**General.** Command execution, program storage, program execution, ASCII-to-binary conversion, syntax recognition, handshake protocol, interface timing.

**Specific.** The interpretation of each command is specific to the CY500; each command relates to a stepper motor mode or action. Another device would interpret commands differently and would thus represent a different high-level architecture.

It should be clearly understood that the general architecture of the CY500/CY512/CY5xx is applicable to almost any control function and that particular control functions are implemented by specialized interpretation routines.

The situation is analogous to the relationship between a computer's operating system and its application programs. The general architecture of CY5xx devices corresponds to the operating system for a single-chip computer. It handles keyboard or host computer inputs, translates from ASCII to binary (or accepts binary directly), processes input strings, and loads and executes stored programs. In this respect, it might be compared to the CP/M* operating system for 8080/Z80/8085-based systems. By purchasing or licensing CP/M, the user obtains debugged(!) file handling and I/O routines; thus he gets the routines he needs for most applications without having to do any time-consuming rewriting. (Intel general manager Bill Davidow claims customers find they must often spend $200,000 or more to develop the software to run on a $10 chip—i.e., the 8048.) An even more important aspect of CP/M, or any standard operating system, is that it serves as a vehicle for other standard software, e.g., compilers and interpreters (Fortran, Pascal, Basic, PL/1), and numerous application programs (word processors, accounting programs).

Just as CP/M "carries" application-specific software, so will the CY5xx architecture support applications of members of the 8048 family. The early availability of this standard high-level architecture is intended to promote the effective use of these microcomputers.

---

*CP/M is a registered trademark of Digital Research.

Edwin E. Klingman's biography appears on page 56.