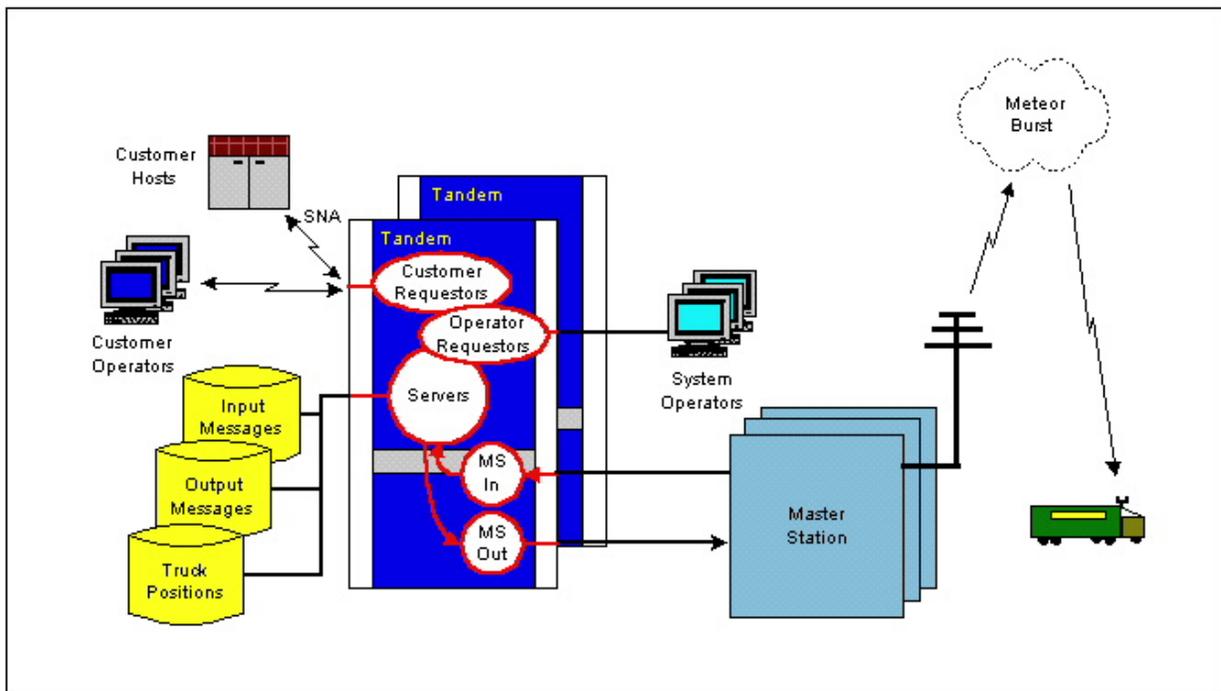


Pegasus Meteor Burst Communications Network Control Center

Meteor burst communication is a new technology in which radio waves are bounced off frequently occurring meteor showers in our atmosphere. A young company with expertise in this technology decided to aggressively pursue a new mobile communication service to trucking firms. This service would provide participating firms with two-way data communication capabilities with their enroute trucks, regardless of the vehicles' positions in the continental U.S. and without the need for expensive satellite channels. Messages would be routed to the trucks in question and would be displayed on the cab consoles. The drivers then could format and return replies to the messages as well as send messages of their own. In addition, the hourly position of each vehicle could be reported to the trucking firm via on-board Loran.



Central to this communication service was the requirement for a Network Control Center (NCC) that would receive and route messages, track the trucks' positions, and manage the network. The Sombers Group was selected to implement the fault-tolerant Tandem-based NCC. Custom requestors were implemented to support remote customer operator workstations as well as customer host systems networked to the NCC via SNA. Customer requestor-server pairs running under Pathway allowed customers to send messages to their trucks, to check the 24 hours of position information for each truck or their current positions, and to perform administrative tasks. Position information was provided in terms of distance and direction to the closest city.

Requestor-server pairs also supported the network operation functions of network management, customer service, database maintenance, billing, archiving, and other administrative duties.

The customers and network operators interfaced with the outside world of meteor burst communications through the NCC data base. The predominant files in this data base included the Outbound Message File (OMF), the Inbound Message File (IMF), and the Position File (POS). Outbound messages were sent from the OMF by the OUTMS subsystem. Inbound messages and position reports were received by the INMS subsystem and stored in the IMF and POS files, respectively.

OUTMS and INMS communicated with remote Master Stations, which controlled the country-wide network of antenna farms. It was OUTMS's responsibility to send each message to that Master Station which had the destination truck in its range. It was INMS's responsibility to receive and interpret inbound messages and to track truck positions for OUTMS and for the customer.

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