IEEE committee moves ahead on local networks standard, explores differences with Ethernet Local Network

The second IEEE Local Networks Standards Committee meeting, held May 30 in Gaithersburg, Maryland, and attended by 84 participants, was highlighted by the presentation of Ethernet by the representatives of Xerox, DEC, and Intel, and by a question and answer period that followed. Because the Ethernet has been offered as a candidate for the IEEE Local Network Standard, there was considerable discussion about its merits. Since the functional requirements for the IEEE network have not yet been finalized, however, and since the complete Ethernet specifications are not yet available, the committee determined that it could not tell how close the Ethernet comes to what it wants.

There are several differences between the IEEE draft functional requirements for the standard local network and the preliminary definition of Ethernet:

1. The IEEE committee wants to define its standard so that there is an interface between the modem (connected to the signal transmission lines) and the equipment in the network. By requiring replacement of the modem only, this interface should allow any number of present and potentially future signal transmission technologies to be used, including baseband coaxial cables, broadband CATV, fiber optics, and IR radiators. The idea is to be able to accommodate signal transmission technology changes without obsoleting the equipment that uses the network.

2. The IEEE committee wants the network to provide reliable communications—this entails sending acknowledgments for correctly received data frames, having frame sequence numbers to guard against lost or duplicate frames, and using other secure communications techniques. To ensure compatible device-to-device communication, well-defined standard protocols will be required.

3. The Ethernet does not appear to follow this model.

4. The IEEE committee is investigating existing data communications standards such as HDLC for applicability to local networks.

While the Ethernet, or the techniques it uses, will be considered in the deliberations of the IEEE Local Networks Standards Committee, the committee at this time has not accepted any part of the Ethernet. Its possible acceptance as a de facto standard in some local network applications does not imply its sanction as an IEEE standard.

Work on the IEEE local network standard is proceeding rapidly: A draft standard should be available early this fall. The committee comprises three subgroups, each considering a particular aspect of the network:

1. Signal transmission techniques and the modem interface. If interested in this area, contact Chris A. Wargo, RCA Automated Systems, PO Box 588—MS 8-6, Burlington, MA 01852; (617) 272-4000, x3596.

2. The link and transmission media access protocols. Contact Gerald J. Clancy, Honeywell Information Systems, Honeywell Plaza—MN-12-2276, Minneapolis, MN 55408; (612) 870-2074.

3. Interface to the link service layer. Contact Allen Rockkind, Spectra Physics, 2905 Sender Way, Santa Clara, CA 95051; (408) 249-5200.

The full committee will meet again August 21 and 22 in Minneapolis. Any interested individual can attend the meetings—for more information contact Maris Graube, Chairman, IEEE Local Networks Standards Committee, Tektronix, Inc., PO Box 5000—58/240, Beaverton, OR 97077; (503) 644-0161, x6234.

600 exhibitors, 35 technical sessions set for Wescon/80

With the theme “Electronics, the Magic Kingdom,” Wescon/80 will explore new techniques, products, and systems in high technology at the Anaheim, California, Convention Center from September 16-18. The event is expected to attract approximately 50,000 industry professionals.

Nearly 1200 booth spaces have been reserved by more than 600 exhibitors, filling both halls and the arena of the convention center and making the convention the largest Wescon since 1969. The technical program, with 35 sessions and nearly 150 technical and scientific presentations, also will be housed in the convention center, thus placing all the main events of Wescon under one roof.

Wescon/80 actually gets under way Monday, September 15, with a full day of preview activities, including the annual marketing conference and the keynote luncheon, both at the nearby Disneyland Hotel. Keynote speaker will
be Simon Ramo, a founder of TRW Inc. and former chairman of the President’s Committee on Science and Technology. Ramo is one of the best-known individuals in high-technology electronics, with credentials as a scientist, engineer, business executive, and educator. Ramo holds the National Medal of Science, the nation’s highest scientific honor, and is presently a director of and consultant to TRW.

Telecommunications, satellite systems, test technology, memories, and LSI head up the Wescon technical program. The block of sessions on telecommunications will cover topics ranging from robust satellite communications to advances in telephone switching equipment. Other sessions will cover applications of bubble memories in harsh environments, electronic packaging, semicustom LSI, computer-aided design, optical fiber transmission systems, multiplexed liquid crystal displays, and aircraft collision avoidance systems.

Taking the lead of Electro, its sister conference in the East, Wescon will present three blocks of technical sessions each day instead of the traditional two. Sessions will begin at 9 am, noon, and 2 pm each of the three days. With the number of different sessions approximately the same as in past years, the new format will allow attendees to reduce conflicts and participate in more sessions.

Advance registration and information is available from Wescon, 999 N. Sepulveda Blvd., Suite 410, El Segundo, CA 90245; (213) 772-2965. Advance registration is $5; the at-the-door price is $10. Paid registration admits the participant to all exhibits and technical sessions.

On-line product reference service available

Auerbach is introducing a comprehensive computerized information retrieval service containing reports on data processing products, services, and prices. Called Auerbach Compar, the cross-indexed data base is accessible through standard computer terminals from any location served by communications services.

The service is being developed and introduced in stages, with the first stage to be available this fall to US users. Auerbach intends to offer the service internationally in 1981.

For more information, write Auerbach, 6560 North Park Dr., Pennsauken, NJ 08109, or call (609) 622-2070.

Peter J. Denning elected president of ACM

Peter J. Denning, chairman of the Computer Science Department at Purdue University, was elected president of the Association for Computing Machinery for a two-year term beginning July 1, 1980. Denning previously served as ACM vice-president (1978-80), council member-at-large (1974-78), chairman of the Special Interest Group Board (1970-74), and editor-in-chief of Computing Surveys (1977-79).

Michael A. Harrison, professor of computer science at the University of California, Berkeley, was elected ACM vice-president. Harrison has been a member of the ACM Council and chairman of the ACM SIG Board since 1978.

Elected as ACM secretary was Kathleen A. Wagner, a financial/budgeting systems consultant for the state of Wisconsin.

MAKE YOUR DUMB TERMINAL SMART.

Teach it to talk back. The SLC-1 Time Machine replies instantly to requests from your computer. It automatically tells the date and time, enters log-in codes, gives any responses you specify. No changes are required in your operating system. Simply install it in the RS-232 or 20mA current loop serial link that connects your computer and terminal.

No more operator response errors. No more delays. Now you can automatically re-boot your system after power failure.

Whether you use your computer for business, research, or process control, the Time Machine will save you money. In fact, the first time it prevents a human error, it will more than pay for itself.

The Time Machine doesn’t interfere with your computer’s operation. It steps in and responds only when it sees the key phrases you have specified. And because it’s battery-supported, it never misses a beat or a bit.

The Time Machine comes with a built-in bonus: it is also an independent microprocessor system. Its 1,000 bytes of RAM (expandable to 12K) lets you use it in the off-line mode to free your computer for other tasks. Applications support is available, including a growing 6502 machine language software library.

The single quantity price is only $640. Ten-digit display option, $190. For more information or literature on the SLC-1 Time Machine, contact Digital Pathways, Inc., 1260 L’Avenida, Mountain View, California 94043, or phone (415) 969-7600.
Capital investment in production facilities to spur Japanese semiconductor boom

The fast-growing Japanese semiconductor industry invested the equivalent of more than $460 million in new production facilities and equipment in fiscal 1979.

This is more than double the industry's capital investments for fiscal 1978, according to a new study by BA Asia Limited, a subsidiary of Bank of America. The 270-page report, "The Japanese Semiconductor Industry 1980," was prepared under the direction of Robert H. Silin, director of consulting services for the Hong Kong-based merchant bank. The report says 1979 was a record year for the Japanese semiconductor industry and prospects appear favorable for continued growth.

Semiconductor imports to Japan also did "extremely well" in 1979, the report adds, rising 63 percent in value to $385 million. This strength stems from increased domestic demand and favorable exchange rates. American firms controlled approximately 65 percent of the Japanese import market with American-made imports amounting to $315 million last year, up 67 percent from $188 million in 1978.

Despite these substantial imports, Japanese exports more than doubled in 1979. The value of integrated circuits sold abroad in 1979 amounted to $368 million, representing 22 percent of Japan's total production. In unit terms, however, exports accounted for only 15 percent of production, underlying the high unit value of integrated circuits exported by Japan. Shipments to the US—primarily of high-value products—more than doubled, going from $75 million in 1978 to $167 million in 1979. This represents 46 percent of the total value of Japan's IC exports, but only 21 percent of total quantity.

Featuring a summary of 1978-79 industry activity, with projections for the current year, the report lists semiconductor equipment suppliers as well as agents for foreign producers. It provides data on semiconductor sales and unit production, and profiles Japan's leading semiconductor manufacturers.

According to BA Asia Limited, the report includes new information on the passive/mechanical electronics component industry. The study notes that the total value of passive/mechanical production in the last fiscal year amounted to $4.8 billion, with nearly 50 percent of that production (in terms of value) exported. Imports reached only $394 million, indicating, according to the report, that there is room for knowledgeable foreign producers to expand and grow in this segment of the Japanese market.

The report is available in the United States for $490 from Electronics Trend Publications, 10080 North Wolfe Road, Suite 372, Cupertino, CA 95014; (408) 996-7401.

J. Ralph Leatherman is new AFIPS president

J. Ralph Leatherman, CDP, was elected president of AFIPS by the Board of Directors on May 24 in Anaheim, California. The board also elected Sylvia Sharp vice-president, Arthur C. Lumb as secretary, and M. Stuart Lynn as treasurer. The new officers began their one-year terms July 1, 1980.

Leatherman is manager of information services, Hughes Tool Company, Houston, Texas, where he is responsible for information systems, computing and data processing, and communications. Active in AFIPS in many capacities, he has served as vice-president, chairman of the National Computer Conference Board, and chairman of the Admissions Committee. A member of the Association for Computing Machinery and the Data Processing Management Association, he has also served in those societies in numerous roles including DPMA international president. Leatherman succeeds Albert S. Hoagland, AFIPS president for the last two years.

Digital Signal Processing: September 11-12, Richmond, Washington, $177 (members) and $217 (non-members); Power Systems Relaying: September 23-24, Portland, Oregon, $165 (members) and $205 (non-members); Mini-Microcomputer Applications: September 27, Binghamton, New York, $110 (members) and $140 (non-members); Digital Signal Processing: October 1-3, Atlantic City, New Jersey, $165 (members) and $205 (non-members); Fundamentals of Systems Grounding and Protection: October 8-10, Greenville, South Carolina, in advance $190 (members) and $240 (non-members), at the door $238 (members) and $299 (non-members); Introduction to Solid State Power Electronics: October 17-18, Santa Clara, California, $165 (members) and $205 (non-members).

Vincent J. Giardina, Manager of Continuing Education, IEEE Service Center, 445 Hoes Lane, Piscataway, NJ 08854; (201) 981-0060, Ext. 174/175.

Computer Programming for the Non-Programmer: September 3-5, $480; Advances in Electronics Technology: September 22-26; Structured Programming and Software Engineering: September 22-26, $635; Software Quality Assurance: September 29-October 1, $495; Mathematical Theory of Reliability: September 29-October 3; Distributed Processing: October 20-24, $635; Modern Software Development Techniques for Managers: October 20, $215; Wideband Communications Systems: October 27-29.

Director, Continuing Engineering Education, George Washington University, Washington, DC 20052; (202) 676-6106 or (800) 424-9773.

Aidie Thomas, DPMA Education Foundation Coordinator, 5959 W. Century Blvd., Los Angeles, CA 90045; (213) 670-2975.

Performance Reporting, Instrumentation, and Workload Forecasting: August 18-22, Chicago; Organizing the Capacity Management Function: August 25-29, New York; $650 each.

Institute for Software Engineering, PO Box 637, Palo Alto, CA 94302; (415) 493-0300.

Audit and Control of On-Line Systems: September 17-19, San Francisco; October 15-17, New York; Data Base Analysis and Design-Tools and Methodologies: September 8-12, Denver, Colorado; October 6-10, Washington, DC; Data Communications Systems: September 8-10, San Francisco; October 8-10, Washington, DC; Distributive Processing/Data-Base Technologies: August 19-22, Chicago; September 30-October 3, Washington, DC; October 20-23, San Francisco; Effective Analysis and Design of Information Systems: August 18-20, Boston; September 15-17, Washington, DC; October 13-15, San Francisco; prepaid tuitions are $545 (3-day), $695 (4-day), and $825 (5-day).

Institute for Professional Education, PO Box 756, Arlington, VA 22216; (703) 527-8700.


Continuing Education in Engineering, University of California Extension, 2223 Fulton St., Berkeley, CA 94720; (415) 642-4151.

Computers in Elementary Education: August 21-22, Denver, Colorado; Programming with Pascal—Learning When and Why: September 25-26, St. Louis, Missouri; Computerized Data-Base Management: October 9-10, St. Louis, Missouri; Computers as Effective Tools for Education—The Evidence: October 23-24, Des Moines, Iowa.

Association for Educational Data Systems, 1201 16th St., N.W., Washington, DC 20036; (202) 833-4100.


University of Wisconsin-Extension, 432 North Lake, Madison, WI 53706.


Registrar, Brandon Systems Institute Public Service Corp., 4720 Montgomery Lane, Bethesda, MD 20014; (301) 986-8611.


Integrated Computer Systems, 3304 Pico Blvd., PO Box 5339, Santa Monica, CA 90405; (213) 450-2060 or (703) 548-1333.

MAKE YOUR SMART TERMINAL SMARter.

Automatic Date/Time Entry. Simply install the SLC-1 Time Machine between your computer and terminal and it will automatically log the correct date and time of each transaction into your computer. The SLC-1 Time Machine will save you money, both in reduced operator time and the elimination of costly human errors.

The Time Machine contains a precision 24-hour clock and a 100-year self-correcting calendar that automatically adjust for leap years. Time and date functions include: hours, minutes, seconds, day, month and year.

But the SLC-1 is more than a clock. It constantly monitors the output from any computer and provides instant responses to a number of user-defined key phrases. This makes it ideal for use with unattended process control or data acquisition systems. And since the Time Machine is a 6502 microprocessor system, it adds computing power to any terminal.

The Time Machine is easily installed without modification to your operating system. Both RS-232 and 20mA current loop serial link are provided. And because the battery-supported, the time will always be correct, even after a power failure.

The single quantity price is only $640. Ten-digit display option, $190. For more information or literature on the SLC-1 Time Machine, contact Digital Pathways, Inc., 1260 L'Avenida, Mountain View, California 94043, or phone (415) 969-7600.

GET INTO THE TIME MACHINE.

DIGITAL PATHWAYS