

NORSAR

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FINAL TECHNICAL REPORT NORSAR PHASE 3

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W. THE NORSAR ARPANET CONNECTION

The Terminal Interface Processor (TIP) located in the NORSAR Data Processing Center is a node in the ARPA Network. Two terminals (Tektronix 4010-1 and Data Dynamics 390) have been attached to the TIP during this period.

The NORSAR bulletin has routinely been converted to paper tape and inputted through the Data Dynamics 390 terminal, to be transmitted to the message file of the U.S. Geological Survey on the OFFICE-1 Host computer at Stanford, California, thus speeding up delivery and keeping the bulletin in a format which is directly machine-readable.

The terminal access has also been used for information exchange with other institutions (Seismic Data Analysis Center, Lincoln Laboratory's Seismic Discrimination Group, U.S. Geological Survey, Vela Seismological Center, etc.). This activity is based on our account on the SRI-ARC (Stanford Research Institute's Augmentation Research Center) computer, and the use of this system's facilities and resources. In the middle of this period our account was transferred to the OFFICE-1 computer, at the closing down of the SRI-ARC computer.

In the beginning of January, two Special Host Interface Units for the 360 machines were installed, thus physically linking the multiplexor channel of each IBM/360 machine to a corresponding General Host Interface within the TIP. A program called "WRABBIT" was received over the ARPANET from SDAC and was, with small modifications, used to check out the Host-TIP connections through the installed units.

During the last six months of the reporting period, a first version of a Network Control Program, dedicated to data exchange with the forthcoming Communications and Control Processor (CCP) has been developed to be implemented as a task in the Detection Processor System. This task has been implemented and tested out in the so-called Secondary On-line System (SOS), which actually is a copy of the Detection Processor System, used for experimental purposes. The SOS now sends error-free messages to itself over the ARPANET. Also, test sessions have been started, where we have run the SOS, to let it exchange messages with the program in the CCP, presently situated at BBN in Boston, Mass. Some minor discrepancies in the interpretation of protocol were discovered and cleared up. Also, a time discrepancy was discovered.

We are now ready to start up these test sessions again, and expect to test the NCP-task in a more realistic environment, with full processing load on DP at the same time as we exchange messages over the network. A plan for implementation of a Network Control Program of the off-line (B) computer has been worked out, in which we expect to use 7 man-months to perform this job. With the anticipated staff reduction for the next period, this work load estimate may turn out to be too small.

D. Rieber-Mohn