

2.1.3 Launch Information Exchange Facility, Huntsville Operations Support Center

The Launch Information Exchange Facility (LIEF), HOSC, is a multi-purpose data display, monitoring, and control facility that links KSC and MSFC and is operated during prelaunch operations, launch, and post-launch evaluation to assist MSFC in providing technical support to KSC. The system was designed with visual output devices in place of conventional printer output.

2.2 MANNED SPACECRAFT CENTER

2.2.1 Manned Spacecraft Center, Houston, Texas

A significant number of computers are required to support the MSC activity with general scientific computing capability. Scientific and engineering needs are based upon requirements to develop models, evaluate engineering design, plan missions, predict failures, and so forth. The specific computing equipment used to support these applications is discussed in a later section. In the administrative and management area, there is a class of computers capable of processing and retrieving volumes of data in support of MSC administration, finance, logistics, and procurement activities.

2.2.2 Mission Control Center/Real-Time Computer Complex, Houston, Texas

The computer complex supporting the MCC is identified as the RTCC. Operational mission support required that the computing system automatically accept input data from ground-based tracking stations and from spacecraft and launch-vehicle TM systems. In addition, the system must accept display requests from flight controllers and manual input data from computer controllers. The RTCC processes the input data to provide support displays for flight dynamics and vehicle systems analysis; it also performs network support and vehicle command functions. The RTCC also has the capability to evaluate the mission flight plan in real time and to redesign the mission profile, as necessary, during the mission.

For Apollo missions, the RTCC will be the prime source of navigational data during the translunar phase of flight. The RTCC has provided backup guidance information to the spacecraft, including updates of targeting parameters in the spacecraft computer and backup computations for both nominal and abort maneuvers. The RTCC computers also