COMPETITION 2000

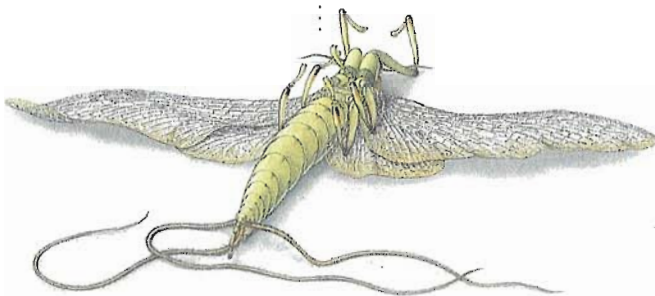## Strategic Standardization
and International Trade

A mayfly born today will be dead by tomorrow.

Much like a company that develops technology no one understands.

5:00 a.m. Monday

5:00 a.m. Tuesday

WHEN developing new technology, it seems the all-important customer is often left out of the equation. And by not giving real people a say in the matter, the result can be a customer who has no idea how to use the technology.

Who among us hasn't been tempted, at one time or another, to toss a high-technology product out the highest window we can find?

It's why we at Ameritech have a Human Factors department, a group of behavioral scientists dedicated to making technology easy to use. They test new products and services with real people, outside the confines of the laboratory.

We do so in our Test Towns, where we observe how people use the technology in everyday life. If it doesn't work in the Test Town, it's back to the drawing board until it's right. It's a process that puts hundreds of our customers into direct contact with the multitude of new products and services we test each year.

Take, for example, our improved message delivery service. It's now a convenient way to leave a message for someone whose line is busy, though it originally required a cumbersome extra step—unbeknownst to us until people in our Test Town brought it to our attention. The step was removed and now it's back to the Test Town.

Because at Ameritech, we believe people shouldn't have to use things that don't have the bugs worked out.

Ameritech.

YOUR LINK TO BETTER
COMMUNICATION®

COMPETITION 2000

Strategic Standardization
and International Trade

GLOBAL COMPETITION IN THE YEAR 2000 WILL BE DOMINATED BY
COUNTRIES AND COMPANIES THAT BUILD COMPETITIVE ADVANTAGE
ON GLOBAL PRODUCT AND PROCESS STANDARDS THAT PROMOTE
INTERNATIONAL TRADE.

Standards provide a platform for innovation to help companies compete and impact nearly every aspect of life, including consumer product safety, electronic commerce, the environment, and the education and skills of our work force. Forces accelerating standards adoption include increasing export trade, ubiquitous technology, deregulation, and the growing economic importance of the service sector worldwide. To respond effectively to these developments requires increased cooperation and standardization among nations and businesses.

A new business discipline has emerged—called strategic standardization—to help companies manage in the new economy. Strategic standardization management is being practiced by a number of U.S. corporations—Ameritech, Ford, and IBM among them—to help develop new products, open new markets, and ensure patent protection, among other benefits.

Many U.S. business leaders now realize that their companies' ability to compete internationally is clearly tied to standards that reflect U.S. interests. What's

U.S. BUSINESS LEADERS NOW REALIZE THAT THEIR COMPANIES' ABILITY TO COMPETE INTERNATIONALLY IS CLEARLY TIED TO STANDARDS THAT REFLECT U.S. INTEREST.

at stake? Nothing less than America's competitive position in the global marketplace.

FREE TRADE

With tariffs and quotas falling around the world, standards remain the most significant barriers to free trade. For American businesses looking to export, meeting product standards imposed by foreign governments can be costly. U.S. exports totaled $585 billion last year, and half of these were affected by for-

eign product standards and certification requirements. In recent years the federal government has made significant progress in negotiating free trade agreements around the world and helping boost U.S. exports in the process. Those agreements are based on consensus standards developed by business and industry—not government—which underscores the importance of business participation in the American voluntary standards system.

At the first meeting last November of the Transatlantic Business Dialog (TABD)—a public/private partnership formed by the late Commerce Secretary Ron Brown to help speed a U.S.–Europe free trade agreement—one of the hottest items for business executives was reducing the standards and certification barriers that transatlantic traders face daily. Prompted by business leaders from both continents, Commerce persuaded the Europeans to rethink proposed ecolabeling that would have blocked $2 billion in U.S. exports. In another recent example, the U.S. negotiated an agreement with Russia through which U.S. approved and manufactured drugs can be accepted into that country under streamlined procedures. The harmonization of standards has in fact

> U.S. FREE TRADE AGREEMENTS ARE BASED ON CONSENSUS STANDARDS DEVELOPED BY BUSINESS AND INDUSTRY.

Global Positioning for International Trade

Ford

With $137 billion in revenues and nearly 346,000 employees in over 34 countries, few businesses can equal the reach of Ford Motor Company, the world's biggest producer of trucks and the second largest producer of cars and trucks combined. Ford's vision is to be the best automotive company in the world.

To achieve this, Ford is transforming itself by implementing a single set of standardized processes and systems in product development, manufacturing, purchasing, and sales. Ford is also reducing the number of engine and transmission combinations by 30-50%, and the number of basic vehicle platforms by 33%. The number of unique components and systems is being slashed; horns from 33 to 3, batteries from 40 to 14, steering wheels from 50 to 11, and cigarette lighters from 14 to just one. And Ford continues to standardize materials, small parts, and machinery components using external standards.

A critical part of Ford strategy is increasing sales in mature markets while becoming a major force in new and emerging markets such as China, India, Thailand, and Vietnam, and reestablishing subsidiaries in South America. But what are the required standards? Highway infrastructure, fuel quality and availability, and many other factors—taken for granted in the West—are being determined by teams operating around the world to identify what is required. This research is leading to new internal product acceptance standards.

Ford is beginning to manage available standards as a portfolio and as a key to reaching potential customers. The company successfully negotiated with an Asian nation to accept Ford's own durability test in lieu of the Asian government test, thereby entering the market six months earlier than otherwise possible. Ford seeks one standard, one conformance test, one accreditation, and one recognition. Ford participates in the world's major standards organizations and in U.S. industry associations to encourage the development and implementation of standards worldwide. Where previously viewed as a technical exercise, the company has come to view standardization as a tool to help international trade.

"Standards development at Ford has become a competitive venture, fast paced, intellectually demanding, results oriented, and global," explains Keith Termaat, strategic standardization manager. "Setting high standards is an essential principle—high standards for ourselves, for our company, and for our customers."

Where Mr. Whitaker's connectors are taking us.

William J. Hudson
Chief Executive Officer
and President

"In 1941, Uncas A. Whitaker founded AMP around a very innovative idea: a solderless connector that installed more quickly and held more securely in aircraft and ships. ✦ Today, that connector has grown into thousands of components. What's more, the company behind them has grown just as dramatically. We are a global company of technologies that impact wireless communications, touch screens, automotive electronics, power utilities and computer networking. Technologies that can bring the world together as never before, especially when standards to ensure their compatibility are established and followed. We're proud to recognize the importance of these worldwide standards. But we're even more proud to be a leader in developing them to maximize their impact and benefit. ✦ Technology has changed dramatically from World War II, where our first products saw service, to today's AMP electronic components and systems. But what hasn't changed is the heritage of innovation Uncas Whitaker began over 50 years ago."

Connecting
at a
HIGHER
level.™

AMP

"When I meet

with living

breathing

customers, why

don't I recognize

them from

the profiles

in my database?"

IDENTIFY You know that your customers aren't numbers. Certainly no graphs, charts or even fancy multimedia presentations can fully describe them.

"So how do I paint a fuller picture of my clients?" IBM consultants are being asked the same question by thousands of companies. And we've found that they all have one thing in common. Almost all of the information they need already exists. But where?

Payment histories are in their Hong Kong credit bureau. Customer complaints float around in e-mail limbo. Details of a new order cruise at 30,000 feet on a sales director's laptop. And, most important, today's customers are interacting with you via the Internet. Providing your company with a wealth of specific information with each log-in.

So IBM has developed new ways to connect your company to all of this vital information – ways to make sure the latest, most relevant facts are instantly available every time you come in contact with your clients. We call these offerings Customer Relationship Solutions.

Take our call center technology, for example. It recognizes callers and puts their latest profiles on the screen before your customer service rep has even picked up the phone. Now they can answer, "Hello Mr. Wright, your automobile loan has been approved and you'll receive a check by the end of the week. By the way, I see that you requested an investment kit this morning from our Web site. It's gone out in today's mail."

It all makes you more responsive. Which increases customer loyalty. Which makes your business grow.

We more than understand the value of great client relationships. And we'd love to start one with you. Visit us at www.ibm.com or phone IBM at 1 800 IBM-7080, ext. G135, for a free 16-page booklet highlighting how IBM can help your business thrive in a networked world.

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Interconnection Through Innovation

How important are standards in the electronics industry? At AMP, the world leader in electronic interconnection products and systems, they play an increasingly critical role in both new product development and global market strategies. Standards are a market-driven phenomenon that, combined with the company's history of innovation and customer service, enable value differentiation. AMP's ever-growing number of multi-national customers demand the assurance of compatibility that standards bring; and more than half of its $5.2 billion in sales come from products that meet industry standards.

Aggressive involvement in standards organizations worldwide is evidenced by the several hundred AMP professionals who serve on more than 500 industry associations and standards-setting committees. This effort ensures customers

of AMP's readiness for next-generation developments. No better example of this is the exploding communications marketplace. A major driver of company growth, the "information superhighway" simply could not exist without standards that provide global interconnectivity and interoperability. AMP local area network wiring systems provide customers around the world with interconnection infrastructures that tie together the many layers and elements of these complex communications systems.

AMP

These networks also enable AMP to provide enhanced customer service. Early this year, the company launched a global electronic catalog on the Internet that provides technical information on 70,000 AMP products. Customers can interactively search for data according to their application requirements, and receive immediately up-to-date product

details and specifications.

Having attained ISO 9000 certification in virtually all of its major facilities, the company is forging ahead with early involvement in ISO 14000, the emerging series of environmental management standards. At the same time, AMP is an active proponent of the Suppliers Audit Confirmation process which holds promise for greatly reducing conformance costs that don't add direct value to its products.

According to Henry Line, vice president of AMP global product standards and chairman of ANSI's company member council executive committee, "standards manifest the strengths and technologies of those who embrace them. They cannot be neglected without severe risk to our competitiveness; for today and the future, standards are an integral part of our business strategy."

become one of the most critical elements of free trade agreements. Commerce's National Institute of Standards and Technology (NIST) is placing standards experts in key embassies around the world to help ensure that foreign standards organizations don't exclude American products. At a TABD task force meeting in Chicago next month to be led by Tenneco chairman Dana Mead, business leaders will work to eliminate product standards and certification procedures as technical barriers to trade in advance of the

U.S.–European Union Economic Summit in December.

Through initiatives such as TABD— chaired in the U.S. by Ford's Alex Trotman and Xerox's Paul Allaire— American business leaders are increasing aware that strategic standardization is a management tool to help maintain a competitive edge in a global market. More need to become involved. Compared to their counterparts across the Atlantic who seek every opportunity to leverage their European technologies, experience, and insights to their own

advantage, American business executives have much to learn.

LEGISLATION

1996 has proved to be a banner year for legislation that calls for the adoption of voluntary standards and conformity assessment, a procedure to verify that products or processes meet a standard.

One notable example is the passage by Congress last year—and signed into law by the president this year—of the National Technology Transfer and Advancement Act. The act requires gov-

ernment agencies to rely on the private voluntary standards system, and not on those government standards which are duplicative, costly, or unique. "The use of voluntary consensus standards for government procurement and in the regulatory process will significantly decrease both the non-value added cost of doing business in the U.S. and the cost of government," according to Henry Line, vice president of global product standards for AMP, Inc. "Enhancing industry standards, which by definition already have the stamp of 'market acceptance' on them, will help increase the competitiveness of U.S. business in
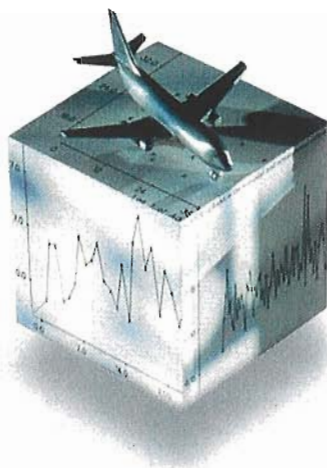
the global marketplace and, by doing so, preserve American jobs."

Other important legislation this year impacting standards include the Telecommunications Act of 1996, which

calls upon the Federal Communications Commission (FCC) to use commercial standards, and the Health Insurance Portability and Accountability Act, which specifically calls for the use of the U.S. voluntary standards system coordinated by the American National Standards Institute (ANSI) and for ANSI accreditation of healthcare standards developers.

ANSI-NIST

The challenges of a competitive global market has forged stronger partnerships between the private and public sectors. Nowhere is this stronger than in the close relationship between ANSI and

Leading Strategic Change Through Standardization

With the growing importance of standardization in ensuring U.S. economic leadership in the world marketplace, the ANSI Federation has an important mission to achieve on behalf of U.S. business and American citizens. A strong U.S. voluntary standards and conformity assessment system is the most effective way to increase U.S. competitiveness and maintain the American quality of life. ANSI accomplishes this by bringing together business and industry, standards developers, trade association, labor unions, professionals' societies, consumers, academia, and government agencies to serve this common purpose.

As international standards become fundamental to world trade, ANSI's international relationships and its role as the U.S. representative to the ISO and, through the U.S. National Committee, the International Electrotechnical Commission, greatly bene-

fit the U.S. The U.S. is a strong and well respected leader in the international arena. Through ANSI, U.S. business has the ability to influence international standards which form the basis of product acceptance in many countries and help establish policies that have direct implications on American competitiveness. Today standards development has dramatically expanded to such vital concerns as quality management systems, personal data and

ANSI *American National Standards Institute*

privacy, and most recently the area of services including those in the banking, travel, and hospitality industries.

ANSI provides the U.S. with a forum where peers and competitors from business, standards developing organizations, and government can work together to discuss timely issues of mutual concern. Recently, through the auspices of ANSI,

the U.S. was successful in effectively reaching a unified American position regarding an international proposal to develop global standards for occupational health and safety management systems, an activity which posed consequences for U.S. business across all sectors. The majority of the other nations supported the U.S. position on this important issue "Involvement in ANSI is an excellent means of tracking such issues and developing solutions that will benefit U.S. business as well American employees and consumers," states Lawrence L. Wills, chairman of the board of ANSI, and director of standards, IBM.

The strategic value of standards and U.S. participation in the standards development process is vital to America's ability to compete effectively in the worldwide marketplace. Strategic standardization makes good business sense.

Commerce's NIST. ANSI, a private, non-profit membership organization, accredits U.S. standards developers, approves American national standards, and is the sole U.S. representative to the Geneva-based International Organization for Standardization (ISO). With the prime responsibility for the government's coordination of the technological basis for standards, NIST works with industry to promote economic growth through a focus on the nation's technology infrastructure. Together, ANSI and NIST help coordinate a national strategy at the international standards negotiating table. "Governments around the world are using standards in a strategic

sense," explains NIST director Arati Prabhakar, "and increasingly in this
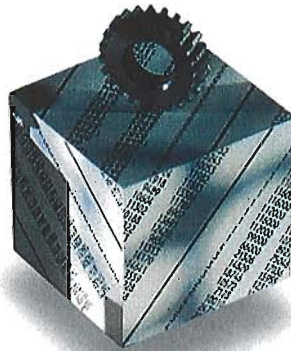
country we recognize there is a need to understand the strategic role of standards to establish a level playing field

to enable our companies to sell and operate in markets around the world."

DEREGULATION

Government deregulation and procurement reform has led to increased partnerships with the private sector, creating new opportunities for industries and companies large and small. Even the Pentagon is getting into the act. A series of directives from Defense Secretary William J. Perry has ordered that commercial standards be used in place of military ones wherever possible, opening the DoD market for companies who have traditionally passed it up, and saving billions of tax dollars as well. The military's adoption of commercial standards and products saves more than money. Says Under Secretary of Defense Paul G. Kaminsky,

> GOVERNMENT DEREGULATION AND PROCUREMENT REFORM CREATES NEW OPPORTUNITIES FOR INDUSTRIES AND COMPANIES LARGE AND SMALL.

"The military advantage will go to the nation which has the best cycle time to capture technologies that are commercially available, incorporate them into weapon systems, and field new operational capabilities." Standards are essential to speed that cycle time-to-market.
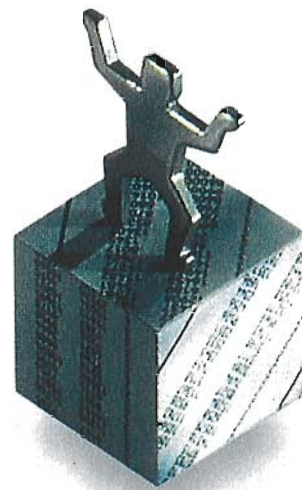
SERVICES

The trends in standardization are also impacting service businesses from air couriers to fast food. In most developed economies, the service sectors account for a growing portion of total GNP. In the U.S., 70% of the economy depends on services, and the share is growing. The area of service standards, while more difficult to define, has gained increasing attention as a result. Not unexpectedly, the European Union is leading the charge with several initiatives to establish service standards for consumers and businesses alike, from the moving of household goods to funeral services. An especially active area is the grading of hotel services—which could include the end-to-end process of registration to departure and the entire experience in between. If European hoteliers had such a competitive edge, non-conforming U.S. hotel chains operating in Europe could find themselves with no rooms at the inn.

Standards for travel agents, tour operators, and financial accountancies may not be far behind.

U.S. service businesses must pay closer attention to these developments. The ISO has identified services as the

> THE TRENDS IN INTERNATIONAL STANDARDIZATION ARE ALSO IMPACTING SERVICE BUSINESSES FROM AIR COURIERS TO FAST FOOD.

SETTING STANDARDS FOR PROFITABILITY

For over 50 years, ISA has led the way in the development of national and international standards. Accredited by the American National Standards Institute (ANSI) and recognized worldwide as a standards writing organization, ISA has published over 100 standards and currently leads three key international committees.

ISA Standards are widely used across industries in plant-floor applications; process control and automation; design, purchase and installation of equipment; communications; documentation; maintenance and safety. Experts have documented cost savings from 10-50% in areas of capital expenditure, construction, maintenance, engineering and equipment purchase resulting from the use of ISA Standards. In the safety area, savings go beyond financial to

ISA has led the way in the development of standards that increase industrial productivity and safety and ensure environmental compliance.

include human lives. And, the new technology represented in Fieldbus communications standards will have an impact throughout the United States and the World.

ISA is the international society of measurement and control with a membership of 49,000 engineers, managers and other professionals from over 85 countries around the world. The technologies represented within ISA span nearly every industry and are essential to the manufacture of products from cosmetics to cars. Environmental emissions control, quality control, the efficient use of energy, and reduced waste are all dependent upon measurement and control technology. All are vital to global competitiveness.

In addition to standards, ISA has much more to offer both individuals and industries. The Society provides training courses, certification programs, reference materials and other publications, forums for information sharing and technical journals to keep members up to date on the latest applications.

For more information about ISA and ISA Standards, call or write for our Information Package.

ISA

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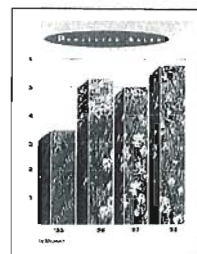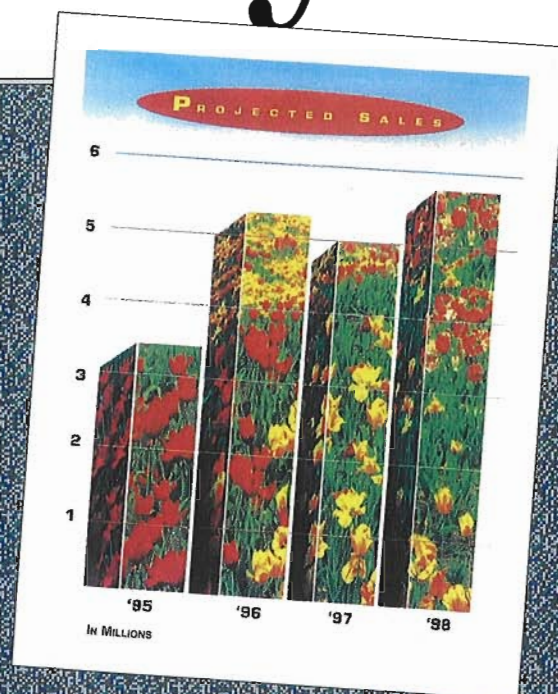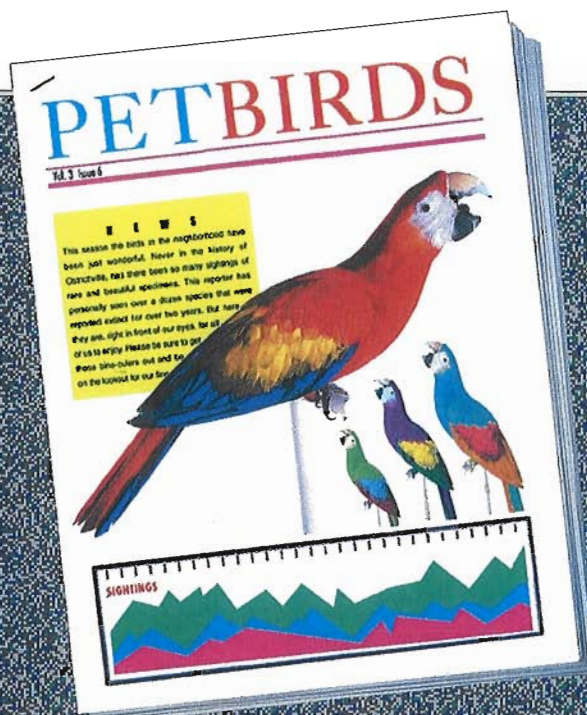
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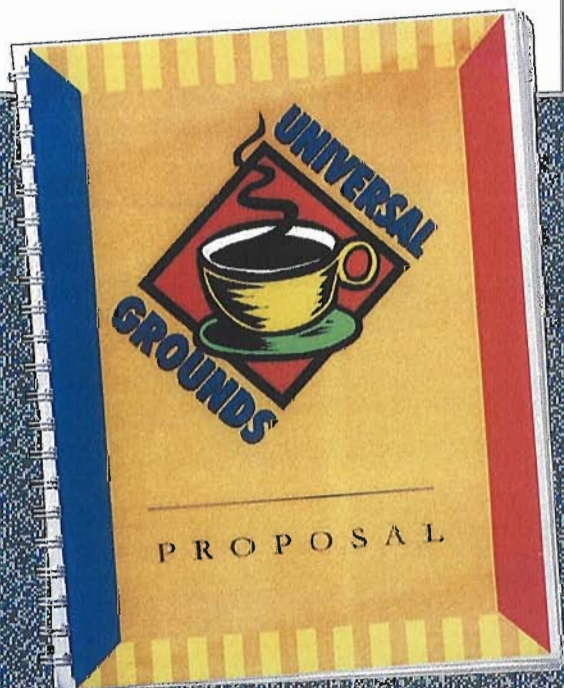
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Opening New Markets Worldwide

Hewlett-Packard Company, with 1995 revenues of $31.5 billion, competes in markets where standards affect access, customer acceptance, cost, and time to market. Selecting which standards initiatives to focus on means not only a firm fix on technology and world markets, but also a clear understanding of the de facto, consortia, formal, and regulatory standardization processes.

HEWLETT PACKARD

The development of the HP Printer Command Language (PCL), for example, was aimed at satisfying customer needs for printing low-cost, high quality integrated text and graphics. PCL became a de facto standard and fueled not only the growth of HP Laserjet and Deskjet printers but the success of many competing products. The standardization of infrared communications between computer products utilized the consortia route. The Infrared Data Association (IrDA) standards are now being used by HP and other vendors of mobile computing products, making the customer's life easier through wireless printing and data exchange.

A formal standards route was chosen for networking standardization. "In communications, standards are essential, and HP led the effort to create the most successful local area networking standard in history, Ethernet 10Base-T," notes Gary McAnally, general manager of HP's workgroup network division. The resulting IEEE standard boosted LAN use worldwide, along with sales of HP's networking products. Today, LAN connections exist in such places as college dorm rooms, in some elementary schools, and in many hotel, hospital, manufacturing, law, and insurance businesses.

Standards strategies are a key element of business success at HP and will continue to be important to HP growth, and that of the industry. "Our investments in setting new Internet printing standards will help drive the computing industry forward as the Internet becomes ubiquitous," says Carolyn M. Ticknor, HP vice president and general manager of the Laserjet solutions group. "Working with HP businesses, our company-wide Standards Strategy Committee facilitates the use of de facto, consortia, formal, and regulatory standardization processes to enable the creation of leading edge products that aim to satisfy real customer needs on a global basis," notes Brian D. Unter, director of corporate external standards.
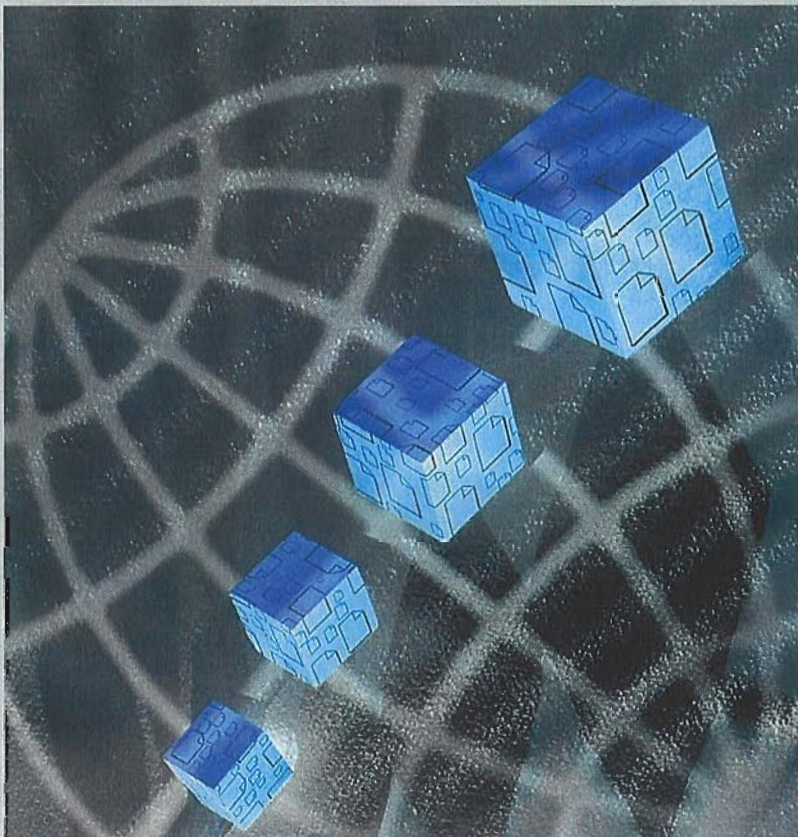
next major focus of standardization activity—already begun—well into the next century. An international conference on service standards is being planned for 1997. U.S. service businesses are well advised to establish an identity within ANSI to ensure that business and consumer interests are represented.

THE ENVIRONMENT

Also underway is a series of standards aimed at safeguarding the environment around the world. In September, the first of the ISO 14000 Environmental Management Systems standards became official, which helps businesses apply global standards for environmental risk management. The U.S., through ANSI, has played a critical role in their development, ensuring that U.S. interests are protected both in business and in the quality of life for every American. The U.S. Environmental Protection Agency (EPA) anticipates that the ISO 14000 standards—which will be adopted as American National Standards by ANSI—will provide more cost-efficient procedures to ensure compliance under EPA regulations. These same 14000 standards could minimize liability risks and reduce insurance costs for every American business adopting the standards. Businesses that comply with the new standards demonstrate to customers that—when it comes to the environment and safety—they are well managed and good corporate citizens. Being "green" is more than saving money; it's just good business.
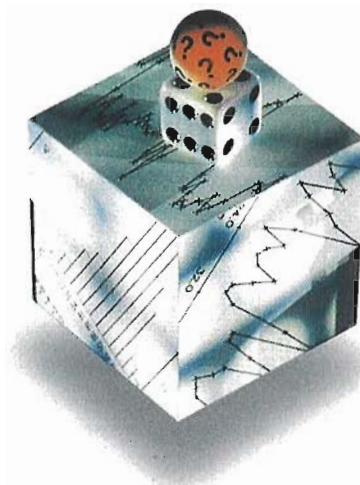
A CALL TO ARMS

While strategic standardization management will help the U.S. remain a global trader well into the next century, here at home it remains fundamental to

deregulation and government downsizing. To regulate less means to rely on conformance to a strong voluntary standards system, supported by government and industry alike. More American businesses—and their executives—need to have a place at the table. American enterprise—which used to export based on our own standards—is increasingly challenged by international standards resulting from the ongoing implementation of the World Trade Agreement. Emerging markets—such as those in China, Mexico, and Saudi Arabia—are establishing conformity assessment systems based on international standards that have the potential to exclude U.S. industry.

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The ProLiant 5000, with its Pentium® Pro processor, delivers unprecedented performance for mid-range solutions.

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We've also partnered with the industry-leading companies of system management applications. So now you can view your entire network in one place. Together, these and other improvements have helped reshape the landscape of mid-range computing, by creating the most manageable server in the industry. To find out more about the ProLiant 5000, visit our Web site at www.compaq.com, or call us at 1-800-315-7772. It's not just a server. It's a force to be reckoned with.

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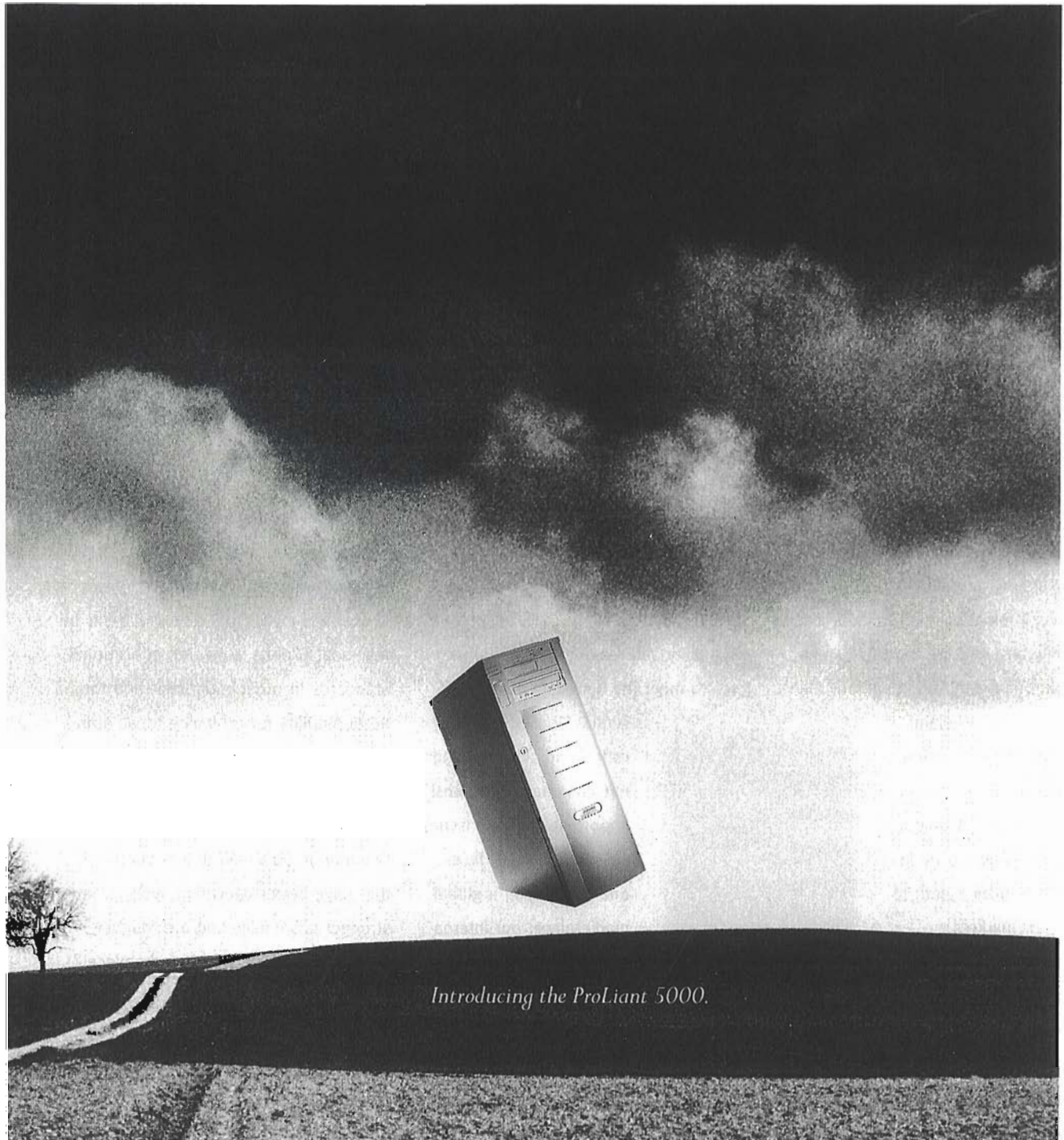
COMPAQ

Has It Changed Your Life Yet?

Avoiding standards which only create non value-added costs to doing business is equally important. An example of "less is more" is the recent success in tabling initiatives to develop international management standards for occupational health and safety, which the U.S. and others felt was more effectively dealt with at the national and local level. Where they are needed, American standards created by our voluntary system of standards development organizations (SDOs) are not just for domestic use; they have historically found wide acceptance abroad. Constant vigilance is required to ensure that this remains the case. U.S. companies can't afford to rapidly alter their products and services to meet sundry and complex domestic—much less international—standards and conformity assessment, especially ones that have been established without their participation. Carpe diem! U.S. business participation in the standards development process is not only a good preventative to trade barriers, it can be a path to exploit new markets.

The exponential growth of the Internet and the emergence of corporate intranets portend revolutionary changes to commercial and consumer markets, and disintermediation among traditional distribution channels. For such critical technologies as electronic commerce to flourish, global standards are required. At present, the U.S. has a commanding lead in developing and implementing technology for electronic commerce and a real opportunity to establish U.S. technology as global standards.

U.S. BUSINESS PARTICIPATION IN THE STANDARDS DEVELOPMENT PROCESS CAN MINIMIZE TRADE BARRIERS AND HELP EXPLOIT NEW MARKETS.

EDUCATION AND TRAINING

Perhaps nothing is more important to our long term economic well being than the quality and readiness of our work force to meet the demands of the next century. Work force education and skills training remains among the most important business issues we face. The U.S. faces one certainty in a global marketplace: our international competitors continue to improve their skills and capabilities in their quest for increased market share and enhanced quality of life for their citizens. MIT economist Lester Thurow estimates that only 20% of adult Americans have the education and skills to compete in the global market.

Many U.S. business leaders believe that our educational system is failing to deliver enough adequately prepared workers that are essential to compete on the world stage. "If we can't adequately prepare our kids, we'll continue to have job outflow," warns William C. Hudson, chairman and CEO of AMP, Inc., a global manufacturer. "From an employer's perspective, it's a customer satisfaction issue, and increasingly in this country, a lot of customers are dissatisfied. What we need is a common benchmark for our kids and those of other countries."

Each year, American businesses find a greater need to invest time and money in remedial education of new workers. In a society that faces a doubling of knowledge every seven years, it is absolutely essential that this trend be reversed. Experts warn that educational standards in other countries—and the accountability for achieving those standards—are generally much higher than in the U.S. At the National Education Summit this year, IBM CEO Louis V. Gerstner, Jr. observed that "Countries that have better education systems have stronger economies and are tougher competitors in the world marketplace." More American companies find themselves in the business of educating their new employees in the basics before they can be adequately trained in the skills their jobs require. As a result, business has had to take up where education has left off, amid a growing chorus to totally revamp the standards for education and skills training.

The Global Importance of U.S. Standards

Standards mean the difference between winning and losing in today's competitive world marketplace. Participation in the standards development process is vital; not only is it a good preventative to trade barriers, but an excellent means to exploit new markets. More than 254 standards developing organizations (SDOs) accredited by the American National Standards Institute (ANSI) are at the core of the American voluntary system of standards development. Each plays a vital role in meeting industry, business, government, and consumer needs. SDOs maintain a proper system of standards that reduces complexity and streamlines the production and delivery process, ultimately providing the consumer with clearer, more reasonable, economical choices. U.S. standards often have broad acceptance throughout the world.

A key ANSI standards developer is the Society for Automotive Engineers (SAE), which supports a membership of more than 65,000 professional engineers in over 80 countries. While its name may suggest that its single focus is on the automobile sector, in reality, SAE develops standards for the entire "mobility" industry, from airplanes, cars, construction and farm vehicles to helicopters, marine equipment, and trucks. Among SAE's better known standards are its oil viscosity ratings SAE 10W-30 and 10W-40. SAE actively promotes "globally harmonized" standards and serves as secretariat to a number of ISO committees. "I firmly believe that SAE is the unique catalyst to make global harmonization a reality," offers Max E. Rumbaugh, Jr., SAE's executive vice president.

As U.S. industries emerge into the world of standards for electronic data interchange, the Data Interchange Standards Association (DISA), Inc., Alexandria, Virginia, embraces the vast community with support and education. DISA's primary role is administering the ANSI accredited standards committee X12, which develops EDI standards widely used by industry and the U.S. government. As part of DISA's mission, it hand-tailors educational programs and annually holds the world's pre-eminent electronic commerce/electronic data interchange conference.

The World Leader In Project Management Standards

From high-tech to insurance, Business Week 1000 to small businesses, project management is fueling much of the successful development of exciting new business enterprises. Leading-edge organizations recognize the importance of standardization in securing a competitive position in future global markets, and they are turning to the Project Management Institute (PMI) for guidance.

PMI, a non-profit association representing more than 20,000 members worldwide, is the world leader in the development of project management standards. Our core standard, A Guide to the Project Management Body of Knowledge (PMBOK Guide), is recognized and used by professionals on six continents and in more than 50 countries.

The PMBOK Guide provides the framework for introducing a standardized, organization-wide project management methodology by documenting, identifying, and defining generally-accepted project management approaches—the well proven tried-and-true processes, the planning, the discipline to manage projects well.

The PMBOK Guide also provides a consistent structure for study and preparation of PMI's Project Management Professional (PMP) Certification program. Successfully achieving the PMP designation signifies that an individual has demonstrated a base level of knowledge and competency. PMI's Certification Program is the most widely recognized in the field of project management with more than 5,000 PMPs worldwide.

Industry Leadership and Time to Market

With $71.9 billion in revenues and 225,000 employees worldwide, IBM markets thousands of products from semi-conductors to software to mainframe computers in more than 159 countries. "IBM's customers are demanding open, interoperable systems, and the way to achieve that is through standards," according to Lawrence L. Wills, IBM's director of standards.

The growth of information infrastructures has increased global competition. Electronic commerce is speeding up the pace. Standards play a critical part in the successful, seamless development of these worldwide networks and applications that will take the world into the 21st century. IBM has over 800 individuals (part-time) from its divisions around the world involved in the development of these standards. The benefits of this participation far exceed the costs incurred.

"If you're not at the table participating, you don't have a voice in what's happening." says Wills—who is also Chairman of ANSI—"and you are in effect letting your competition define what your products are going to look like in the future."

Active participation in standards activities permits IBM to get its own technologies into the process, better understand where the standards are going, and help facilitate speed to market. An international standard permits IBM to build one product and market it worldwide. Standards and how they are used in products are an integral increasingly formalized part of the company's general management and strategic planning process.

In an information technology (IT) industry where historical four to six year product life cycles have been reduced in some instances to six to 12 months, IBM's challenge is to ensure a more responsive process and compress the time it takes to get standards approved.

New processes are now available to help close the gap between the time it takes to develop an international IT standard and the fast product cycles that characterize the IT industry today.

IBM's participation in standards bodies helps ensure that the development and approval procedures put in place are necessary and value-added to both industry and itself.

Standards provide an essential foundation on which reform and innovation can be built. The National Skills Standards Board (NSSB)—created by Congress in 1994 to help develop a voluntary national system of skill standards—calls such standards "essential... for individuals to succeed in the workplace." Adds NSSB chairman and retired Corning CEO James R. Houghton: "Skill standards are a national imperative. Success will be achieved only if employers, employees, educators, and communities across America... apply the standards in hiring and training." The National Governor's Association recently established an independent agency to help set educational standards and then monitor them in schools. The governors' actions were applauded by Albert Shenker, president of the American Federation of Teachers, who has long called for rigorous academic standards in schools—including teacher certification—while at the same time acknowledging schools aren't necessarily ready for them. The dramatic rise in private school enrollment across the country signals increasing dissatisfaction with public schools. Competition will help. The successes demonstrated by recent experiments—such as publicly-funded, privately-run charter schools in California, Massachusetts, and elsewhere—hold promise in helping speed reform.

Despite all the recent activity and broad agreement on the need for reform, for a variety of reasons—cultural and political among them—little real progress has been made. There are widely disparate opinions about what educational standards should include, let alone what they should be, and there are competing interests each with their own organizations and agendas. What's needed is a mechanism to channel these efforts to help deliver results. Such a mechanism exists. According to the Hon. Robert S. Walker (R-PA), chairman of the House Committee on Science, "The U.S. voluntary consensus standards community represented by ANSI comprises a unique American system: diverse membership, an open and published process, opportunities for

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public input, due process and a cooperative working relationship with federal, state, and local regulating bodies."

"We're convinced that there's nothing more important for ensuring U.S. competitiveness and our quality of life than our educational system," adds Sergio Mazza, ANSI president. In June, ANSI's company member council formed a task force to study how its members—representing hundreds of American businesses large and small—can help facilitate the national dialog among all stakeholders, with the idea of offering to interested parties an open process and level playing field for educational standards development, conformity assessment, and coordination.

Nearly 15 years after the National Commission on Excellence in Education's seminal report, we remain a nation at risk. Warns U.S. Commerce Secretary Mickey Kantor: "It does us no good to strengthen our economy if we don't take our most important asset—our work force—and educate and train them and provide them with the necessary tools to compete in the global economy." Our ability to learn and adapt faster than our competition may be the only sustainable competitive advantage we really have. As we approach the millennium, the U.S. voluntary consensus standards system may offer all stakeholders in educational reform and skills training the best hope to succeed.

Partnering With Customers for Success

Ameritech keeps 15 million customers in touch through telephone, cellular, paging, data, video, and information networks. Some 65,000 employees helped generate $13.4 billion in revenues last year. In a rapidly changing technological environment with increased customer expectations, Ameritech understands the fundamental connection between standards and new product development and service delivery. Strategic standardization is a key business policy.

Advanced technology is worthless if it isn't easy to use or doesn't meet real human needs. With 55% of Americans describing themselves as "technophobic," access to new products and services must 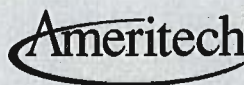be so simple and painless that those who can't program a VCR can get on board. Ameritech exhaustively studies and tests products with real people in the community where teams of engineers and cognitive psychologists work closely with customers to test and refine products to ensure ease of use. The results help drive the company's standards strategies. Determining early the right standards to use can accelerate the adoption of new products sooner. The lack until recently of a commonly accepted signaling standard for screen phones, for example, delayed their successful introduction. Once a standard was agreed upon—the Analog Display Services Interface (ADSI)—manufacturers could be assured enough market volume to produce screen phones that could retail for under $200.00—the price point for widespread consumer acceptance.

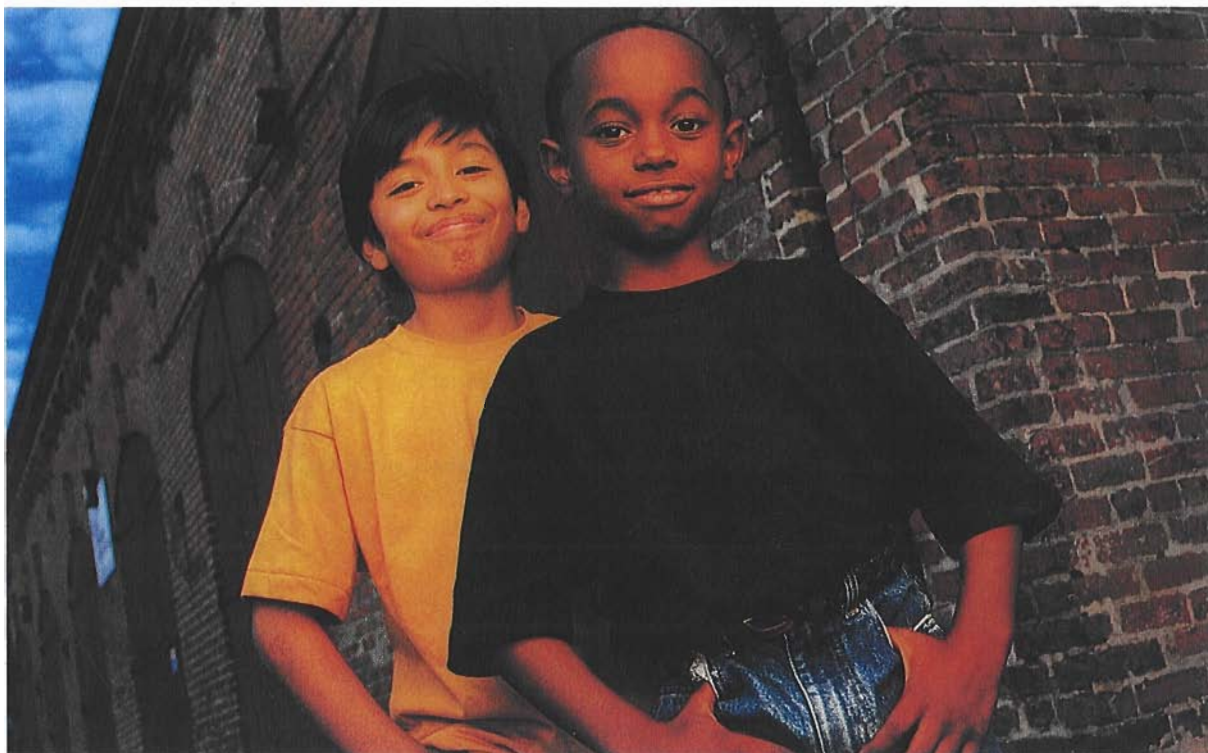Explains Michael G. Gorman, who oversees standards for the company, "We've moved from viewing standards as a technical concern to seeing them as a basic customer and marketing issue. Where we can involve end users early in the process, thereby making the standards more accepted by manufacturers—we can increase American competitive advantage." Ameritech—through its active participation in national and international standards development policy—is seeking to do just that.

Ameritech