



## PRESS REVIEW

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### As Part of NBS

# Bill Would Create Federal Standards-Making Institute

By Edith Holmes

Of the CW Staff

WASHINGTON, D.C. — A Senate bill that would create an independent government-financed standards board and a new Institute of Standards and Accreditation in the National Bureau of Standards (NBS) received strong support from the Computer & Communications Industry Association (CCIA) during hearings here recently.

However, equally strong opposition to the Voluntary Standards and Accreditation Act of 1977, S. 825, was lodged by the American National Standards Institute (Ansi).

The lack of computer industry standards costs the taxpayer "hundreds of millions of wasted dollars per year," CCIA President A.G.W. Biddle told the Senate Antitrust and Monopoly Subcommittee, chaired by the bill's author, Sen. James Abourezk (D.-S.Dak.).

Testifying on behalf of Ansi, the organization's executive vice-president, Donald I. Peyton, argued the bill would deprive the American public of the voluntary standards system by nationalizing it.

Ansi views the creation of the National Standards Management Board and the new NBS institute as its obvious replacement as the national standards-setter, Peyton said.

Rather than take the standards efforts in-house, the government should fairly enforce existing laws "which are totally adequate to provide oversight for voluntary activity," Peyton stated. Congress should encourage and support government participation in voluntary standards activities and government use of those voluntary standards which meet its needs, he added.

### More FTC Responsibility

Besides establishing a standards board and an accreditation institute, the Abourezk bill would strengthen the Federal Trade Commission's (FTC) responsibility to see that standards are not used as anticompetitive tactics. This would be accomplished by providing a means of appealing FTC decisions where appropriate, a spokesman for the Senate subcommittee explained.

The Secretary of Commerce would be given overall responsibility for standards efforts. Through the proposed NBS institute, the Commerce Department could check out laboratories who come to it and ask to be accredited to test products for consumers and the government.

One of the assumptions of the bill is that testing facilities like Underwriters' Laboratories have become "the tools of the industries," he noted.

The NBS institute could develop standards in the absence of private initiatives, according to S. 825.

The bill further provides for U.S. government participation in international standards efforts.

### Change of Heart

Jordan Baruch, assistant secretary for science and technology at the Department of Commerce, appeared briefly before the subcommittee to present executive branch opposition to the bill.

Abourezk, who had been informed by high-level Commerce Department officials that Baruch and the department as a whole supported S. 825, asked Baruch why his stance had changed. Staff members indicated the change was made on orders from the Office of Management and Budget (OMB).

Abourezk, who wanted to know

Baruch's personal opinion about the bill, asked that he provide it, and Baruch said he would ask the White House for permission to do so.

Last week a subcommittee staff member indicated Baruch had provided his "qualified" approval of the bill without indicating why OMB had asked that he oppose it.

During the hearings, the CCIA's Biddle explained to subcommittee members that the lack of compatibility between mainframes makes it difficult for users to move easily from one manufacturer's system to another's.

There is no institutional mechanism to encourage voluntary private-sector standards bodies to act in any but their own self-interest, Biddle said, citing Ansi X-3 committee contributions regarding a standard to permit the interconnection of peripheral products to mainframes as an example.

The Computer and Business Equipment Manufacturers Association (Cbema) has served as the secretariat of Ansi X-3 for several years, and IBM is a key Cbema member, Biddle said in explaining the industry leader's potential for influencing any standards-making process.

"A mechanism must be developed and implemented to prioritize the development of those standards that will be most beneficial to users and to the nation," Biddle said. "In our industry we have numerous standards dealing with how a magnetic tape reel should be labeled, or physically specified, as well as standard numerical designations for cities.

"We do not, however, have standard higher level computer languages that permit a program written for one manufacturer's machine to be run without change on another's machine," he said. "Nor do we have standards for the efficient high-speed usage of computer/communication networks or standards for the interconnection of the various units of hardware and software that go together to make a computer system.

The CCIA recommended Congress create a Computer & Communications Standards Board (CCSB), modeled after the Financial Accounting Standards Board (FASB), which would be under the full-time direction and control of a board of directors drawn from both the government and the private sector, including representatives from large and small providers and users.

The CCIA also proposed an addition to S. 825 which would require that standards be developed for the interconnection of devices made by different manufacturers.

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# Computer network conferences a

By Don Wood  
Special to Minicomputer News

NEWARK, NJ — Scientists around the nation can now hold conferences without leaving their offices, send electronically-delivered messages to their colleagues from hotel rooms and write, edit and submit journal articles from poolside. Using a minicomputer-based Electronic Information Exchange System (EIES), researchers in specialized disciplines can exchange ideas and compare notes on a daily basis, even if their colleagues are hundreds of miles away.

All they need is a terminal and access to a telephone. By dialing a local number, they connect with a nation-wide teleconferencing network developed by Murry Turoff of the New Jersey Institute of Technology.

EIES is now being tested by more than 200 scientists under National Science Foundation support, but Turoff predicts that a third or more of all scientists will use descendant systems within 20 years.

Most current EIES users belong to "invisible colleges" — informal groups of 10 to 50 researchers all working in the same specialized field though widely separated geographically.

"The system itself may be viewed as a large common blackboard available to

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**With a terminal and a telephone  
a scientist can set up a  
national conference.**

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scientific users of the system regardless of their location or their preferred time of use," Turoff said. Users communicate through four major modes — a private message system, a conference system, a bulletin and a personal notebook. Additional

# Network allows daily research among scientists all over the country

features can supplement these modes if the user desires.

On the private message system, a user can send an "electronic letter" to any other individual or group. Incoming messages are stored until the addressee signs on the system, when he can retrieve them. The computer stores messages for about a week after delivery; if the recipient wishes a permanent copy, he can transfer it to his personal notebook. The system automatically notifies senders when messages are delivered.

Most established groups have on-going conferences during which a conference moderator acts as chairman by encouraging participation, editing comments and keeping discussion relevant to the topic.

Conferences may take several months to complete, but participants can add comments whenever convenient for them (say, three in the morning). Users can review comments made since the last time they signed on the system, recall comments from any previous data, or search the on-going proceedings by keyword, name, and so forth. Normally, proceedings are limited to 300 comments, but the number may be adjusted if necessary. Either the author or the conference moderator may edit or delete outdated or irrelevant comments.

Any user can set up a temporary conference to discuss a problem common to some sub-group. He then functions as conference moderator. Temporary conferences are generally limited to 50 comments. However, several participants can pool their allocations if more space is needed.

Each user group has a bulletin which serves as the group's journal. Authors write and edit papers in their personal notebooks, then notify the bulletin editor when ready to submit their papers for publication. The bulletin editor chooses

reviewers, who discuss the paper anonymously with the author. After acceptance, the paper is published in the bulletin where any user can retrieve it.

Members can also submit news or business items to the bulletin. The system automatically tallies votes on business items and displays results to readers.

Users have a 50-page notebook for personal use. This is basically a personal file for storing correspondence, retaining copies of items, and writing and editing material such as conference comments or technical papers. Two or more users may merge their notebooks and a user can open portions of his notebook to others

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**The system leads beginners through its features so that anyone can use it after 30 minutes of instruction, Turoff said.**

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for reading and writing or for reading only.

Additional features of EIES include:

- **User Directory:** users enter name, address, telephone number and brief descriptions of themselves and their interests. The directory can be scanned geographically by name, profession, keyword, zip code and area code.
- **Hal Zilog:** users see Hal Zilog as a member of the system, but he's actually a microprocessor. When fully developed, Hal will be on call for all users to do simple terminal graphics as well as statistical and modeling routines. Also, users could request Hal to access a large data base somewhere, manipulate data, perform other chores and display results.
- **Pen Name:** users select pen names that allow them to send messages or make comments anonymously if desired.

- **Coffee Break:** Users can write jokes or funny stories and swap gossip much as they would during a face-to-face coffee break. Originally called Graffiti, the designers felt that name lacked dignity.
- **Text Editing:** Users can prepare texts easily and quickly using this feature.

Anyone can use EIES after only 30 minutes of instruction, Turoff said. The system leads beginners step by step through the various communication modes and features. As users become more experienced, they can take advantage of the more advanced features and even write their own commands for operations they perform often.

Turoff said EIES is cheaper than long distance phone calls and the U.S. Mails and its costs will drop as more users come online. For 300 users, the system costs about \$8 per hour; with 800 or more users, costs drop below \$5 per hour.

EIES and descendant systems will have a profound impact on human communications, Turoff predicts. The chief bottleneck in making the system generally available is difficult access to terminals. But as terminal prices drop in the next few years, Turoff sees more and more people joining the system. Perhaps libraries will install terminals for public use, Turoff suggested.

Newspapers may be delivered electronically and magazines and journals will publish hard copies only on specific demand, he added.

The hardware heart of EIES is two Interdata 7/32 minicomputers, each connected via separate disk controllers to DD/32 dual disk systems with more than 200 megabytes of capacity, Turoff said. Only one of the minicomputers is actually used to operate EIES; the other performs different functions, but can take over the system if trouble develops in the first.

# THE TOP 50 U.S. COMPANIES IN THE DP INDUSTRY

Estimates for 1976

RANK	COMPANY	DP REVENUES \$M	DP REVENUES (% of total revenues)	U.S. DP REVENUES (% of total dp revenues)
1	International Business Machines	\$12,717	78%	50%
2	Burroughs	1,630	86%	57%
3	Sperry Rand	1,430	45%	58%
4	Honeywell	1,428*	47%*	45%*
5	Control Data	1,331	98%	66%
6	NCR	1,100	48%	51%
7	Digital Equipment	736	100%	62%
8	Hewlett-Packard	335	30%	52%
9	Memorex	310	90%	58%
10	TRW	295	10%	90%
11	3M	211	6%	80%
12	Itel	189	73%	90%
13	General Electric	185	1%	80%
14	Automatic Data Processing	178	95%	90%
15	Computer Sciences	165	75%	81%
16	Mohawk Data Sciences	162	100%	43%
17	Data General	161	100%	59%
18	Electronic Data Systems	133	100%	95%
19	Management Assistance	123	100%	60%
20	Storage Technology	122	100%	75%
21	Data 100	120	98%	67%
22	Xerox	120	3%	100%
23	California Computer Products	116	96%	76%
24	Ampex	115	45%	53%
25	Bunker Ramo	107	34%	90%
26	Amdahl	93	100%	75%
27	Harris	92	18%	90%
28	Teletype	90	50%	90%
29	System Development	85	77%	95%
30	General Instrument	84	22%	80%
31	Tymshare	82	100%	85%
32	Wang Laboratories	82	85%	55%
33	McDonnell Douglas	77	2%	100%
34	Dataproducts	75	88%	75%
35	Telex	75	71%	74%
36	Raytheon	74	3%	80%
37	Perkin-Elmer	73	21%	75%
38	General Automation	71	100%	70%
39	Datapoint	68	94%	70%
40	Sycor	67	100%	70%
41	Texas Instruments	66	4%	70%
42	GTE	65	1%	70%
43	Four-Phase Systems	63	100%	70%
44	Inforex	63	100%	70%
45	Tektronix	62	17%	70%
46	Wyly	62	97%	70%
47	Recognition Equipment	60	92%	70%
48	Informatics	59	100%	70%
49	Electronic Memories & Magnetics	58	6%	70%
50	Boeing	55		70%

ATSU COMMENT - Out of the top 50, the following eleven companies offer remote computing services, either themselves or through a related company:

5. Control Data (Service Bureau Company)
12. Itel (Multiple Access)
13. General Electric (Information Services Div.)
14. Automatic Data Processing (ADP Network Services)
15. Computer Science (Infonet)
22. Xerox (Xerox Computer Services)
31. Tymshare
33. McDonnell Douglas (MCAUTO)
46. Wyly (University Computing)
48. Informatics (Data Services Division)
50. Boeing (Boeing Computer Services)