was published in the August 1983 issue of *IEEE Micro*, deals with another critically important area for software portability. A uniform modem protocol is also badly needed. Absolute reliability and integrity of transmitted data must be assured. The incompatibilities among different microprocessors are, now, accomplished horror story, one beyond salvation, with which several articles in *IEEE Micro* have dealt.

### Issue contents

Five articles in this issue deal with hardware:

- **Bus tutorial.** This article helps explain the processes involved in designing a bus.
- **P896.** Three articles deal with the innovative design of the Futurebus's protocol, arbitration method, and electrical specification.
- **P1000.** An I/O channel for the bigger buses, and the successor to the STD bus, on the Eurocard, are discussed.

And four articles deal with software:

- **P854.** The proposed radix-independent floating-point arithmetic standard is discussed.
- **P855.** The microprocessor operating systems interface (MOSI) is described.

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This symposium offered discussions on computer animation; sound systems on micros; digital audio peripherals; computer-controlled installation in a gallery space; a liberal arts college course in computers, music and the arts; and an artist’s workstation design. 143 pp.

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• P694. The rationale for, and benefits of, the proposed assembly language standard are presented.
• Software engineering. Article outlines the standards efforts of the Technical Committee on Software Engineering.

### Happenings

For reasons that are not clear to us, the activities of standards-making working groups are regarded as dull, unintellectual, and prosaic. Of course everyone is entitled to his own opinion, but many of the meetings of Computer-Society-sponsored committees can be classified as "happenings." Brilliant prima donnas have managed to work together to evolve enhancements to the state of the art. It has been real fun to work with them. We all owe them an enormous thank you.

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**Paul Borrill** is a research fellow in information technology at University College London, Mullard Space Science Laboratory, where he is completing a PhD dissertation on spaceborne processing systems. He is responsible for the design and programming of a dedicated experiment processor to support the CHASE project, a UV spectrometer due to fly in the Spacelab 2 mission of the space shuttle in April 1985.

Borrill is the chairman of the IEEE P896 Futurebus Committee. He was elected to the Governing Board of the IEEE Computer Society for a two-year term starting in January 1984. He is also serving as secretary to the IEEE Computer Society for 1984. Borrill's research interests include multiprocessor systems, computer buses, and fault-tolerant operating systems.

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**Robert G. Stewart** is presently the first vice-president of the IEEE Computer Society, with responsibility for technical activities. He has been a member of the Governing Board, the Publications Board, the Magazine Advisory Committee, the New Publications Proposal Committee, the Computer Standards Committee, the Microprocessor Standards Committee, and the 694, 696, 754, and 896 working groups, and is an associate editor of *IEEE Micro*. As a member of the Governing Board he was instrumental in starting *IEEE Micro* and initiating efforts to investigate merger with the ACM.

He served as chairman of the Computer Standards Committee for three and a half years and was responsible for initiating numerous standards activities and for having drafts published in *Computer*. He also served as chairman of the Santa Clara Valley Reliability Chapter, which was awarded the IEEE Chapter of the Year Award during his tenure. He received the Honor Roll Award from the Computer Society for "distinguished service in promulgating important standards in the microprocessor area."

Stewart now works for Exxon in San Jose. He holds a PhD from the Illinois Institute of Technology in Chicago and is a senior member of the IEEE and a member of SID, Sigma Xi, and Pi Mu Epsilon.

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