in which the users actually share the computer hardware. These systems are capable of handling a wide variety of tasks, many large independent data bases, automatic assignment of almost unlimited memory to any task requiring it, and perhaps a multiplicity of central processor units as well.

Although the Hospital Computer System is not as large as Project MAC, it is conceptually much closer to that end of the scale than it is to systems like SABRE. It includes both special-purpose functions designed for use by hospital personnel and general-purpose functions which are available to modify and extend special-purpose functions. "Automatic" memory assignment includes only one segment of 4096 (4K) 18-bit words. There is only one language, a macro-assembly language, available to applications programmers. The data structure is oriented toward the particular storage and retrieval problems of the hospital. On the other hand, many users may be performing unrelated tasks at the same time. They can access one of several data bases; these data bases may be privately owned and confidential or they may be public and accessible by many users simultaneously. Thus, while the hospital computer system is directed toward a single goal, servicing a hospital, it permits a wide variety of different tasks to be performed simultaneously. Systems programmers, applications programmers, and hospital personnel are generally all working with the system at any given time.

The time-sharing operating system (Executive System) described in this report is the third hospital time-sharing operating system developed at BBN. It was first put into operation in May 1966 and has been in service operation since December of that year. In its first 15 months of operation, the system was scheduled