONNECTING LANS

ABRIDGMENT

A so-called "ELAN contronect network" is employed to interconnect sub-ELANs to form an ELAN. More specifically, the "ELAN contronect network" is a separate network for interconnecting the servers of the sub-ELANs, where a sub-ELAN is a part of an ELAN having its own LES and BUS that may also be configured as a stand-alone ELAN. Each of the sub-ELANs is connected to the ELAN contronect network via a point-to-point connection-oriented connection, e.g., an asynchronous transfer mode (ATM) connection and the ELAN contronect network is configured to present itself to each of the servers of the sub-ELANs as clients thereof. In a particular embodiment of the invention, the ELAN contronect network includes an address server, a broadcast/route server, a configuration server, multimedia servers, and at least one LAN hub interconnected over a high-speed backbone. The address server contains an address data base for performing address resolution between the at least two addresses of each ELAN end-point in response to requests for such translations. The broadcast/route server receives data packets for broadcast to a different sub-ELAN from which the packets originated and broadcasts the received data packets to at least one other sub-ELAN. The broadcast/route server also recognizes that a packet which is a broadcast packet at layer 2 is actually a request for an address resolution at layer 3. If so, the broadcast/route server collaborates with the address server to perform the necessary address resolution and insures that a response is sent only to the client originating the request.

This Sheet Has Been Replaced

