

GLOSSARY

In studying the Imperium, Arrakis, and the whole culture which produced Maud'Dib, many unfamiliar terms occur. To increase understanding is a laudable goal, hence the definitions and explanations given below

—DUNE, FRANK HERBERT

- access method** The method that is used to find a file, a record, or a set of records.
- address space** The range of addresses available to a computer program.
- address translator** A functional unit that transforms virtual addresses to real addresses.
- application programming interface (API)** A standardized library of programming tools used by software developers to write applications that are compatible with a specific operating system or graphic user interface.
- asynchronous operation** An operation that occurs without a regular or predictable time relationship to a specified event, for example, the calling of an error diagnostic routine that may receive control at any time during the execution of a computer program.
- base address** An address that is used as the origin in the calculation of addresses in the execution of a computer program.
- batch processing** Pertaining to the technique of executing a set of computer programs such that each is completed before the next program of the set is started.
- Beowulf** Defines a class of clustered computing that focuses on minimizing the price-to-performance ratio of the overall system without compromising its ability to perform the computation work for which it is being built. Most Beowulf systems are implemented on Linux computers.
- binary semaphore** A semaphore that takes on only the values 0 and 1. A binary semaphore allows only one process or thread to have access to a shared critical resource at a time.
- block** (1) A collection of contiguous records that are recorded as a unit; the units are separated by interblock gaps. (2) A group of bits that are transmitted as a unit.
- B-tree** A technique for organizing indexes. In order to keep access time to a minimum, it stores the data keys in a balanced hierarchy that continually realigns itself as items are inserted and deleted. Thus, all nodes always have a similar number of keys.
- busy waiting** The repeated execution of a loop of code while waiting for an event to occur.
- cache memory** A memory that is smaller and faster than main memory and that is interposed between the processor and main memory. The cache acts as a buffer for recently used memory locations.
- central processing unit (CPU)** That portion of a computer that fetches and executes instructions. It consists of an Arithmetic and Logic Unit (ALU), a control unit, and registers. Often simply referred to as a *processor*.
- chained list** A list in which data items may be dispersed but in which each item contains an identifier for locating the next item.