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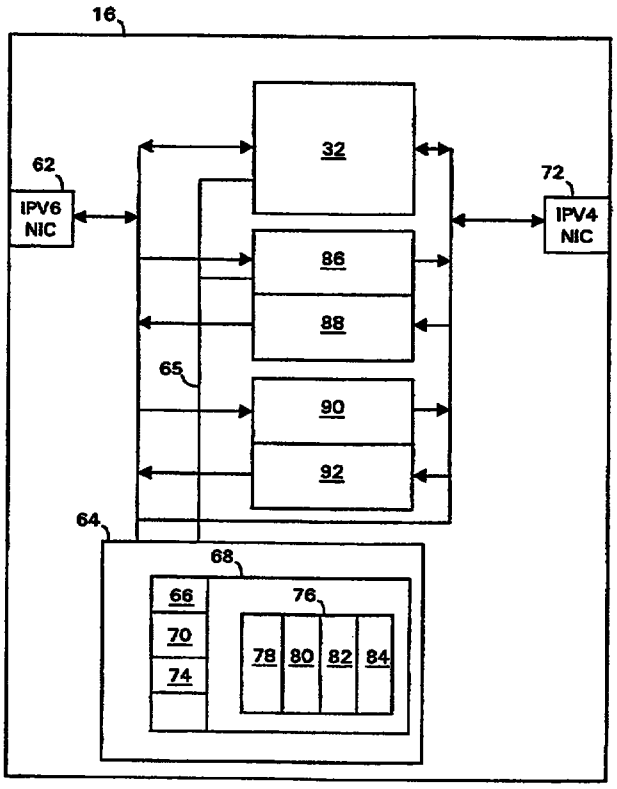
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(54) Title: PACKET NETWORK INTERFACING



(57) Abstract: A method of interfacing, and an interface for use, between two IPv6 domains separated by an IPv4 domain. The interface comprises a protocol converter, an encapsulator/un-encapsulator and a controller. When an IPv6 source wishes to send to a named destination in the other IPv6 domain, the source sends a normal IPv6 address request to its local DNS server, which relays it to an IPv6 name server in the other IPv6 domain. The response message, containing the true IPv6 address of the destination is received at the remote interface, which appends to the resulting protocol converted DNS response message a first additional record containing the true IPv6 address, and a second additional record containing the IPv4 address of that interface. Upon receipt at the other interface, the additional records are stripped off, their contents stored in an entry of a table, and the true IPv6 address written into the address record of the resulting IPv6 DNS response message. When the interface receives a packet from an IPv6 host, it checks whether the destination address matches an entry of its table, and if so sends the packet to the encapsulator together with the IPv4 address of the remote interface. The remote interface extracts the source address and the address of the encapsulating interface and stores these in an entry in its corresponding table for use in encapsulating return packets to the source. If, however, the destination address is recognised as being of IPv4-compatible or IPv4-mapped format, the packet is sent to a protocol converter.

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