

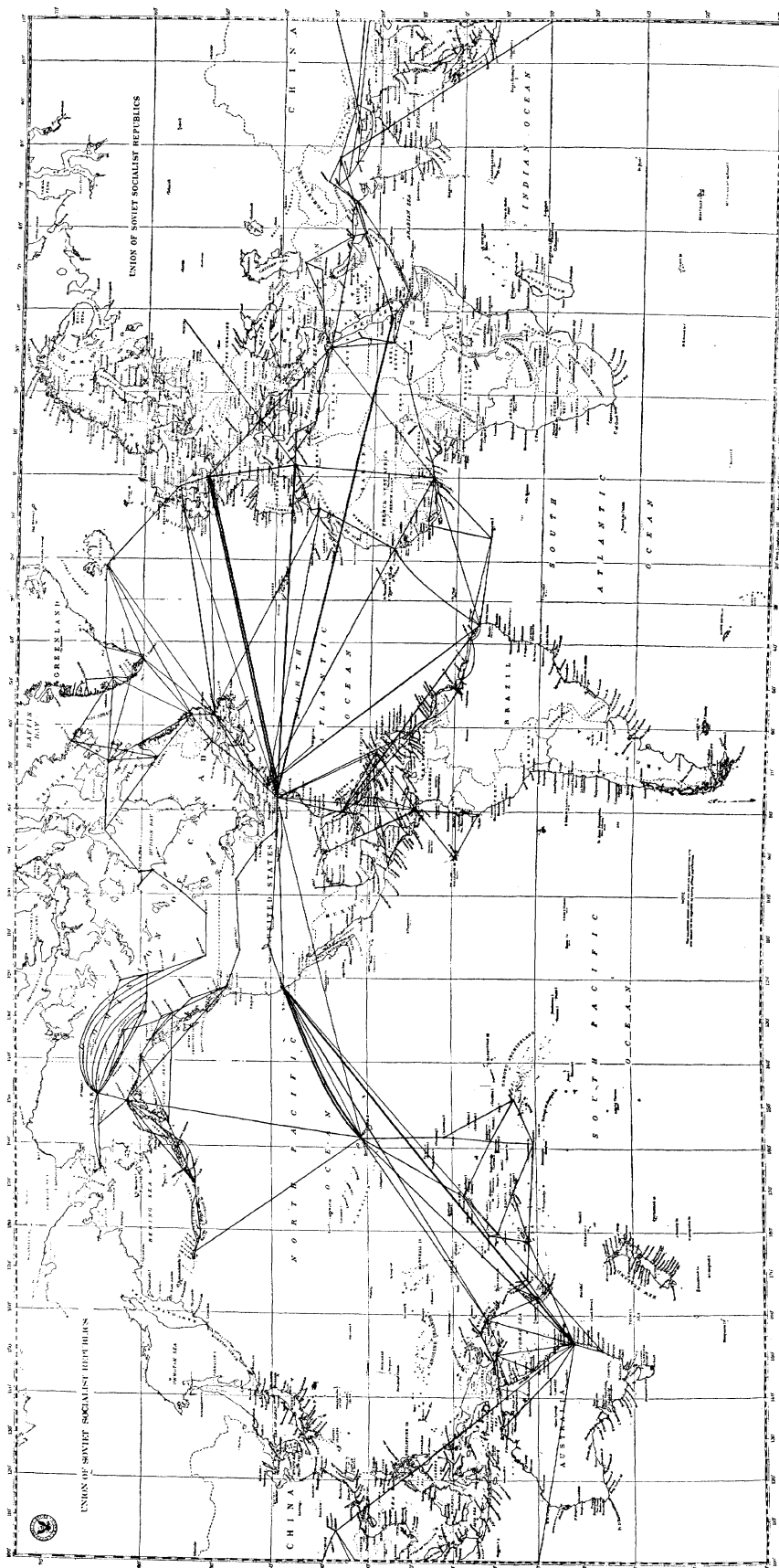


Figure 20. Long-haul military radio teletypewriter circuits during 1944

Legend: — Multichannel System
— Frequency Shift Single Channel System

writer systems provided outstandingly reliable, rapid and secret communication facilities which were found by the armed forces and Government officials to be much better suited for providing extensive military communication networks than alternative arrangements. Although each teletypewriter channel usually operated at a rate of only 60 words per minute, whereas some automatic Morse channels operate at much higher speeds, experience demonstrated that as much or more traffic could be handled each day over a single teletypewriter channel as over a single high-speed automatic Morse circuit. This is possible because the new method of transmission is so superior that the teletypewriter traffic flows at a uniform rate hour after hour with few if any interruptions and enciphering and deciphering may be automatic and instantaneous. This is in contrast to Morse methods which require interpreting and typing the received messages.

The successful application of teletype-writers to long-haul radio links permitted the establishment and successful operation of extensive military teletypewriter networks. This is because the long-haul radio links could be operated in the same manner as the short-haul radio links and wire-line circuits with which they were associated. Thus, by the help of teletypewriter tape relay methods, in which messages were stored in perforated tape form and these used to control transmitters on other circuits, teletypewriter networks extending over land and sea and including long-haul radio facilities and American private-line networks, were operated as an integrated military communication system including connections, as required, with certain stations of the TWX system. Results were successful far beyond previous accomplishments in overseas transmission of written communications via radio or other means, and perhaps beyond expectations. Favorable and enthusiastic reports were received on the use of these facilities. Our military leaders and government officials depended upon them for communications, including scheduled conferences in which groups separated by thousands of miles passed communications back and forth practically instantaneously.

The following quotations from President Roosevelt's speech to the Congress on March 1, 1945, regarding the Yalta conference indicates the importance of radiotelegraph in handling the communications while en route to and from Yalta and during the conference there. Both Morse and teletypewriter methods were employed.