had no professional standards for determining quality then.

Herbert Hecht of SoHaR led a lively conference discussion on standards for software reliability. Hecht defined reliability as a way of describing frequency of failures. As the discussion progressed, several useful ideas on how to evaluate the quality of a product were put forward.

Fletcher Buckley of RCA indicated that a reliability measure by itself was not adequate. Availability, a measure of duration of outage after a failure (how fast you can reload), is just as important as reliability. Sometimes it is more important, Buckley believes.

Jim McCall of Science Application International added that either of these measures is acceptable after the product is being used by the customer. Unfortunately, that's too late. McCall stressed the need for a test comprehensiveness measure that could be applied before the product is shipped. Combined measures of reliability, availability, and test comprehensiveness would go a long way toward letting an individual know before the product is released, whether or not he or she has done a good job. Producing a professional quality product in accordance with ANSI, IEEE, X3, EIA, or US government standards would become even more important in the future. A session titled "Standards and the Law" held by Mike Carrio of Teledyne/Brown ended in some revealing discussions. Presently, there are several cases in court where computing companies are being sued for delivering products that contained latent defects (bugs). The basic defense being used against these charges is that programmers followed reasonable and prudent professional practices (that is, they followed standards) in developing their products.

As the computer community to move to new areas of our society, more professional standards will be required. As end users become increasingly sophisticated, demanding easier ways to compare products, we'll need very precise new standards. With mounting legal issues, we'll require a higher degree of professionalism from our standards makers than ever before expected.

Our work is cut out for us.

Acknowledgment

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Operating system group adopts name, publishes trial-use document

Jim Isaak, IEEE 1003 Chairperson

The IEEE 1003 operating-system standard effort now has a name—Posix—that can be pronounced and used as a quick reference point. The name, suggested by Richard Stallman, combines the initials from portable operating system with the classical "ix" ending of many Unix-compatible operating systems.

The new name will appear on the cover of the IEEE 1003.1 Trial Use Standard, which is now in print and can be used to state conformance to the standard. A system can be a Posix-compatible implementation (or an IEEE 1003.1-compatible implementation), and application code can be a Posix-compatible application.

The challenge facing the working group is to move from the trial-use document to a full-use document, incorporating the comments that come in over the next months, and to complete the tasks outlined in the appendixes.

As a result of the April meeting, held in Florence, Italy, and attended by representatives from 11 countries, we have a much better understanding of international concerns. We also established closer contact with the X/Open group, which is aggressively developing and promoting a standard environment for portable applications.

Recommendations out of the Florence meeting included a draft statement on internationalization and a question about mandatory locking. The group is actively seeking feedback in these and other areas. The primary objective from an international perspective is to ensure the feasibility of Posix-compatible international implementations. A secondary objective is to incorporate changes that encourage international capabilities. In the area of mandatory locking, the group is seeking an application example to help resolve outstanding questions.

We have established a set of priorities for addressing the outstanding issues. Detailed work began at the June meeting in Atlanta and will continue at the September meeting in Palo Alto. Our time frame, as it now stands, is to go back into the balloting phase in the spring of 1987 and to have that completed for review at the September 1987 IEEE Standards Board Meeting. The process of reviewing the Posix standard as a possible FIPS will begin shortly.

The IEEE 1003.1 Trial Use Standard (order number 967) is available for $19.95 US, plus $4 for shipping and handling, from the IEEE Computer Society, PO Box 80452, Worldway Postal Center, Los Angeles, CA 90080; (800) 272-6657 or (714) 821-8380 in California.