This special issue on the business of applying microelectronic components (commonly lumped under the term “microprocessors”) is dedicated to the proposition that the LSI microelectronics generation is now replacing the MSI TTL generation for the vast majority of applications for electronic control and intelligence. With this transition, the skills repertoire formerly attributed to the “systems man” must now be acquired by the “LSI components man.” In effect, the systems engineering chore has moved one step closer to the device engineer.

The LSI systems engineer must now maintain an awareness of progress in electronic technology as well as the practices of system-function interconnection complementing software/firmware.

These challenges were addressed at the seventh annual Computer Elements Workshop, December 1977, at Mesa, Arizona. The workshop, whose proceedings I have briefly summarized following this introduction, had several highlights as documented in papers by McKenzie, Garland, and Ahlgren, Magers, and Rauscher, later in this issue.

In order to enhance the comprehensive nature of this issue, I have included one other paper—

“The Intel 8086 Microprocessor: A 16-bit Evolution of the 8080,” by Morse, Pohlmans, and Ravenel, which describes the latest component in the pioneer 8080 microprocessor family.

This set of papers, then, serves as a comprehensive snapshot of the hardware art, the software art, and the management reflections of six current practitioners spanning the disciplines of low-end microelectronic components.

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