INTRODUCTION

The Hospital Computer System is viewed in several different ways by the various groups of people who use it. To the hospital staff, it is an information-handling system which interacts with them in a question and answer form of English dialogue. Application programmers at Bolt Beranek and Newman Inc. (BBN) view the system as a time-shared computer with a programming language and debugging facilities. The BBN systems programmer sees a collection of hardware elements (central processor, drums, tapes, Teletypes, etc.) which must be converted into a time-shared computer facility.

This report describes the time-shared computer facility which the systems programmers have created. The report is directed primarily toward those readers who are investigating the concepts necessary for construction of a time-sharing system. With this point of view in mind, machine-dependent descriptions have been avoided when they are not essential; hence, this is not a maintenance manual for the BBN system. On the other hand, it is assumed that the reader is familiar with the terminology and techniques of programming and time-sharing in general.

A scale of over-all complexity can be constructed for the classification of present time-sharing systems. At one end of this scale are systems such as the SABRE airline reservation system; users of SABRE interact with a small set of rigidly defined programs which perform prespecified functions of information storage and retrieval in a massive but simple data base. Users of this type of system are actually sharing an application function. At the other end of this scale are systems like MIT's Project MAC