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TRANSCRIPT OF HEARING ON IMPROVING U.S. PARTICIPATION IN INTERNATIONAL STANDARDS ACTIVITIES

THIRD DAY: APRIL 5, 1990

U.S. DEPARTMENT OF COMMERCE
National Institute of Standards
and Technology
Technology Services
Office of Standards Services
Gaithersburg, MD 20899

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U.S. DEPARTMENT OF COMMERCE
Robert A. Mosbacher, Secretary
NATIONAL INSTITUTE OF STANDARDS
AND TECHNOLOGY
John W. Lyons, Director

NIST

NATIONAL INSTITUTE OF STANDARDS &
TECHNOLOGY
Research Information Center
Gaithersburg, MD 20899

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TRANSCRIPT OF PROCEEDINGS

UNITED STATES
DEPARTMENT OF COMMERCE

In the Matter of:

NATIONAL INSTITUTE OF)
STANDARDS AND TECHNOLOGY)
PANEL MEMBERS' MEETING)

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NATIONAL INSTITUTE OF STANDARDS AND TECHNOLOGY
DEPARTMENT OF COMMERCE

HEARING PANEL MEMBERS' MEETING

Thursday
April 5, 1990

9:00 a.m.

Department of Commerce Auditorium

Present on Panel:

DR. STANLEY I. WARSHAW, Chairman
Director, Office of Standards Services
National Institute of Standards and Technology
Admin. Bldg., Rm. A-603
Gaithersburg, Maryland 20899

Mr. Walter G. Leight
Deputy Director, Office of Standards Services
National Institute of Standards and Technology
Admin. Bldg.
Gaithersburg, Maryland 20899

Mr. John L. Donaldson
Chief, Standards Code and Information Program
Office of Standards Services
NIST
Admin. Bldg., Rm. A-629
Gaithersburg, Maryland 20899

Tom Crider
Food Safety and Inspection Service
U.S. Department of Agriculture
South Building
Washington, D.C. 20250

Mr. Phillip B. White
Director, Office of Standards and Regulations
Center for Devices and Radiological Health
Food and Drug Administration, HFZ-80
5600 Fishers Lane
Rockville, Maryland 20857

Mr. Earl S. Barbely
Director, Telecom and Information Standards
CIP Bureau
U.S. Department of State
2201 C Street, N.W., Room 6317
Washington, D.C. 20520

Presenters Present:

JOHN PICKITT
Computer and Business Equipment Manufacturers Association

BRUCE DeMAEYER
Exchange Carriers Standards Association

L. JOHN RANKINE
Consulting Services

DON LOUGHRY
Hewlett-Packard Company

KENNETH INGRAM
DENNIS THOVSON
AT&T

KENNETH HUTCHESON
ANSI ASC X12 - Electronic Data Interchange

SAMUEL CHEATHAM
Storage Technology Corporation

WAYNE DAVISON
Research Libraries Group

G.J. HANDLER
Bellcore

ERICK DUESING
Infolink Solutions

CHET STURGEON
Product Data Exchange Specifications

JO WILLIAMS
American Speech-Language-Hearing Association

EILEEN HEALY
Pacific Bell

PETER YURCISIN
Department of Defense

CHARLES H. PIERSALL, JR.
US> TAG to ISO TC 8

Presenters Present: (continued)

G. WILLARD JENKINS
JOHN CROWLEY
U.S. TAG for ISO TC 23
Tractors and Machinery for Agriculture and Forestry

JOHN HEDLEY-WHYTE
U.S. TAG for ISO TC 121, SC 3
Anaesthetic and Respiratory Equipment, Lung Ventilators, and Related Equipment

C. EDWARD ECKERT
GERALD RITTERBUSCH
U.S. TAG for ISO TX 127
Earth-moving Machinery

P R O C E E D I N G S

CHAIRMAN WARSHAW: Good morning, ladies and gentlemen. We welcome you to the three days that we've had these hearings. I'm Stanley Warshaw of the National Institute of Standards and Technology and I will be chairing today's hearing.

On my immediate right is Walter Leight and to his right is John Donaldson who are also of the National Institute of Standards and Technology.

We are also fortunate to have with us today some representatives of other agencies who can bring some particular skills to contribute to this forum and they are helping to advise NIST in these hearings.

I am please to introduce Tom Crider on my far left, from the Department of Agriculture, Mr. Earl Barbely from the U.S. State Department, and on our far right, Bill White from the Food and Drug Administration.

On the last page of your agenda package is some information as to how you can obtain copies of both these transcripts, as well as the numerous written comments we have been receiving relative to this subject.

The comment period has also been extended until June 5, 60 days following this hearing, the reason being that we would like to provide an opportunity because of the tremendous response that we have received to date, for those who wish to comment further based upon either the information they received at this hearing, or other information.

So we would encourage further comment through June 5th.

I would now like to call the first two presenters today from the Computer and Business Equipment Manufacturers Association and the Exchange Carriers Standards Association. Would you come to the podium, please?

I would like to also note that there have been three cancellations for today. The one scheduled for 10:15 by AT&T Bell Laboratories has been cancelled. The one scheduled for 2:15 p.m., NKA has also been cancelled, and the third cancellation is the one marked for 3:00 p.m., U.S TAG for ISO TC 115, pumps.

These are all cancelled on the individuals' initiative. As a consequence then, we should be able to finish today's program at 3:00. This will put us 45 minutes ahead of schedule.

First, Mr. Pickitt, if you would kindly offer your comments and introduce your associate, we would appreciate it.

MR. PICKITT: Mr. Chairman and members of the committee, good morning. I am John Pickitt, President of the Computer and Business Equipment Manufacturers

Association.

With me this morning is Bill Hanrahan, the senior director for standards and technology programs.

We submitted a statement on March the 22nd and request that it be included in the record of these hearings. And I would like to thank you for the opportunity to personally express the views of the Computer and Business Equipment Manufacturers Association on U.S. participation in international standards.

On behalf of our membership, information technology companies that are responsible for nearly five percent of our gross national product, I'm please to tell the Department of Commerce that the United States has an effective and democratic process for developing technical standards, and that we strongly urge that it not be replaced by the government.

Since 1959, CBEMA has consistently supported the voluntary standards process, which the American National Standards Institute -- ANSI -- embodies. We've also consistently participated, through ANSI, in the effective efforts to harmonize information technology standards worldwide.

An alternative to ANSI is now under consideration within the U.S. Government. The proposal -- Standards Council of the USA (SCUSA) -- we believe demonstrates a misperception, a misperception of the current and future challenges in standards. SCUSA would add an unneeded bureaucracy, and no value.

Our experiences gives us a different view of the situation facing our industry and the United States.

We want to register our disagreement with those who would replace the voluntary system led by ANSI with a government-mandated system. ANSI is the foundation of our voluntary standards system.

The American National Standards Institute is not national in the sense that it is a government-mandated entity, but it is truly national in that it encompasses the concerns, the input, products, and needs of an entire nation: Producers, private-sector users and government. All of those in standards may participate equally in the ANSI system.

American industry faces global competition. To succeed, it must market globally and cope with numerous standards, testing and certification schemes around the world. In meeting this challenge, industry joined with consumers in the U.S. voluntary standards process in making progress in the all-important effort to internationally harmonize standards and conformance testing.

This process, therefore, does serve the nation's trading needs in today's international climate.

In fact, in a recent international information technology standards meeting, the U.S. position prevailed 105 of 106 times. This stands out as a prime accomplishment of a process wherein the government serves as a participant, not as a ruling or an administrative body.

There is more than adequate participation by representatives of the public and private sectors in the process. The U.S. information technology standards community served by secretariat activities of CBEMA alone includes almost 1800 organizations representing major manufacturers, private-sector consumers, government and other interested parties.

Moreover, under the ANSI rules, participation of smaller companies is just as effective as larger companies on any given subject: One organization, one vote.

Clearly then, the information technology standards community encompasses the range of U.S. interests and carries their interests forward as a great strength in representing the United States in international standards organizations.

The United States Government can and should support this voluntary standards system, without damaging the integrity of it, in at least three ways: By continuing to participate in the voluntary process and adopting voluntary standards for government purposes in accordance with OMB Circular A-119, as NIST's National Computer Systems Laboratory has done with GOSIP, the Government Open Systems Interconnection Profile.

And second, to take aggressive action when standards or testing procedures in other countries are used as a trade barriers against United States companies; and third, to urge other countries to adopt and implement international voluntary standards.

In contrast to most other countries, the national standardization system in the United States is a profoundly democratic process. Challenges which must be met by our voluntary process to ensure successful standards developments in the United States environment include assuming representation of users; achieving a fair balance among competing industry interests; avoiding fragmentation, duplications, and inefficiency in standards committee activities; and most importantly, establishing a clear consensus of vision of the future we seek.

We should not change our process just because other nation organizes their internal system in a different way.

The government-run standards system such as that embodies in the proposed SCUSA, contemplates a remedy inappropriate to the government's role, and unnecessary for the effectiveness of the process here and abroad.

Without our standards process, the government should continue to act primarily as a proprietor and not its sovereign interests. Its sovereign interests are met through enforcement of the anti-trust laws and technical regulation of commerce under statute, such as carried out by the FCC and OSHA.

Among the duplicative and intrusive tasks for SCUSA outlined in the published proposal, two of the most harmful relate to testing and certification, and to accreditation.

First, a shift from the voluntary process in the private sector to a government-centered program could have an extreme adverse effect on current testing and certification programs.

The information technology industry believes in the principle of Manufacturer Self-Testing and Declaration of Conformance to standards. We are not opposed to voluntary third-party testing and certification for manufacturers who desire an alternative.

We are opposed to unnecessary government regulation of testing and certification programs. Testing is an integral part of the manufacturing process and an essential requirement for an information technology manufacturer to provide an acceptable product and to successfully remain in business today.

Additional testing, if required, would be redundant, time-consuming and would certainly escalate costs for the consumer.

Secondly, SCUSA as proposed would involve the government in recognition, or accreditation, of testing and conformance programs. Requiring these programs to have a government seal of approval or license would institutionalize discrimination against those groups that are not accredited.

Lack of accreditation by a private voluntary organization doesn't carry the same stigma. The marketplace, in effect, accredits them by accepting or rejecting their products. If the government were to become more involved in the accreditation process, that would do great harm to the current system.

Further, a danger of government getting too deeply involved in voluntary programs is that government funds become scarce when they are shifted in response to political needs. Examples of this in the standards environment include such actions as NIST being forced to drop or renege on offers to take the secretariats of several different technical committees due to lack of resources.

For example, NIST relinquished the secretariats for the ISO standards committees on Documents and Data Elements in Administration, Commerce and Industry, and on the Representation of Data Elements.

NIST offered to take the secretariat of the ISO committee on Flexible Magnetic Medica for the Digital Data Interchange, and then later had to withdraw the offer.

In summary CBEMA member companies are strongly opposed to a federal government created infrastructure such as SCUSA.

It would not enhance U.S. international commercial interests as stated in its proposed purpose. It would add no value, but it would add an unneeded bureaucracy. All of the functions in the proposed scope of SCUSA are currently provided for within the government or are functions which are currently the responsibility of private industry, and should remain so.

CBEMA's goals in the areas of standards and testing are very straightforward: To develop standards as functional specifications, not as design specifications; to have one standard or set of standards per application recognized everywhere in the world; to have acceptance of a manufacturer's declaration of conformance to standards; to test our products once and be free to use them and offer them anywhere in the world.

These goals can be met within the current system and we call on the government to support our system. The United States voluntary system with its built-in checks and balances of government, private-sector user, and producer involvement, is a unique system which has evolved sensibly to serve our nation well, both nationally and internationally.

A healthy private sector standards structure is the mechanism to maintain our strength and effectiveness, and the best safeguard for protection of U.S. interests abroad is to reinforce ANSI in its role in international standards organizations.

It is not necessary that the internal United States standard system mimic another nation's structure. Let's retain that which has been successful and has a satisfying history of satisfying our U.S. needs nationally and internationally

Thank you.

CHAIRMAN WARSHAW: Thank you very much, Mr. Pickitt. Are there any questions from the panel?

Mr. Leight.

MR. LEIGHT: I would like to ask you a question quite independent of the SCUSA issue. You talked about a government seal of approval as being discriminatory in the sense that if somebody doesn't get it, they are discriminated against, whereas this doesn't apply in the private sector.

Did you mean by that, that private-sector seals of approval really have no meaning?

MR. PICKITT: No, far from it, sir.

The private sector seals -- the point I was making is that when a government, a nationally founded organization certainly within the standards that within our culture and society, we implement -- adds a permanence, a legitimacy, and overview that carries a level that is supposed to be beyond challenge in integrity of setting a plane that can't be arbitrated against, can't be discussed and reasoned.

The difference in that is that within the civilian side and the private-sector side, there is a participative rather than a dictative-type element because you are part of the same group and the same team in the same context.

Ultimately, the seal of approval for a manufacturer's product is reached in the marketplace by the very plain fact that as we buy and use equipment, regardless of whose seal of approval is on it, the people know, just as you do in your family whether you are buying cars or appliances for the house, ultimately your use tells you both the quality and the durability of the product.

The difference comes that if the government begins to get into that area, you bring a different formality to recognition and that creates the compression in the middle that we do not see as appropriate, nor desirable.

MR. LEIGHT: Thank you.

CHAIRMAN WARSHAW: Mr. Donaldson.

MR. DONALDSON: Thank you. Over the previous two days, we have heard references in a number of the presentations to events occurring within the European community, some with respect to problems, potential technical barriers to trade, others talking about remedies that have been established and which we will watch to see if, in fact, they are implemented.

Do you care to offer any comment as to the affect on your industry of the EC activities and do you anticipate potential barriers?

MR. PICKITT: I just returned from making a presentation in Europe where I had an opportunity to interface actively before a group with some of the EC officials.

The view that I would offer is that in general, we are very optimistic, I believe, within the membership that I represent for the EC, but we really hope and wish that they would keep their system open and discuss and make an avenue and a forum for discussion and consideration as they develop their directives.

Not necessarily because we expect any type of deliberate barrier to be erected, but it is very possible if one acts without all information, without understanding of all parties, that it could even inadvertently result in creating a barrier.

To that extent, we are trying to encourage. I know that there will be continuing concern and anxiety until everything is established and has been assessed.

As to examples of previous issues that have barrier-effectiveness, I believe that they are delineated both in my prepared text which was submitted on the 22nd, and we have a paper that lays out several particular areas which we will submit for the record.

MR. DONALDSON: Does the written comment then address the discomfort that some of your members feel with respect to the quality system activity.

MR. PICKITT: Yes.

MR. DONALDSON: Going on within EC.

MR. PICKITT: Yes. Yes, sir, it does.

MR. DONALDSON: Okay. I haven't had a chance to read all that, but I will look for it. Thank you.

MR. PICKITT: We do have some grave reservations in the area of the quality system and the ISO 9000 area, as well as some others, Mr. Donaldson.

MR. DONALDSON: One of the more outspoken members of your community has made that quite clear.

MR. PICKITT: Well, I hope that I am doing well in representing him, because there are many that share his views.

CHAIRMAN WARSHAW: Thank you very much, Mr. Pickitt. We appreciate your taking the time to present your material to us, and again, the record is open if you have additional comment. We would be most happy to receive it.

MR. PICKITT: Thank you, Dr. Warshaw, and I would like to express my appreciation for the committee's understanding and for Bruce's excusing me, since I have 16 members of the board that are somewhere over there doing something that I am developing anxieties about in the same way we are standards.

CHAIRMAN WARSHAW: We fully understand.

MR. PICKITT: Thank you.

CHAIRMAN WARSHAW: We will now hear from Bruce DeMaeyer of the Exchange Carriers Standards Association.

Mr. DeMaeyer.

MR. DeMAEYER: Thank you, Dr. Warshaw.

My name is Bruce DeMaeyer, and I am submitting this statement in my capacity as the President of Ameritech Mobile Communications and as the Chairman of the Board of the Exchange Carriers Standard Association.

I am also a member of the Board of the American National Standards Institute of which ECSA is one of the largest members.

I am particularly pleased to have the opportunity to present these comments today because of my involvement in the U.S. standards community and my strong belief that the current private voluntary standards process administered by ANSI is the most sound, efficient and effective means for achieving essential standardization, particularly as it relates to telecommunications products and services.

Moreover, based on the performance and result of the present process, there can be no doubt that U.S. interests are not only adequately being represented in the global standards arena, but that they are assuming a leadership position.

For these reasons, I believe it would be a grave error if any effort were undertaken to re-design the domestic standards infrastructure so that greater government would result.

Government representatives already play an important role in the development of voluntary standards. As respects telecommunications, for example, the government is perhaps the largest consumer of products and services, and as a result has an enormous influence on the direction of standards development and the priorities placed on specific projects. This traditional role should no doubt be re-affirmed.

On the other hand, structural modifications to the current process resulting in an increased administrative or regulatory role for the government, or any of its agencies, would only lead to a slower, less responsive system for the development of standards.

Resources would not be allocated as efficiently and priorities might be misdirected. As a result, U.S. industry would be negatively impacted because it would find itself in even a less advantageous position for the purposes of competing in the global marketplace.

That is not to say, however, that the government has no role to play relative to standards, or that its role cannot be enhanced. At the present time, there can be no doubt that competition is global in nature.

This is true for telecommunications and many other industries which benefit from standardization. There also should be little question that there exists a pressing need for the government to enhance the ability of domestic firms to compete in world markets.

The task that remains, then, is how to coordinate the efforts of the government and those of the private sector so that foreign markets are made fully accessible and free from artificial barriers to all forms of trade, including standards that are developed in the United States.

One way would be to establish a well-defined complementary partnership between government and the private sector that relies on the respective strengths of each. Thus, substantive standards development should remain the responsibility of private sector standards developers, and the government should have the task of exercising its influence so that the fruits of the private sector's efforts would be provided the fullest access available to all markets of the world.

Such a division of responsibility would then not encumber the existing highly productive efforts of the private sector, and would not impose layers of bureaucracy or regulation on a process that has become recognized as the leader in its field.

It would, however, serve U.S. interests and make U.S. industry an even stronger competitive force throughout the world. U.S. interests would be able to rely on the technological advancements that readily result from the current standards process.

In support of these views, I would like to present some hard facts. In particular, the success and influence of the ECSA-sponsored Committee T1 stands as a compelling example of the effectiveness of the current voluntary standards system.

The development of standards took on a new importance for those of us in the telecommunications industry at the time of the AT&T divestiture. It became clear that we could no longer rely on a monolithic Bell System to ensure compatibility and inter-operability of networks and equipment.

Nor could we predict how increased competition for service and equipment offerings would impact our ability to deliver first rate telecommunications services.

In part, for these reasons, I joined with others in the telecommunications industry, in 1983 in anticipation of divestiture, in an effort to establish a standards development group.

From this effort, ECSA was born as a non-profit trade association and was incorporated in the summer of '83 for the purpose of providing a forum and for representation of wireline exchange carrier interests in connection with standards and related activity regarding the telecommunications industry.

When we were formulating the T1 committee, we researched other standards developing organizations to look for success and failure elements. We found that all of the successful standards developers were a part of the ANSI federation.

ANSI's due process concepts fit our needs precisely, and accordingly requested that ANSI sanction our request to become Secretariat of the newly-proposed T1 committee on telecommunications.

ANSI provided provisional acceptance on January '84, permanent accreditation on September 20, 1984.

Committee T1 Telecommunications held its first official meeting in February of 1984 and commenced its operations under procedures correctly proscribed by ANSI.

From the outset, as required by ANSI, a broad cross-section of the industry has been represented in Committee T1. The committee currently has 90 members, one of the largest committees of the ANSI federation.

Perhaps most important, however, though, is the high level of productivity that Committee T1 has been able to achieve during its short existence. As of last count, 50 standards developed by Committee T1 have now been approved as American National Standards.

In addition, another 150 projects continue to be worked on in Committee T1, many of which will also result in American National Standards.

Thus, in only a little over six years, Committee T1 has been able to establish a forum where over 100 participants from all aspects of the telecommunications industry have been able to engage in a consensus process and develop technical standards relating to existing and newly-emerging technologies.

Such success, I strongly believe, could not have been achieved through government mandate.

What's more, such success reflects T1's effectiveness in managing the flow of critical technical information to interested parties throughout the industry and globally.

Specifically, procedures exist which ensure that timely, comprehensive and cost-effective distribution of information to members and non-members of T1 alike.

And finally, Committee T1's influence internationally is reflected by the large number of contributions emanating from T1 to the State Department's U.S. National Committee which has the responsibility for U.S. positions to CCITT.

This has been particularly the case as respects contributions developed within T1 relating to the emerging ISDN technology.

Given such unmitigated success then, it is my view as a representative of the private sector and a highly committed participant in the standards process, that imposing governmental administrative or regulatory control over standards developers in the U.S. would be a terrible mistake.

Such a step would compromise the effectiveness of committees such as T1, and potentially redirect their efforts to projects deemed important from a government perspective, rather than as demanded by the marketplace.

This would especially be true if standards developers were made dependent, even to the slightest degree, upon the government for funding. Political or bureaucratic infighting could be rife and budgetary constraints devastating, all to the detriment of the standards process.

But as I indicated earlier in my remarks, there are initiatives which the government could undertake to make U.S. industry even more successful in its efforts to remain competitive in the global marketplace.

Most importantly, through existing legislative authorizations, the Department of Commerce and the United States Trade Representative's office must make every effort to ensure that a level competitive playing field exists throughout the world.

Foreign markets must be made free of trade barriers for U.S. products and services. Achieving full and complete transparency of standards on an international basis must also be a primary undertaking.

To achieve improved coordination and communication may be the easiest aspect of all, however. ANSI already serves as a coordinating force for the voluntary standards developers that operate under its auspices, and would be an appropriate and logical liaison between U.S. government representatives and the private sector.

By playing such a role, ANSI would also enhance its position as the focal point for managing non-treaty U.S.

positions internationally. ANSI's recently opened Washington and Brussels offices would also enhance its ability to perform such a function.

In sum, as a general proposition, the effectiveness of U.S. standards development cannot be questioned. Committee T1, as just one example, has already demonstrated in its short lifetime the pre-eminence of its technical expertise and the leading position it has assumed in the world standards community.

No steps should be taken to hinder these efforts. Rather, a coordinated effort between private industry and all relevant government entities must be developed so that the opportunities for U.S. industry to complete abroad are maximized.

I would like to ask that a full copy of my testimony be presented for the record, as I had to remove several parts of it last night when I found out about the ten minute limitation.

CHAIRMAN WARSHAW: Thank you very much, Mr. Demaeyer. We appreciate your brevity, and indeed, if you would leave us a copy the transcriber will certainly incorporate it in the record.

You may submit additional comments up until June 5th as well.

MR. DeMAEYER. Thank you.

CHAIRMAN WARSHAW: Are there any questions from the panel?

Mr. Donaldson.

MR. DONALDSON: Mr. DeMaeyer, you made reference to enhancing the private sector system and U.S. government partnership, and indicated that clearly one area, from your point of view, for enhanced efforts is in the international arena.

I wondered if you had any specific proposals in mind that would implement that principle?

MR. DeMAEYER. I think I can give you a fairly good example.

The European community has created a regional telecommunications standards effort as what they refer to as ETSI -- I think it stands for the European Telecommunications Standards Institute, I think.

I believe that because T1 started about two years before ETSI was created, and the European community had been invited in to an open participation in U.S. standards, that there was a compelling need to be bilateral in the creation of ETSI, and in fact open themselves up for observer status that U.S. players in standards could come in as observers.

We welcomed that opportunity and it was supported strongly by the U.S. trade representative, at the time, I believe, encouraged the Europeans to truly open their standards setting process up to the American input far before the draft stages of any proposed drafts and so on.

We were welcomed in, in that process. Subsequently efforts on both government's part and our part have continued to open up that effort at the very early stages of being able to submit input into significant pre-draft levels of those kinds of standards that we would be mutually interested in making sure are compatible between Europe and the United States.

It is that kind of effort that I am talking about that would be on an on-going forward pushing kind of process that I would encourage that we work together on.

Each of us by ourselves is incapable, I believe, of solving the problem unilaterally, but the private sector and government working together can put a lot of pressure on Japan's and the European process where there are three now very large regional bodies that are beginning to formulate world telecommunications standards.

MR. DONALDSON: Thank you.

THE COURT: Mr. Leight.

MR. LEIGHT: I wonder if you could clarify your reference to non-treaty obligations. Did you mean by that, private-sector type activities, or did you mean such things as the GAT standards code which is non-treaty but government-to-government type stuff?

MR. DeMAEYER. Most of the telecommunications standards internationally are operated through the International Telegraph Union -- ITU -- which the relationship between the U.S. Government and the rest of the countries is under a treaty obligation.

That's why the State Department manages the U.S. national committee's input into that process.

When I refer to non-treaty standards, I mean those that are dominantly managed by ISO and IEC internationally.

MR. LEIGHT: That's private sector voluntary organizations.

MR. DeMAEYER. All three of them are essentially private sector here in the United States. In the foreign countries, the government is dominantly involved in the setting of telecommunications standards because very few governments have opened up their telecommunications competitively like we have here.

So it is a government body that would represent their country in the ITU, CCITT involvement which is why the State Department represents the private competitive issues here.

That's what I meant by the non-treaty.

CHAIRMAN WARSHAW: Any other questions? No.

Well, thank you very much, Mr. DeMaeyer. We appreciate your thoughtful comments.

Now I would like to call upon Mr. John Rankine and the representatives of the Hewlett-Packard company.

(Pause.)

Mr. Rankine, if you would please offer us your comments, we would appreciate it.

MR. RANKINE: Thank you.

Mr. Chairman, members of the committee, Ladies and Gentlemen.

I appreciate this opportunity to appear before you and I shall not waste your time by reiterating my written statement, nor its executive summary, nor my credentials since they are all on the record and are easily read.

Instead I should like to take the few minutes available to me to focus on what I believe to be some fundamental delusions that are implicit in these discussions. This is necessary because as Edmund Burke once reminded us, "people never give up their liberty but under some delusion."

One delusion is that because we are confronted with EC-1992 we should rush to change our national standards structure.

I submit to you the reverse conclusion, namely that this is the very time to stand by what we have and focus on intelligent actions rather than distract ourselves with hypothetical and unproven structure.

Another delusion is that the Canadian model is the one the U.S. should follow. I have nothing against the Canadian approach. As an international chairman, I enjoy working with it as I do working with all of the differing systems that nations have evolved over the years to best represent their needs in terms of their heritage and political system.

But, if the U.S. is hell bent to throw out its own system which it too evolved over the years in terms of its heritage and its needs, it should look at the field -- not just in Canada.

The result might well be to conclude that there are other systems that fit U.S. needs better and also to find, perhaps to the surprise of many, that they involve even less government influence than does today's U.S. system.

A third delusion is that the standards system of the other nations, particularly those in Europe, are run by their governments and the U.S. by comparison is an anomaly. On the contrary and again, as an international chairman dealing with many countries, several of which are European, I note the U.S. is somewhat unique in including U.S. governmental representation in its delegations.

I am not speaking against the U.S. doing so because again it is what the U.S. has decided is best in terms of its interests.

A fourth delusion is that the standards process will somehow be more fair and efficient if it is run by government.

I am not sure I agree entirely with Thoreau's comment "that government is best which governs not at all", but it is very pertinent in regard to a voluntary consensus standards process wherein government should be a participant in terms of its many interests as a user along with other users, producers, consumers and general interests groups.

None should govern but all should serve as in the U.S. system today.

One more delusion is that anyone who wants to participate in international standardization but cannot pay his or her way should have the U.S. Government pay for it as is supposedly the case in some other countries.

This is an issue with several sides to it, more fully dealt with in my written statement. At this stage, I shall do no more than remind you of Adam Smith's caution that "there is no art which one government sooner learns of another than that of draining money from the pockets of the people."

Of much more immediate concern to me at this time than the several delusions I have touched on is how the U.S. is spending its time and resources in these and other associated national discussions.

By the conclusion of these hearings, we shall have heard from more than four score speakers representing an immense spectrum of interests from government, industry, users, academe and contributing thousands of pages of testimony.

Useful as these hearings might be, how much better might the interests of this nation have been served by focusing this impressive assembly of talent and experience on the implications of a changing Europe beyond EC-1992.

How much better might the national interest have been served by a thoughtful examination of the role of the European Free Trade Association and that of the rapidly crumbling Eastern Bloc of nations, many of whom will have an increasingly significant influence on the directions in international standardization.

How much better to have looked also at Asia and what is implicit in the developments relating to Japan, Hongkong 1997 and the other key players in the Pacific Rim?

How much better to have grappled in depth with key issues such as the multi-faceted one of testing and certification and what strategies best apply in the several industrial sectors involved.

How much better to have decided how best the public and private sector should work in harmony with what we have in order to achieve that which we need.

Instead, we pre-occupy ourselves with matters of structure and organization and, in many cases, self rather than national interest. We have become fascinated with how best to impose proposed Councils and huge Advisory Committees upon carefully evolved and proven structures.

How necessary it has become to remember Voltaire's advice that "God is on the side, not of the heavy battalions, but of the best shots." How vital it has become to follow Candide's advice, "il faut cultiver votre jardin," one should first cultivate one's own garden.

The need is to cultivate our own garden; to stay lean and move forward in harmony and close cooperation with all of the public and private sector resources that this nation has developed so well and with which it has accomplished so much.

Thank you.

CHAIRMAN WARSHAW: Thank you very much, Mr. Rankine. Are there any questions from the panel?

Well, very insightful comments, thank you.

MR. LEIGHT: John was challenging me to come up with a quotation but I think I would rather admire the quotations you had.

I would like to ask you, since you referred in particular to the notion that we might be expending our time, energy, resources on such issues as testing and certification, whether you'd care to say a few words about that here, what we might be doing in that particular area?

MR. RANKINE: Well, as I mentioned in my oral statement and in my written statement, the testing and certification issue is a multi-faceted one. It has a wide range of implications, depending on the subject at hand.

The example that I use, important as it is to know whether dishes will melt in a dishwasher, it is also very important and very different to address a question of will two jumbo jets possibly collide, or will vast sums in international funds transfer, go astray because two systems, information systems are not inter-operating properly.

The latter case requires a great deal of resource, much of which is scattered throughout manufacturers' premises. It requires a great deal of user cooperation. It requires, in the final analyses, for the user and the various vendors to sit down and hammer out what needs to be fixed in the system which in a test environment may have inter-operated, but now in the user environment -- a totally different communications environment -- does not.

And that is where I side very strongly with the CBEMA recommendation, that in such cases, the manufacturer's self-declaration is the most important one, and the manufacturer working with the user directly, is the only way to really address that very complex subject.

MR. LEIGHT: Thank you.

CHAIRMAN WARSHAW: Mr. Donaldson.

MR. DONALDSON: Mr. Rankine, I appreciate your remarks with respect to some of the foreign national standards bodies, that in fact, some of them may not be quite what they have been portrayed to be in the United States.

I would be curious if you would be able to amplify slightly on your comment and perhaps select one or two that you find particularly unusual or worth mentioning.

MR. RANKINE: Well, you put me in a difficult position, Mr. Donaldson. As an international chairman, I have to treat at least 20 major nations equitably, but I think if one was to run a poll and look for an organization that has a very high credibility, one that would come to mind is the Deutsche Institute for Norman, and the German Din Institute which is very heavily motivated by industry.

Another might well be the Swedish Institute for Standardization, the British Standards Institute.

There are many. I hate to -- there's quite a list of very, very viable candidates out there.

MR. DONALDSON: Thank you. I didn't mean to put you on the spot, but I did want to benefit from your many years of very good experience. Thanks.

CHAIRMAN WARSHAW: Well, thank you very much, Mr. Rankine.

Hewlett-Packard, is it Mr. Patterson?

MR. LOUGHRY: I'm Don Loughry.

Mr. Chairman, ladies and gentlemen, the Hewlett-Packard Company appreciates the opportunity to present its views relevant to U.S. participation in international standards-related activities and the role it believes the U.S. Government should take in respect to such participation.

Hewlett-Packard Company is an international manufacturer of measurement and computation products and systems recognized for excellence in quality and support. The company's products and services are used in industry, business, engineering, science, medicine and education in approximately 100 different countries.

As a context for our comments, it is important to realize that in the Information Technology field, Hewlett-Packard bases much of its networking technologies and resultant product development on the Open Systems Interconnection standards as pioneered by the ISO international community.

HP considers the global marketplace a critical element of its business and, as such, international standards are an important consideration.

John Young, HP's CEO and President, has said repeatedly that standards and open systems really are going to be the way of the future. HP personnel participate actively in many JTC-1 SC's standards projects and the TAG's that help to formulate U.S. positions.

We participate on an on-going basis and take on leadership roles where appropriate. In summary, HP personnel participate in a wide range of national and international standards development as such work is essential to our business needs.

A few words now about today's voluntary system. The U.S. IT community provides more than 5,000 volunteers, is open to all interested parties, and is quite responsive to new technology and the need to create relevant standards.

HP, along with many other companies, affirms the need for international standards as critical and works toward that end.

In recent years, there has been an increasing number of international participants in U.S.-based standards development work. This helps promote a growing level of consensus among the international community at an early stage of standard development work and enables significant U.S. leadership.

The subject matter to be standardized, the evolution of the technology, the relevancy to changing needs, and the responsiveness of the participants and their companies are generally met by the present voluntary system.

Since the preponderance of the participants are from the vendor community, there is direct and effective input to standards work based on current business and market needs. This interaction with business needs is absolutely essential and much more responsive to the present voluntary system than is likely to be in one dominated by government interests.

The financial resources for IT standards work have come under recent stress as a result of burgeoning standards workloads and the growing needs of the user community. Some steps have been taken to build up the funds to support this work and those most impacted have shared the load.

In the long term, the entire community of IT standards participants will need to both contribute to and benefit from the necessary financial support. It is far better to have those directly involved share in all aspects of the work, technical and financial, rather than have a few or one major entity provide the financial support.

There needs to be some improvement in the present system such that it is more pro-active and responsive to changing needs. Pressures from an ever-growing number of consortia that want to utilize base standards, demands for shorter development times, flexibility to keep up with new addenda to standards before the first one is completed are all examples of areas in which a more pro-active stance would benefit the U.S. position.

These improvements are feasible within the present system. To change the present responsibility for managing the standards process in the U.S. could be most disruptive and detrimental to the IT community. The U.S. cannot afford such disruption if it is to maintain or increase its competitiveness.

Now a word about the U.S. Government role in the standards process.

Today, there are a significant number of standards development participants from governmental agencies. They and their private sector peers make meaningful contributions to the overall process.

HP considers this team relationship, this partnership, needs to grow and be further strengthened within the voluntary, ANSI managed system we now have.

In some instances, there appears to be a rather weak partnership. When the rate of development of the voluntary standards necessary to satisfy NIST needs is too slow, then perhaps added resources -- people, support -- should be applied by NIST and other government agencies, at the technical committee level, to speed up the development work.

In this way, added resources should facilitate ANSI standard approval for subsequent use as a FIPS rather than forge ahead in FIPS before industry standards are produced.

There are a number of ways government resources might be applied to achieve improvements in the overall standards process. Tax incentives, possibly tax credits in addition to tax deductions, ought to be considered for contributions that would make the development process more effective.

For example, just as tax incentives have been applied to R&D investments in various research fields, it could prove very beneficial to allow some form of tax incentive to private sector companies that provide extraordinary funding for U.S. support of the international JTC-1 standards community Secretariats.

Similarly, a tax incentive for direct travel expenses and wages during international-related standards meetings could also be used to increase participation by highly qualified individuals who might otherwise be unable to attend, particularly those from smaller companies.

A government-provided network and host facilities to enable widespread mechanization technology could prove very beneficial. Such a government, hardware and software network that support an electronic conferencing system and provides host computer nodes at minimal connect charges might well shorten standard development time and improve the quality of the resultant standards.

Another possibility worth considering is one of recognizing new technologies that are reaching a point where standardization is both needed and feasible and then initiating the standards work at an early stage. This has been done in the past by NIST with LAN and I/O interface standards work.

Additionally, the government might also serve as a focal point for user community participation. This function might be accomplished by government sponsorship of user groups comprised of both government and private users to help define more thoroughly user requirements, objectives, goals, and relative priorities for pending standards projects.

Such an action might well achieve three things: supplement the relatively thin population of user participants in typical standards meetings, decrease the time to develop standards, provide added focus to the standards projects such that they better meet end user needs.

This possibility seems to serve both the government mission as a large user and as a rallying point for other users, small and large, in the private sector.

The intention of all of these proposals is to have government agencies provide appropriate tools and resources without managing or controlling the standards process.

It would seem appropriate for the government to negotiate the political issues on standards matters where other governments were directly affected. The need to understand the base issues, explore alternative solutions, and communicate these to the relevant standards committees could prove beneficial since the technical committee participants are not usually expert in these matters.

My written remarks will contain the comments on testing and certification.

In summary, the U.S. Government agencies are of critical importance to the formulation of base standards and the resultant policies for subsequent interaction in the international arena.

Significant government contributions can be made to this process not only by direct participation in the numerous standards committees but also in such areas as network facilities support, tax incentives, user group mentoring, contribution of technology, and direct negotiations with foreign governments.

One role that is not considered appropriate for government is that of managing all standards development activities. Sudden shifts in funding and administration policy or undue influence from the political process could seriously disrupt essential standards activity.

Abrupt changes in support level will damage U.S. credibility and leadership. In addition, a government sponsored council that has as a major goal the production and promotion of mandatory regulatory and procurement standards in a voluntary standards environment appears to create significant contradictions.

With some exceptions, the general level of urgency and focus on key business basics and efficiency do not appear to be high priorities in traditional government-managed activities.

What is needed is a solid partnership among private industry vendors, government agencies, IT community users from many categories, the growing category of consortia interests, and the existing ANSI managed voluntary standards federation.

We, at Hewlett-Packard, look forward to participating along with you in this process of vital interest to the United States and its leadership position in the international standards community.

This concludes my remarks. Thank you.

CHAIRMAN WARSHAW: Thank you very much, Mr. Loughry. Any questions? Mr. Leight?

MR. LEIGHT: Early on you made a statement that raised a question in my mind that you later partially answered.

You mentioned that the preparation of standards, the participation is preponderantly -- I think that was the word you used -- from the vendors and then later on you said that one of the roles for government might be to attract more private sector users, as well as more government users.

Would you perhaps bridge the gap and tell us why users are not participating more now? Private sector users?

MR. LOUGHRY. Well, I can only guess but I think that it is a question of the return, the investment that needs to be made attending meetings, being familiar with the state-of-the-art technology is not something that comes particularly easy to the user community.

The return to the user community is much, much further out -- three, four, five years as products then come into being, and their ability to project the future is somewhat limited.

What I then feel is an appropriate role for the government would be to provide a rallying point to help users think about the future, help collect their thoughts to kind of balance this lack of users in the standards development process.

There are users, yes, but they need a focal point. They need some prodding and perhaps the government could help in that process.

MR. LEIGHT: Do you have any suggestions for mechanisms for that prodding or rallying?

MR. LOUGHRY: Well, I think from my experience, the orderly process of developing a standards starts with requirements and what I call objectives, that the objectives and the goals of a standards development project are clear from the start. Then everyone can work toward that common set of objectives, and that includes user requirements.

So I think in business terms, management by objectives is something that is a healthy process and I believe that that really shortens the overall development process significantly.

MR. LEIGHT: Thank you.

CHAIRMAN WARSHAW: Mr. Donaldson.

MR. DONALDSON: Mr. Loughry, in the written statement which we received, in the section on testing and certification -- and I recognize you passed over it -- but there is something I don't understand.

After commenting on the fact that there is the lack of a worldwide agreement on some of the conformance testing principles, and that that is an area that should receive attention, in the next paragraph you go on to say that many potential customers do not understand or even know about international standards.

Are you meaning, in that case, international standards that would apply to conformance testing? Or do you mean the more general sense, international standards overall?

MR. LOUGHRY: Yes, your assumption is correct relative to conformance testing.

MR. DONALDSON: All right.

MR. LOUGHRY: I think there is a rather widespread knowledge of international standards in general, but I think the conformance testing is something that is relatively new and is emerging and needs a lot of education.

In my written remarks, I think the government could play a role in helping in this education process.

MR. DONALDSON: So you feel that within the United States, the level of understanding and knowledge is sufficiently low that we need to do something about bringing it up.

MR. LOUGHRY: Yes.

MR. DONALDSON: Thank you.

CHAIRMAN WARSHAW: Mr. White.

MR. WHITE: I have a question for both gentlemen.

I am from the Food and Drug Administration and my field of interest is medical devices. So I am really scatter-shooting when I ask you questions on the information technology area, but one of the things that is of concern to me is the financial efforts provided by the private sector to support ANSI, ISO and IEC in the medical devices area.

So sometimes I ask in terms of other technologies, this kind of question. Do you think the private sector is adequately supporting ANSI, and through ANSI, ISO and IEC, in terms of the standards activities that both of you have an interest in, which I assume is the information technology area or telecommunications area?

Either one.

MR. LOUGHRY: I guess it is to both of us, so.

MR. WHITE: Each of you. Mr. Loughry, why don't you go first?

MR. LOUGHRY: Well, I guess the question is, is there adequate funding provided by the private sector to support all these activities.

MR. WHITE: Yes.

MR. LOUGHRY: The answer to that has to be yes and no.

I think that the funds needed to do this are significant, substantial, and as I have in my remarks, the workload has increased dramatically.

The standards community does not in general do a lot of planning about the future workload. We are a group of technologists writing standards and we don't think about the support effort that it is going to take to provide the

Secretariats.

So that has kind of gotten away from us. We have responded to that substantially, but do we need to do more planning ahead? The answer is yes. So in addition to our technical standards work, we need to pay more attention to business basics ourselves.

So I think it is a matter of significant concern. One of the challenges I foresee is widespread support financially, not just by a few companies or entities, but on a very broad base.

MR. WHITE: Mr. Rankine.

MR. RANKINE: It's been quite some time since I have been involved with ANSI's budgetary situation and I am now completely not involved in ANSI affairs. I don't participate in any ANSI board committees or on the board itself.

So I can't answer the question in terms of present status, but from an information technology viewpoint, which is where my bias lies, looking at what is going on nationally and seeing the U.S. participation internationally, it would seem to me that the private sector in the U.S. is more than playing its part in information technology.

The major manufacturers are involved, as I understand, not only as ANSI members but also in paying to a special funding program to ANSI for information technology and the U.S. delegation at the international level is always a very strong and vocal organization.

We have heard from Mr. Pickitt this morning their support giving through CBEMA which is another very active source of heavy private sector support.

CHAIRMAN WARSHAW: I want to thank both you gentlemen today for your offering of comments. Please, if you can come up with some additional thoughts between now and June 5th, we would appreciate that too.

Thank you.

MR. RANKINE: Thank you.

CHAIRMAN WARSHAW: I would like now to ask for the representatives of AT&T and the American Standards Committee X12, if they could come forward.

(Pause.)

Mr. Ingram, AT&T.

MR. INGRAM: Yes.

CHAIRMAN WARSHAW: Please offer us your comments. We appreciate it.

MR. INGRAM: Mr. Chairman and members of the panel, I am Ken Ingram, director of network architecture and technology planning for AT&T's network services division.

My colleague is Dennis Thovson who is the manager in charge of AT&T standards activities.

AT&T appreciates the opportunity to present its views on the status of international standards activities and request that its written submission be made part of the record of this proceeding.

CHAIRMAN WARSHAW: It certainly will.

MR. INGRAM: This is the submission of March 19th.

CHAIRMAN WARSHAW: We certainly will.

MR. INGRAM: The global marketplace for goods and services highlighted by the emergence of EC 92 has brought with it an increased emphasis on standards development and has created a perception of strain on the current voluntary standards making system.

The problems with the current system, real or perceived, are the focus of this hearing and the basis for a proposal by the National Institute of Standards and Technology to create a standards council of the United States, patterned after the standards council of Canada.

AT&T does not believe that the current system is so deficient that it requires the replacement of a voluntary consensus standard making with government regulation through a SCUSA or similar organization.

We believe that effective mechanisms are in place to coordinate U.S. positions concerning both treaty and non-treaty organizations which prepare standards.

In the telecommunications and information technology industry, there are well-defined processes that permit development of U.S. positions on international standards with ANSI providing coordination and process for non-treaty bodies, and the Department of State providing coordination and oversight in the treaty of organization domain.

It is our strong believe that both of these mechanisms have and will continue to foster a high degree of productivity in the development of national and international standards and has placed the U.S. in an unparalleled position of leadership in international standards area.

Thus, we do not understand the apparent motivation to replace the present system, rather than address its deficiencies.

Private sector machinery, as it currently operates in concert with government, has served the nation's needs well. The United States fundamentally utilizes a voluntary system of standards development and application which permits a public and private sector participatory partnership.

Indeed, government agencies are major participants in the standards process and by virtue of their procurement role, are probably the largest users of the standards produced by the system.

The United States' approach allows a broad industry and government corroboration and has proven extremely effective.

Any current signs of stress in the standards processes of our industry are a function of the enormous technological changes of the recent past and the success of the standards which already support the industry.

The infrastructure for standards activities and related initiatives is expanding. The need to develop and utilize standards has generated a variety of consortia, workshops, user groups as well as a number of bilateral and multi-lateral corporate agreements to address specific subject areas.

These new mechanisms supplement the more formal public process that continues to serve the U.S. community as the primary consensus mechanism for participation in global standards work.

The present U.S. system permits a rich variety of options for meeting the essential requirement of obtaining the resources necessary to address a perceived standards need.

We should not require that this free market allocation of resources be constrained to operate within a confined discipline, or expect it to appear orderly in comparison with other countries which do not address the resource allocation problem the same way.

What we have now is not percent. We must continue to avoid unnecessary duplication in the system. We must also recognize that, as standards work draws closer to leading edge technology, we can expect multiple standards initiatives in a given domain for technology yet untried in the marketplace.

We should not give up the freedom and flexibility of the present system which allows the marketplace to make the final choice for a discipline that prevents duplication at all costs.

We can, however, plan for better milestones and schedules and we can manage our corporate representation so as to focus on really significant goals.

We do not wish to scrap a successful U.S. institution. Extensive change at this time could interfere with our international effectiveness. With the emergence of EC 92, we are particularly dependent upon a stable, international infrastructure in which the U.S. plays an important role based on American standards machinery that is effective.

We therefore support continuing the existing industry/government partnership, utilizing the infrastructure that is currently in place while resolving problems and new issues as they mature.

Thank you.

CHAIRMAN WARSHAW: Thank you very much, Mr. Ingram. We certainly will include your full text in the record.

Are there any question from the panel?

Mr. Leight?

MR. LEIGHT: I think you said that -- I'm trying to quote you -- the current system is not so deficient as to require being replaced by something else, and instead of replacing with a new system, we should address the deficiencies of the present system.

Of course, we are here today, as we have been this week, to get ideas about what deficiencies there may be, and in particular what role the government might take to help remedy deficiencies.

I wonder if you could comment on that.

MR. INGRAM: Well, I think some of the deficiencies that I had in mind, they were in terms of -- if I can use your word -- the disciplines of the processes. I think we need to be more disciplined in our processes, in our voluntary bodies, set milestones, drive to those milestones, make sure that we get the standards evolving as they are necessary to meet the needs of the customers in the marketplace.

I think that's something the voluntary industry standards bodies have to do. I really don't see that we need government participation to deal with those issues. I think the mechanism and the structure is there. We need to apply the discipline.

MR. LEIGHT: Thank you.

CHAIRMAN WARSHAW: Thank you very much, Mr. Ingram.

We have Mr. Hutcheson of the X12 committee.

MR. HUTCHESON: My comments this morning are going to supplement the letter that I wrote to you on February the 8th.

CHAIRMAN WARSHAW: We will include that in the record too.

MR. HUTCHESON: I will attempt not to completely reiterate everything that is in the letter.

I would like to introduce myself first. I am Ken Hutcheson. I am employed by the Du Pont Company as program manager for electronic data interchange, also called EDI.

For those of you who may not know what that is, EDI is the name commonly given to the technical discipline used by business partners to exchange information electronically between computer systems and a standard format.

Almost any type of information can be exchanged via EDI, but at this stage in our development in particular, most often business partners exchange business information such as orders, invoices, payments, things of that nature, using this technique.

In addition to being involved in DuPont's EDI program for the past six years, I have also been very active throughout that period in the National Standards Organization for EDI which is the ANSI accredited standards committee X 12.

I am currently the Chairman of that committee and it is in that capacity that I am making my comments this morning.

Chartered by ANSI in 1979, X12 has grown from limited participation by fewer than 100 organizations in the early 80's, to nearly 350 dues-paying member companies, trade associations, government agencies, and financial and education institutions.

Representing the private sector, nearly every industry is there -- chemical, auto, textile, banking, utilities grocery,. metals, paper, electronics, telecommunications, retail, transportation, health care, petroleum, agriculture, etc. That is just a partial list.

Although X 12 is primarily driven by the need to the private sector, government -- particularly the various agencies of the federal government -- is playing an increasing role.

In fact, X 12 some years ago created a government subcommittee to allow government organizations -- local, state and federal -- a platform from which to discuss the special needs for EDI and to develop standards to exchange data that is unique to the government such as tax returns.

Since it was formed more than ten years ago, X 12 has published standards covering more than 30 types of information and there are over 30 more in development among the 10 technical subcommittees.

In developing and maintaining these standards, the committee has followed religiously the ANSI Procedures for the Development and Coordination of Standards, which calls for rigorous discussion in open forum leading to consensus among interested and materially-affected parties involved.

I don't have the slightest doubt that, given the enormous number and diversity of the participants in X 12, that consensus would be nearly impossible to reach without the structure and fairness of the ANSI process.

I also believe that the success the committee has had in becoming the pre-eminent EDI standards organization in the United States -- and for that matter, one of the pre-eminent ones in the world -- is due in large part to the stability that the ANSI banner provides.

Since your notice of this hearing emphasizes the coordination of United States participation in international standards activities, I have to assume that you believe that current activities might benefit from greater government coordination.

I don't happen to believe that's true, at least for EDI.

International EDI standards which are called UN/EDIFACT or EDI for Administration, Commerce and Transport) are developed under the auspices of the United Nations economic commission for Europe.

X 12 has been instrumental in the UN/EDIFACT movement since it began in 1985, working closely with representatives from Europe to establish the technical structure of the standards and regional advisory process used to develop and maintain the standards.

In fact, the regional advisory group for North America, called the North American EDIFACT Board, which serves as the forum for developing North American technical positions, is officially a part of X 12 and the X 12 secretariat, the Data Interchange Standards Association, also serves as the Secretariat to that Board.

In 1988, X 12 membership overwhelmingly approved the integration of UN/EDIFACT development and maintenance into the existing X 12 environment. This means that UN/EDIFACT standards are processed within X 12 exactly the same way domestic standards are processed.

So far this has worked out extremely well for both the United States and Canada. In fact, I doubt that Canada would have agreed to house the North American EDIFACT Board within X 12 if it weren't for the maturity and reputation of the ANSI process.

When the UN/EDIFACT standard, while they are new and in the process for developing these is not mature. It does seem to be working very well. The movement could certainly benefit from stronger government participation, but greater government coordination which, in my opinion, not necessary.

Use of EDI by government is relatively new, but growing rapidly. There is enormous potential for EDI to be used for procurement of goods and services from the private sector and for reporting information to the government by the private sector.

One of the most important players in this will be the Department of Defense, which has two different procurement-related programs -- called CALS and MODELS. Because the defense industry is so large, the emergence of DOD as a major EDI player will influence literally thousands of companies to invest in EDI capability, which will, because of the trickle-down effect, move EDI even closer to becoming the prevalent way of conducting business in the United States.

Because government is a major potential user of EDI, the X 12 committee needs broad government participation in both the national and international standards0-setting process.

Government representatives working side-by-side with those from the private sector will yield better standards under the open forum, ANSI process than either working independently.

In conclusion, I'd like to thank you for the opportunity to speak today about the EDI standards process. At X 12, we believe very strongly in the ANSI process and don't wish to see it changed in any significant way. The introduction of government coordination of EDI standards would be disruptive and therefore, would be unacceptable to the private sector participants in X 12.

Rather than taking over coordination, we would prefer to see active government participation in developing standards and positive government influence of the growth of EDI by implementing major programs such as those being undertaken by the Department of Defense.

Thank you very much.

CHAIRMAN WARSHAW: Thank you very much, Mr. Hutcheson.

Mr. Donaldson.

MR. DONALDSON: Excuse me. Mr. Hutcheson, something you said interested me with respect to the Canadian participation.

If I understood correctly the UN/EDIFACT board within the U.S. is housed by your X 12 and you indicated that the Canadians agreed to that because of the soundness of the X 12 activity.

Does that mean that the representation from North America to this activity is joint conducted?

MR. HUTCHESON: That is correct.

MR. DONALDSON: Very good.

MR. HUTCHESON: The development of technical positions at the North American EDIFACT Board has equal representation from Canada and the United States.

The North American EDIFACT Board uses X 12's structure process to arrive at those conclusions, but both governments, both sets of representation participate equally there in deriving it.

MR. DONALDSON: If I understand correctly, the UNECE is a treaty activity which means representation to the UNECE is through ---

MR. HUTCHESON: Through government.

MR. DONALDSON: Through government and therefore that means that there is cooperation presumably between the Canadian government and the United States government to enable that to happen. Is that correct?

MR. HUTCHESON: That's correct. Both countries have their own delegations to the UNECE working party on trade facilitation that governs this. The U.S. representative is officially, a person from the Department of Transportation.

MR. DONALDSON: So that two separate parties go, but the positions are agreed to.

MR. HUTCHESON: The technical positions are determined by the North American EDIFACT Board which is a joint effort of Canada and the United States.

MR. DONALDSON: Very good.

MR. HUTCHESON: At least today.

MR. DONALDSON: Right.

MR. HUTCHESON: Those are the only two countries today that are participating.

MR. DONALDSON: Within Canada then, is there a standards activity that would be the counterpart to the X 12 itself?

MR. HUTCHESON: Yes.

MR. DONALDSON: That finds its way through to the board.

MR. HUTCHESON: That is true.

MR. DONALDSON: Very interesting. Thank you.

CHAIRMAN WARSHAW: Any other questions? All right, thank you, Mr. Hutcheson. Thank you both. We appreciate your comments.

We will now have a break and we will reconvene at 20 minutes of 11.

(Whereupon, a brief recess was taken from 10:25 a.m. until 10:40 p.m.)

CHAIRMAN WARSHAW: We are now going to begin with the representatives of Storage Technology Corporation and the Research Libraries Group. Would you please come up to the podium?

Mr. Cheatham, you may proceed.

MR. CHEATHAM: Mr. Chairman, ladies and gentlemen, good morning.

My name is San Cheatham. I am Vice President of Engineering responsible for tape, library and solid state disc subsystems at Storage Technology Corporation at Louisville, Colorado.

We are a $1 billion worldwide corporation engaged in design, development, sales and service of high performance, large capacity information storage and retrieval systems for medium and high performance system environments.

I appreciate this opportunity to provide testimony concerning the U.S. standards program. I have been directly involved in the standards development and application process for approximately 11 years, and in the electronics business for over 25 years.

The current ANSI standards development process benefits from a wide range of producers and consumers, allowing standards to be developed which have the widest practical application.

I believe the government's proper role in standards is to support and participate in the process and be responsible for trade policy and assurance that trade barriers are not created.

The government sector should also assist in information transfer and communication within the domestic and international standards community. The EEC, via EC 92, represents a challenge to U.S. leadership in international standards. I believe that we must work as a team.

The NIST mission is often cited as the only federal laboratory with the primary mission of aiding U.S. industry. While there are areas of industry where this fundamental requirement is probably met, there are instances where I believe it can be more effective.

A major reason for this situation is inadequate coordination of NIST standards reference material support being provided for standards developed under the ANSI process.

Participation by the director of NIST in ANSI board activities has recently improved and needs to be sustained. NIST and ANSI need to be more closely linked at the policy and priority level.

An organizational link is truly needed between NIST and ANSI. One way that this could be accomplished would be to formalize the working partnership between the director of NIST and the president of ANSI.

This would help assure proper NIST support provisions for standards developed under the public sector process. Timely and adequate support for developed standards is critical to their implementation and effectiveness.

Computer Sciences and Technology traditionally receive the lowest level of funding in allocation of the NIST budget. This remains true in the 1991 budget request as well.

During 1987 and 1988 lack of funding priority for a reference material project generated a need for an industry solicitation campaign to co-fund the effort with NIST. I was personally involved in this solicitation campaign.

Correspondence and meetings appealing for a minor reallocation to cover this shortfall with NIST were to no avail. This amount constituted less than .002 percent of the NIST budget.

This situation illustrates the point that the key process requirement, leadership in standards implementation support was lost in a minuscule budget fight. Priority coordination with ANSI is fundamental. This example ties to one area where the U.S. still has a good international position in trade.

The United States has traditionally been the worldwide leadership in establishing standards for data processing products. Priority support of reference material development is one key ingredient required to maintain this leadership position.

These activities are associated with trade values and peripheral products alone estimated at $50 billion for 1990 with a growth path to a very strong $80 billion in 1993, of which domestic consumption is approximately 55 percent of these numbers.

Removal media support for these peripheral products is growing at a rate of approximately 13 percent a year, to measure it with the growth of the overall peripheral products business.

Some additional points for consideration which I believe are pertinent to these issues are that I believe the current infrastructure between the private sector and government, working as partners, is effective in U.S. standards setting activities and global competitiveness.

Our challenge is to strengthen support provided for implementation of those standards.

There needs to be a supportive relationship between the private sector and government to effectively handle EC 92 conformance testing and certification. Without such a relationship, U.S.-made products will suffer limitations in their access to European markets.

Restructure of ISO/IEC voting and operations is needed to ensure that ISO/IEC participation remains as a viable forum for express of U.S. interests in European and Global markets.

A key part of this effort is to change the inequitable voting leverage of the EC through their having 13 votes versus one for the U.S.

In summary and conclusion, I believe that the the ANSI system of standards development is strong and effective. The U.S. Government needs to strengthen focus on U.S. trade policy and coordinate government agency participation in standards development efforts.

Government should provide strong application support of voluntary standards rather than altering the current standards development process.

Thank you very much.

CHAIRMAN WARSHAW: Thank you very much, Mr. Cheatham. Any questions from the panel? Mr. Leight?

MR. LEIGHT: One of the last points you made was with regard to changing the voting leverage of the EC block in ISO/IEC. I wonder if you would care to say a few more words about that, especially since you have heard a number of other speaks talk about the private sector dealing with the private sector organizations such as ISO/IEC.

MR. CHEATHAM. I believe that this is one area where the teamwork aspect between government and private sector can be most effective.

If government will work in concert from the point of view of the trade barrier, trade negotiations situations and tie that into the government arena and influence, with any European economic community and address in a joint teamwork approach to the problem between government and private sector, we can be most effective at breaking down this unnecessary and non-representative voting leverage situation.

MR. LEIGHT: Thank you.

CHAIRMAN WARSHAW: Thank you. Mr. Donaldson.

MR. DONALDSON: Yes. I believe that you made reference to problems, or potential problems in the area of conformity assessment with regard to information technology products.

Could you cite any specific examples of the kinds of problems you had in mind?

MR. CHEATHAM: Certainly. A classic example in the data processing industry is the VDE certification that is required to ship products into Germany, for instance, just as one focus example.

In general, the overall conceptual problem is that in the European community, conformance is very focused. If you want to get a product into Germany, it has to be VDE certification and that's all there is to it.

Where, in the United States, it is much more of an open forum, and I think either approach will work for the interest of both interested groups, whether it is the European community or the domestic community here in the United States, from the user's point of view that serve as a customer base for products that are developed.

This isn't restricted, obviously, just to computers, data processing equipment and other types of consumer used products.

The problem is, the variation in the requirements between the two entities -- between the European community and the U.S. community -- it is kind of like the analogy of the tilted playing field that we have all heard about.

That's the kind of situation that we are dealing with that is causing us the most problems right now. I see that situation as being one that could be exploited to the detriment of U.S. industry if it isn't leveled prior to getting fully involved with the EC 92 precepts.

MR. DONALDSON: Do you anticipate that leveling could be achieved by having such recognition obtained here that would then be accepted within Germany? Do you think that's a possibility?

MR. CHEATHAM: Probably, if it is real and comprehensive, as opposed to just a prima facie type of acceptance.

MR. DONALDSON: Rather than take up more time, if you have other examples that you might be able to cite, we would appreciate them, if you could submit them for the record.

MR. CHEATHAM: I would be pleased to do so.

MR. DONALDSON: I think that would be helpful.

MR. CHEATHAM: I will submit that as a addendum in my testimony for the written record.

MR. DONALDSON: Thank you, that would be very helpful.

CHAIRMAN WARSHAW: Thank you very much, Mr. Cheatham.

MR. CHEATHAM: You're welcome.

CHAIRMAN WARSHAW: Mr. Davison, Research Libraries Group.

MR. DAVISON: My name is Wayne Davison. I am the associate director for development of the Research Libraries Group.

We appreciate this opportunity to testify at these hearings. We come to you as one of those rare animals primarily as a user rather than as a vendor.

The Research Libraries Group, Inc. exists to serve the information needs of high education and research community in the United States. RLG is a not-for-profit private sector consortium whose membership is comprised of over 100 universities and research institutions in the U.S., working together to maintain quality and increase productivity.

The governing members of this consensus-based organization include, among others, such universities as Columbia, Johns Hopkins, the New York University, Princeton, Stanford, California at Berkeley, Michigan, Pennsylvania and Yale.

In facing increased competition from the post-1992 European community and the Pacific Rim area as well, the community served by RLG represents an important set of resources for the United States.

Higher education is one of the U.S.'s strongholds, but this position will be challenged. The front page of the New York Times, Tuesday, April 3, 1990.

Higher education is one of the U.S. strongholds but this position will be challenged. The front page of the New York Times, Tuesday, April 3, 1990, including Hanshaw

Grudolf, chairman of critics.

The European challenge is to restore the unit until 1914 when Europe was the biggest economic power in the world and had the best educated population.

We know that there is a direct relation between education and economic strength. Both the information resources including some of the largest data bases in the country, and the associated body of expertise and information management are key elements in the information economy.

It is essential to ensure open access to information worldwide if the U.S. is to maintain its dominance. Since standards can either facilitate or impede information access and interchange, standards are of great importance to RLG and its constituency.

RLG has a special interest in standards relating to libraries, publishing, information science, paper and the microfilm in particularly, and to information processing in general.

As a result, RLG is a member of ANSI, the National Institute Standards Organization -- NISO -- and various X 3 committees.

RLG supports active staff involvement at both the national and international levels. RLG staff members are currently serving as chair of the NISO standards development committee which overseas the work of all NISO standards committees, member of the NISO international relations committee which acts as the U.S. technical advisory group for all matters of ISO TC 46, member of X3L2 coded character sets in the U.S. delegation to ISO, IEC, JTC. 1S C2, vice chair of X three T five, five, upper layers of open systems interconnection.

Member of X3T5 and the JT C-1 TAG for overall OSI and convener of ISO, IEC, JTC, 1 SE 21 W G 6.

Regarding the efficacy of the current organization of standards activity in the U.S., RLG is here today to go on work and support of ANSI and the currently voluntary standards infrastructure in the United States.

Point one, ANSi and its accredited committees are doing an adequate job. RLG has had considerable experience with ANSI and a number of its committees. We have been satisfied overall with the staff and performance of these organization, and under the new leadership with Mr. Peralta, ANSI is becoming an even stronger organization that is particularly alert to the changing nature of the international standards arena.

As participants and officers in the work of ISO, we have had an opportunity to work with several national standards bodies that act as secretariats for various committees.

Is second to none in its support. As convener of JTC 1, FC 21, WG 6. I certainly enjoy a higher level of support from ANSI and then do any of my fellow conveners from their national organizations.

Point two, and this is a key point, ANSI is a fair and neutral party. One of the primary advantages of the current voluntary standards infrastructure in the U.S. is the fact that ANSI does not itself have a vested interest in the technical issues of individual standards.

ANSI can be and is a fair and neutral party with an excellent record of assuring due process, openness and fair representation for all interested parties in the standard process.

Point three, even small organizations such as RLG are well-served. There has been some concern expressed that small organizations may be at a disadvantage in the current U.S. structure. This is not true.

RLG, with a staff of approximately 100 employees, is certainly a small organization within the information processing industry as represented by X 3. But we have been able to effectively further our interests.

From our experience, it is clear that if an interested organization is willing to commit able, expert personnel to standards activities, it can be effective regardless of size.

Point four, interested organizations can quickly respond to standards issues. The current infrastructure allows and encourages interested organizations to participate actively in the standardization process.

These are the proper organizations to man the standards activities because they have the greatest motivation and incentive, and as a result, are able to quickly respond to issues with additional resources when necessary.

Regarding the inadvisability of federal government control of standards activity -- point five -- unlike ANSI, the Federal Government is not a neutral, disinterested party.

The Federal Government is not a disinterested party regarding the technical content of many standards, nor should it be.

As a major user of many products and services affected by standards, it is essential that the Federal Government promote its interests and the Federal Government is also the supplier of services affected by standards.

In both these cases, the Federal Government is but one member of a community of interested suppliers and consumers. It is not appropriate for any one member to hold over all responsibility.

The referee should not be members of the one of the teams that are playing. For example, the Library of Congress has performed a great service in promoting and supplying the machinery to handle cataloguing data.

However, in order to achieve an effective working relationship among the library and other members of the community, it was necessary to create a forum on neutral ground, the Machine Readable Bibliographic Information Committee of the American Library Association, to deal fairly with matters of common interest.

This need did not arise from any fault or shortcoming of the Library of Congress, but rather from the structural necessary for a neutral forum where all parties could fairly and responsibly argue their interests.

Point six, federal, organizational and budgetary processes cannot respond quickly. The political and bureaucratic processes by which federal agencies must operate, are not conducive to quick response to changes in direction and levels of effort.

This is particularly true when the reduction of the Federal deficit is an overriding priority and we have recently seen a major dislocation in the standards effort of the United Kingdom as the result of a precipitous reduction in government funding in that country.

Point seven, models from other countries are inappropriate. The current voluntary U.S. standards infrastructure has evolved within the societal and economic framework of the United States.

It is uniquely suited to our culture. The organization of standards activities in other countries may be appropriate to their cultures, but not to ours.

I have discussed the notion of a standards council of the United States based on the Canadian model with a number of my colleagues in Canada.

There universal reply was why would you want to do that? Not a single one of them recommended this model as a preferable alternative to the current U.S. organization for the United States.

Indeed, dependents on governmental standard organizations can sap the strength from private sector participation which is one of the hallmarks of the United States standards activity.

In terms of shortcomings of current U.S. standards activity, point eight, there is a lack of coordination within individual organizations. The primary problem we have encountered in effective representation of U.S. interests internationally is the lack of coordination of U.S. physicians.

This is due to the fact that all too often, organizations send different personnel to various overlapping standards groups, such as CCITT and ISO, and argue opposing positions.

Such behavior is both embarrassing and ineffective for the United States. This is not a structural problem. An action by the federal government cannot fix it. It is the responsibility of the individual organizations to manage their standards activities within their enlightened self-interest.

Point nine, a somewhat lesser concern, but the lack of adequate meeting facilities for large international meetings particularly the JTC-1 has been a problem for the United States. Since we don't have a large building anywhere that is analogous to the facilities that some other national standards organizations have, we have difficulty in some cases with the mechanics of hosting very large meeting in order to get enough meeting space together and funded in a single location.

Regarding the proper and necessary role of the Department of Commerce, in addition to the acknowledge of duties of various federal agencies in dealing with issues of trade policy and agreements -- for example, GAT -- and issues of trans-border data flow, the Department of Commerce and NIST within it have a very important role to play in coordinating the activities of the Federal Government as a participant in standards.

Point ten, Commerce should encourage federal participation in the standards process as it exists. Commerce should consider and increase its role in representing federal interests in the standards arena, and encourage other agencies of the Federal Government to participate.

Point eleven, Commerce should coordinate positions of federal agencies. The problem of coordination of organizational physicians mentioned in point eight above is also found among agencies of the Federal Government.

The Department of Commerce should continue and increase its role in such coordination. An example which affects the community is the conflict between the OSI and DARPA networking standards.

While many government agencies have embraced the GOSIP -- Government Open System Interconnection Procurement Specification -- the National Science Foundation continues to support activities using the old protocols developed for the Department of Defense in the early 1970's.

If our universities are forced to use the DARPA protocols to participate in these activities, they will either be cut off from the information sharing in the area of the European economic community, all of which are solidly based on the OSI protocols, or they will suffer the difficulties in unnecessary cost of supporting multiple networking standards.

In conclusion the Research Libraries Group wishes to encourage the Department of Commerce to perform an active role in fostering the interests and coordinating the positions of the Federal Government in the standards arena.

We want to leave no doubt that such federal participation should be within the framework of the current voluntary standards infrastructure so ably administered by the American National Standards Institute.

We thank you.

CHAIRMAN WARSHAW: Thank you, Mr. Davison. Are there any questions from the panel?

Mr. Donaldson.

MR. DONALDSON: Mr. Davison, I am afraid, when you mentioned your membership and you mentioned the universities and you mentioned there were other organizations, do government agency libraries also belong to your association?

MR. DAVISON: There are two types of relations. The kind of organization we are, for example, the Library of Congress feels that it is not appropriate for them to actually become a member of our organization because there are other organizations that do similar things and the Library does not wish to associate itself with any particular one.

However, they do actively participate in a number of the programs as sort of a co-respondent. One of our strong programs is particular in the areas of managing and making available archives and manuscripts. Materials of both the Smithsonian Institution and the National Archives participate as members of those programs within the Research Libraries Group.

MR. DONALDSON: So they participate as members -- basically what I was getting to I guess was does the position you are taking reflect input from government participants as well?

MR. DAVISON: The position that we have given today.

MR. DONALDSON: That you have presented today.

MR. DAVISON: Would be the position of the central staff of the organization. It doesn't necessarily bind all of the individual members of the organization. We did not have an opportunity to get that level of formal review of our comments.

MR. DONALDSON: Right, so this represents the staff of approximately 100 that you mentioned.

MR. DAVISON: Yes.

MR. DONALDSON: Okay.

MR. DAVISON: The organization is a non-profit corporation that is owned by the membership and this testimony was prepared by the staff of that non-profit corporation.

MR. DONALDSON: So therefore it does not have the endorsement of the Board of Directors, or whatever is the group ---

MR. DAVISON: It is endorsed by the President and follows the standard policy set by the Board of Directors, but we did not have individual review of the comments by all of the member institutions, so I have no reason to believe the comments are at odds, but I am not in a position to commit them.

MR. DONALDSON: Okay, thank you.

CHAIRMAN WARSHAW: Any other questions? Yes, please. Mr. Crider.

MR. DAVISON: Mr. Davison, recently the Department of Agriculture let its auditorium be used by the American Veterinary Medical Association for hosting a large meeting, similar to your comments where you indicate that perhaps finding facilities to host meetings is a problem.

Would federal agency auditoriums such as this one be of value in hosting standards-setting bodies?

MR. DAVISON: Yes, there is also other precedence, I know, when the TC 46 had its preliminary meetings here in Washington. The last set of meetings last year, the Library of Congress provided the facilities.

This is certainly an area where federal agencies and perhaps particularly Commerce and NIST could, in some cases, help ease this pressure.

CHAIRMAN WARSHAW: Along that line, NIST holds hundreds of standards meetings a year, some of them with an attendance in the hundreds.

MR. DAVISON: With have particular problems with the JTC-1 meetings because they are so large, they are much larger than most others. Even countries such as the United Kingdom or France which have fairly large facilities are stretched in these cases.

One of the approaches that has been taken recently is to find a university which is out-of-session and take over the campus. This is happened both in England and it happened at the last set of meetings in Australia.

CHAIRMAN WARSHAW: Are there any other questions?

MR. LEIGHT: Just out of curiosity, is our NIST research information division a member of your group? I don't know.

MR. DAVISON: No, they are not.

MR. LEIGHT: Thank you.

MR. DAVISON: At this time.

CHAIRMAN WARSHAW: Gentlemen, we thank you both very much for your presentations and thoughtfulness and time you put into it. Thank you.

MR. DAVISON: Thank you.

CHAIRMAN WARSHAW: Is either Mr. Hennessey here or

Mr. Handler or Bellcore?

Okay, well, Mr. Duesing of Infolink, if he could come forward. Is Mr. Sturgeon of PDS here? Okay.

It is possible some people were delayed because of transportation today and we will check after lunch for them.

(Pause.)

Well, gentlemen, I appreciate your being here and more especially since we are moving a little bit ahead of schedule.

Mr. Duesing of Infolink.

MR. DUESING: Thank you. Let me explain a little bit. I am a private consultant and I do not feel intimidated following organizations that have tens of thousands or hundreds of thousands of employees, being a one man shot and appearing at your hearing.

I however do not have the resources that all of those organizations have at their disposal, so part of my remarks today are informal.

Somewhat in keeping with the nature I guess that I find I want to comment on a few of the things that were done before, some of the previous speakers -- and I should say as an ex-academic, I find something to take exception to in all of them.

CHAIRMAN WARSHAW: Whatever you want to do with your ten minutes is okay.

MR. DUESING: Yes. I am here in part with some support of the Foundation for Electronic Publishing which is not mentioned in the program. The Foundation for Electronic Publishing is still in its formative stages. It is being organized by Dr. Jon Cunningham, a former director of research at AITRC, Advanced Information Technology Research Center, and will carry forward some of the work in what he refers to as revisable standard form documents for electronic publishing -- such standards as SGML, or standard page description language or ODA or other kinds of application architecture.

He commission a paper from me that I have brought copies with me to the hearing, and we will be placing this in the record of the hearing called Many Publics, Many Interests: Electronic Publishing and the Social Good.

This paper discusses the need for a social program, what I referred to as the social program of the Foundation for Electronic Publishing, and I suppose takes a point of view that is somewhat contrary to some of the expressions that I've heard here this morning, not that I do not believe that ANSI is not doing an extraordinary good job in what its doing, and other standard-setting organizations as well, but rather that I feel that the task that is now being attempted within the specific case of digital information technology, represents a special challenge to the standard-setting process.

I think, in fact, the people who participate in standards from those that I have observed in committees, those that I have worked with in my consulting practice, are sort of some of the unsung heroes of American industry.

However, I feel that what we are trying to do through these technologies are leading us into a social discontinuity, that is something very akin to the industrial revolution or the first information revolution when we used moveable type in printing. And that is something that will fundamentally alter many of the relationships by which work is done in society, the fundamental organization.

Therefore we need to broaden the scope of our inquiry to try to understand how we will use these technologies. I believe that we aspire to user digital information technologies in ways that are not now represented by market interests, by organizations that have products and services for sale.

As a result, the participation in the standards-setting process relies on the government to represent those interests, and yet I find that the user interests in government is pretty skimpy and pretty narrowly focused. I do not find, for example, people doing studies on the economic and social costs benefits, risks of standardization itself.

So I would urge that the inquiry be broadened.

Specifically, I believe the government should assume an obligation to inform the public regarding both the opportunities and the risks of uses of digital information technology standards and should consider publishing annually or otherwise a U.S. technology standards outlook 199 X, similar to the U.S. industrial outlook 19 X.

It should provide information center services pro-actively to publicize the social and economic benefits to be achieved through standardization.

It should do these as a matter of disseminating information. In addition, it should provide access to information. Let me point out that the way we use the technologies -- technologies since the Industrial Revolution having really depended on push systems.

We push products through the productive system out onto a market. We use market research and other tools to try to determine what peoples' needs are, but if we have sort of revolutionary products, things that are not a result of an evolutionary process, we have difficulty in determining those needs and understanding them.

So we need to strengthen access. We need to strengthen the hand of the consumer who is the ultimate user of these kinds of technologies and process. That means that, well, basically I would call your attention to the

National Commission on the Library and Information Sciences which is publishing a draft statement of principles with information policy.

I believe that is a very good place to start in talking about access to information.

In addition, I believe the Department of Commerce, in cooperation with other public and private organizations, should extend its intermural and extramural and cooperative research efforts on the social and economic impacts of information technology.

Here I believe the guidelines and recommendations of the Glenerin Declaration should be considered as sort of a primary or initial statement of needs. I would be very interested in finding out what work is underway both within the standards-setting community and within the federal government itself to implement the Glenerin Declaration.

These research efforts should consider the entire spectrum of standards-setting activities. We think of standards as being say ISO, CCITT, these sort of official standards but if you talk to people out in the business community as I do, you find out they have a very different perception.

We can take an example of the X 12 standard. When we talk about EDI, those from the ANSI point of view, EDI is X 12. From the point of view of people particularly in the vertical market, it is the industry linkage council or whatever one calls it that represents or defines the implementation.

But to people who implement the standard, the EDI standard is actually the trading partner agreement or relationship and we are creating a situation where the small partner is very much disadvantaged in these EDI-types of relationships.

We have no central repository of information on implementation. We have private sectors duplicating efforts and putting information that is used as reference data for implementing the standard.

We have to my knowledge no source of machine-readable definition of EDI standards so we have very high costs of implementing things from the perspective of the various small business, and consequently we need to consider the possibility that data repository services were implementing these kinds of standards, should be done by a quasi-public organization, not necessarily by NIST or whatever, but we don't want to privatize and create private information resources for this implementation of this public good, this standard.

Well, the spectrum of standard-setting ranges all the way from these very formal models to the information resource management, the data modeling efforts that are done by private, internal standard-setting in organizations, and NIST and others need to study it and understand the relationships between those various perspective, those various ways of looking at standards.

Finally, because of the creation, implementation and use of digital information technology standards is a lengthy process in which participation by individuals and small organizations is often precluded by the financial and other resource requirements, I would recommend that there be some consideration done to subsidize some participation.

I think first of all that there should be a program of participation subsidies that would include travel expenses of observers who represent professional societies, public interest groups and others who may not initially feel that they have the technical expertise to be contributing, but nevertheless need to have their needs expressed in the process.

Then there should be limited research and development stipends for members, that members of committees control.

Secondly, there should be guest fellowships where NIST and other non-commercial R&D efforts, people where the work is being placed in the public domain so that again, we can move forward on standardization.

Finally, I would suggest a special SBIR program.

I would call it cooperating tools for cooperating professionals which I believe is going to be one of the real serious impediments to our grand scheme of OSI. We bridge the islands of automation and we are left with the swamps of manual effort.

The people who are not now using digital information technology, computer communication technology in their own personal work be delegated to an assistant secretary or whatever, they don't understand what the world is going to be like with the global village arrives.

So I think that we need to encourage and support the experimenting with these kinds of tools, and I would suggest the SBIR program is one that we might utilize. I would suggest that NIST provide the technical leadership and that other government agencies who have users who need access to information or who play a particular constituency, that they help in defining the requirements, the needs.

So that is my basic message.

CHAIRMAN WARSHAW: Oh, thank you very much, Mr. Duesing. Are there any questions from the panel?

Well, thank you for your very thoughtful comments. Now, I would like to ask Mr. Sturgeon of the PDS program to speak.

MR. STURGEON: Thank you. As a member of the executive board of the Products Exchange Specification, Inc., and I will later refer to it as PDES, Inc., I am pleased to make a statement regarding PDES and its effect on international competitiveness.

United States industry is no longer the primary dominant force in the world market. Our European and Japanese competitors are becoming more and more successful in introducing new technologies and products rapidly and ahead of the U.S. companies.

Our industrial base must take every opportunity to ensure a prominent position in world trade and to regain market share and technology leadership.

Toward that goal, Product Data Exchange using PDES enables a new way of doing business within, between and among technical enterprises. The establishment of PDES is a major milestone in the Information Age of industrial development.

PDES is required to take full advantage of the current and emerging product definition technologies, concurrent engineering philosophies, life cycle technical data requirements and acquisition trends for contractor teaming.

The objective of PDES is to facilitate the effort of the proposed international standard -- STEP -- Standard for the Exchange of Product Data. This effort will provide a complete, unambiguous, computer interpretable definition of a product through its life cycle.

PDES will enable and significantly accelerate implementation of technologies pertinent to the delivery and interpretation of product definition information. As a major cornerstone for the Computer Aided Acquisition and Logistic Support Program PDES will enable communications among heterogeneous computer environments, integration of systems which support design, manufacturing and logistics functions, and support automatic paperless updates of system documentation.

Work on the PDES effort began in mid-1984 by the voluntary IGES/PDES organization. In order to accelerate the standard, industry -- encouraged by the Department of Defense -- began a focused effort in August 1988 to develop, validate and implement segments of the standard, with primary emphasis on mechanical parts.

This industry program, PDES, Inc., is schedule driven and uses a disciplined approach, with technical resources provided by the 21 member companies. These companies are: Boeing, General Dynamics, General Electric, Grumman, Lockheed, McDonnel Douglas, Northrop, IBM, Martin Marietta, General Motors, United Technologies, Hewlett-Packard, Rockwell, LTV, Computervision, FMC, Digital Equipment Corporation, Westinghouse, Newport News Shipbuilding, TRW and Honeywell.

The National Institute of Standards and Technology, NIST, has become a strong contributor and has set up a major testbed to support the PDES, Inc. effort.

The voluntary IGES/PDES organization has published their first working draft of the PDES specification for broad international review by the ISO, International Standards Organization. This working draft contains thirteen topical product data specifications, including: seven at the shared resource level -- geometry, topology, shape representation, shape representation interface, form features, tolerance, material, and product structure configuration management, and six at the life cycle application -- specific level -- architectural engineering and construction, shipbuilding, electronic schematic design, layered electrical product, finite element model, presentation and drafting.

PDES, Inc., using its concentrated technical staff provided by the member companies, is testing and evaluating selected topical models of the published working draft.

While accomplishing this goal, PDES, Inc. has developed a strong technical approach and is producing automated tools to provide a testable PDES implementation in specific application context areas.

PDES has become a major industrial initiative in the field of information technology. Ultimately, it is anticipated that PDES will have a more profound impact on U.S. defense and commercial industry than any other computer-based innovation.

Plans are underway to establish a master plan for USA technological leadership in the implementation of PDES.

Thank you.

CHAIRMAN WARSHAW: Thank you very much, Mr. Sturgeon. Are there any questions?

It was very comprehensive and we thank you and again, remind you as we have others, that our comment period is open until June 5th. So any additional comments you both may have, we would certainly appreciate having them as well. Thank you for your time.

Has Ms. Hennessey or Mr. Handler arrived yet? No. Okay. Is Jo Williams, the American Speech-Language-Hearing Association here?

Or Eileen Healy of Pacific Bell. Ms. Healy.

(Pause.)

Thank you for joining us today, Ms. Healy. We appreciate your being here early too as we are moving ahead of schedule.

MS HEALY: You're welcome. Members of the panel, ladies and gentlemen. My name is Eileen Healy. I am associate director in the Advanced Technology Division of Pacific Bell, a local exchange service provider in the State of California.

I am currently the vice chairperson of the National Technical Subcommittee T1X1 and an ex officio officer of the T1 Advisory Group.

Pacific Bell is a corporate member in both ANSI and CCITT. While we participate in several standards forums, the vast majority of our resources are focused on Committee T1 nationally, and the CCITT internationally.

We also support Bellcore, our jointly owned research organization in their participation in standards development. Other speakers at this hearing have provided factual information on the current standards process for the telecommunications industry.

I will not, therefore, repeat these facts, but instead focus on what is good about the U.S. voluntary standards system and tell you about a serious flaw which could affect our long-term competitiveness.

I will then propose a way to remedy this situation.

Telecommunications is a critically important industry. It forms the basic invisible infrastructure for access to information. It promises universal access to this information, and it is driven by rapidly advancing technology, strong customer demand, and healthy competition.

To remain competitive, it is essential to maintain our superior telecommunications infrastructure and to ensure we do not create an information gap -- a gap between information haves and have-not.

It is imperative, therefore, to ensure that standards for the telecommunications industry are developed with the greatest speed and purpose.

W. Edwards Deming, in his book Out of Crisis explores the relationship between the voluntary standards system and the government. The role of government is to make policy and to regulate where necessary. A strong, vibrant, voluntary standards system within a given industry, decreases the need for government regulation.

Before 1984, there was no national standards system for telecommunications.

Since its formation in 1984, Committee T1 has become the focal point of telecommunications standards in the United States. It has approved more than 50 standards and has over 150 active projects. Committee T1 has members from the carrier, manufacturing and user sectors.

Its members range in size from one person consulting firms to small manufacturers to national service providers. Its form and process were studied carefully by both Europeans and the Japanese before the formation of their counterpart organizations, ETSI and the TTC.

Committee T1 continues to receive other requests from around the world for information and assistance, including most recently CITL, a Latin American standards body sponsored by the Organization of American States.

In other words, this existing U.S. voluntary system has attributes envied and emulated throughout the world.

This voluntary system has had some significant technical successes as well. Bellcore's written comments describe the tremendous success of the SONET standards. This standards effort caught the attention of international standard developers in 1986.

The international community was astonished at the rate with which the U.S. was able to develop these standards. Furthermore, given the size of the U.S. market, there was great international concern that SONET might become a defacto international standard.

This concern resulted in the work being presented to CCITT. With extreme market pressure from the United States, CCITT worked faster than ever before to negotiate changes in these proposed standards which would accommodate both North American and European signals and services.

The results are three worldwide recommendations for fundamental infrastructure signals. This entire experienced jolted CCITT into approving something called accelerated procedures, effectively allowing international standards development to occur within a two-year cycle instead of the previous four-year cycle.

With this new two-year cycle, seven additional worldwide recommendations are soon to be completed.

There are several lessons to be learned from this experience. First, a strong, flexible national standards system can have great impact on the development of international standards.

Secondly, it would not have been successful if the private sector had not been able to swiftly mobilize and renegotiate positions. Speed was critical.

Finally, since 1984 and the break-up of the Bell System, a strong telecommunications standards system has emerged.

Now, given Mr. Deming's theories regarding the inverse relationship between a strong standards system and government involvement we need less, not more, government oversight in telecommunications standards.

This is the bright side of the picture; however successfully we are dealing with standards, they cannot be developed in a vacuum. In the U.S., we have many sources of policy, but no coherent national telecommunications policy.

The Europeans and Japanese have been more successful than we in defining regional and national policies and technical direction.

For example, the so-called green paper draft of EC telecommunications policy has galvanized European nations into establishing their own aggressive plans.

This helps to focus and concentrate standards development efforts. In the U.S., there are multiple policy authorities -- the Department of Justice, State and commerce, the FCC and the Congress. This results in telecommunications standards development which is often driven by individual or corporate agenda.

As I mentioned, there are over 150 active projects in Committee T1. It is difficult to prioritize these projects without a focused national agenda. A unified telecommunications policy is essential to get the private sector to charts its path forward and prioritize its work.

We support and applaud of the Departments of Commerce, State and Justice, the FCC and the Congress and fully expect these agencies to continue to implement telecommunications policy.

However, we are now poised at a critical junction in our industry. We need a single policy authority in the government to work with the private sector to achieve a cohesive national telecommunications policy.

With such a policy in place, we will be better able to focus our standards work and to preserve our nation's model telecommunications infrastructure.

We believe the goals set out in the NTIA's report Telecom 2000, are a good place to start. These goals include a commitment to a superior infrastructure, a commitment to universal access to information services, and a commitment to delivery of critical education and health care services.

And we believe a single policy authority must be identified. To that end, we support the existing voluntary standards system and do not support a federal oversight council as proposed.

Such a Council would result in an increase in bureaucracy, a further multiplication of policy authorities, an increase in regulation, and decrease in the speed with which the voluntary standards system could react in a particular situation.

So what role should government play in the voluntary standards system? In addition to supporting standards in its procurement policies, its role should be one of more participation -- more consistent, persistent, long-term participation -- more participation as technical experts, as leaders, as editors and as secretaries.

As an example, the U.S. delegation which negotiated the successful SONET standards previously cited, was lead by Dr. Bill Utlaut of the NTIA.

In summary, Pacific Bell commends NIST for focusing the national standards community on the current process and ways to improve it. We believe the independent, voluntary standards system under ANSI is working. However, we also view that lack of a unified national telecommunications policy as an urgent situation.

Specifically, there are two areas where government cooperation will help to preserve a strong telecommunications industry in the United States, first by identifying a single national policy authority for telecommunications, and secondly, by increasing the level of long-term, consistent government participation in the voluntary standards process.

We strongly oppose a Standards Council of the United States. We believe this will result in a further multiplication of policy authorities, and a decrease in the speed with which the voluntary standards system can react in a rapidly changing world.

Thank you very much.

CHAIRMAN WARSHAW: Thank you, Ms. Healy. You have very constructive comments.

Are there any questions from the panel?

Mr. Donaldson.

MR. DONALDSON: Ms. Healy, early in your presentation you made a reference to a Latin American standards body that was sponsored by BOAS and I think you said it was Settle. Could you tell us? What is the full name?

MS. HEALY: I believe it is Committee 1 and it is a Spanish translation. I'm not sure of the exact translation but the acronym is CITL.

MR. DONALDSON: CITL, and is this exclusively for the telecommunications area?

MS. HEALY: Yes, I believe so.

MR. DONALDSON: Okay, thank you. And this is fairly new?

MS. HEALY: Yes.

MR. DONALDSON: Thanks.

CHAIRMAN WARSHAW: Mr. Barbely.

MR. BARBELY: Thank you, Mr. Chairman.

Ms. Healy, I am somewhat aware of the CITL operation. It is a part of the OAS, and it is not a standard setting body at all, however you do, in your citation, you mention that cooperation, it would like to cooperate with T1 and the CCITT processes.

We certainly in the State Department applaud that, and we are doing that, as you may know.

MS. HEALY: Yes.

MR. BARBELY: I did have a problem following the sense that you are trying to get across. You talked about having a national authority. You were against the Council.

You were in favor of more consistent, persistent government oversight or government leadership.

MS. HEALY: Yes.

MR. BARBELY: There seems to be some inconsistency there. Are you saying that we want a national telecommunications czar in this country? Is that what you seem to be saying?

MS. HEALY: No, not at all.

MR. BARBELY: I would like you to clarify that, if you would.

MS. HEALY: Okay. My point was that there are many government agencies involved in telecommunications policy. What our point is, is that we would like to see a single policy authority be a point of contact for private industry.

In that sense, that that would be the authority that would set policy and other agencies would be involved in implementing that policy, but one consistent national policy.

CHAIRMAN WARSHAW: Thank you very much. Could you leave a full copy of your remarks with the transcriber too?

MS. HEALY: Yes.

CHAIRMAN WARSHAW: We would appreciate it. Thank you very much.

MS. HEALY: Thank you.

CHAIRMAN WARSHAW: We will now break for lunch and reconvene at 1:00 p.m.

(Whereupon, at 11:55 a.m., the hearing adjourned, to reconvene at 1:00 p.m. the same day.

AFTERNOON SESSION

CHAIRMAN WARSHAW: We are back for the afternoon session. Mr. Handler of Bellcore is going to make his presentation previously scheduled for 11:45, and I will call him and Ms. Jo Williams who represents American Speech-Language-Hearing Association, up to the stage.

(Pause.)

Mr. Handler, please proceed with your remarks.

MR. HANDLER: Good afternoon. My name is Gary J. Handler and I am the vice President of Network Planning at Bell Communications Research, Inc., known as Bellcore.

I have spent 24 years at Bell Telephone Laboratories, AT&T, and Bellcore working on telecommunications research and development, and network planning. My current responsibilities include planning for telecommunication services, architectures, standards, and conceiving and using new network technologies.

I am a member of the board of directors of the American National Standards Institute, ANSI, and Deputy Chairman of the Exchange Telephone Group Committee of the Exchange Carriers Standards Association.

Bellcore is a major telecommunications technology consortium owned by the seven regional Bell telephone companies. It is engaged in leading-edge technical research for its owners and in the technical support of their development and planning for the introduction of new exchange and exchange access telecommunications service capabilities into their networks.

A crucial part of Bellcore's mission is to help preserve the technical integrity of the national communications network infrastructure. To this end, Bellcore actively participates in and contributes to national and international standards bodies.

The extent of our involvement can be gauged by the fact that we have approximately 200 people directly involved in national standards activities and over 70 involved in international standards activities. Bellcore people have about 30 leadership positions in international activities.

My comments are offered in response to your request to gather information, insights, and comments relating to improving U.S. participation in international standards-related activities and to possible Government actions.

Clearly, the are issues facing the U.S. standards-setting process. Before examining these, however, it is important to emphasize that voluntary, public, consensus-based standards are essential to the development of telecommunications in the United States and for remaining competitive in the international marketplace.

Additionally, it is equally important to note that while the voluntary consensus-based U.S. standards-setting process faces many challenges it has proven successful in the past and can be expected to meet the challenges of the future.

Hence it should not be replaced nor should its basic nature be altered. I think I would like to make sure, I saw a recent quote from Peter Drucker in a new book called New Realities which I really believe fits the current situation.

He basically states in that book that whatever non-governmental organizations can do better, or can do just as well, should really not be done by government at all.

I believe that really applies here because what I want to do is demonstrate that the voluntary standards process can work well and that the U.S. Government can, in fact, help some aspects of this, but it can only harm this process if it essentially overwhelms or replaces it.

The major issue, I think, facing the U.S. telecommunications standards process today is not the process itself, but somehow the lack of a clear vision and consensus on how and when the U.S. telecommunications infrastructure should evolve.

We have a conglomeration of networks that are characterized by multiplicity of interfaces and these networks are obviously provided by competing entities and are covered by a wide variety of regulations, laws, and even court interpretations.

An evolution to the information age is a ubiquitous public network with clearly defined interfaces and end-to-end performance standards.

Impeding this progress in this direction I think is a lack of a national agenda that provides a strategic focus for the industry. This is an area which we believe the government can provide assistance to the industry.

I believe that the Department of Commerce and the NTIA with the notice of inquiry, the Domestic Telecommunications Infrastructure, is a positive step in that direction.

One of the outcomes of this initiative, I hope, will be the development of some sort of a timeline for the evolutionary process to ensure U.S. competitiveness.

In the field of telecommunications, international standards-setting takes place in a different environment than most other fields. International telecommunications standards setting already has significant government oversight and participation.

We had first international telegraph convention in 1865 and it was established the International Telegraph Union, the ITU. This is now a specialized United Nations treaty organization in which the U.S. Government is itself a member representing the United States.

There are two major standard-setting organizations here -- the CCITT and the CCIR. In 1988, for example, the CCITT adopted or reaffirmed almost 1600 telecommunications standards. The U.S. Department of State with support from the FCC, NTIA, NIST, and other offices and the Office of the U.S. Trade Representative, works in partnership with the U.S. industry and we fully support that.

For developing national standards and technical contributions to international telecommunications standards groups, in the United States the T1 Committee was organized so we have a formal standards process here.

To form U.S. positions in international standards meetings, these technical contributions are reviewed for consistency with policy and strategy at the State Department-led U.S. study groups.

A significant cooperative partnership, therefore, already exists between the voluntary industrial standards groups which create national telecommunications standards, and the government which provides the strategic filter on technology and the voting power in CCITT and CCIR.

Recent successes include, for example, the Synchronous Optical NETwork which is SONET which is a major U.S. standards environment and was successfully exported into the international standards arena.

In 1984, SONET was introduced into T1X1 in the United States, a subcommittee of T1. During '85 and '86, agreements were reached in the United States to create a consensus view and in '85 through '88, during the CCITT study period, the United States led the standard into the international arena and had it adopted.

In several instances, to advance the work in an expeditious manner, U.S. employees met one-on-one with their counterparts around the world to sell all the concepts involved.

I think for SONET the U.S. standards process worked very well and I can't imagine how pervasive government control would have enhanced this process. In fact, I expect that it would have been detrimental.

In a similar manner, Broadband ISDN is another recent example where United States standards organizations have demonstrated world leadership. During '85 to '88, the CCITT preliminary agreements were reached and a schedule developed to lead to international standards by the end of 1992.

Active United States leadership is now leading to series of 1990 standards, thus accelerating the world standards by a full two years because of the needs of the United States industry.

The notice of hearing for today's session requested suggestions for improvement in the process. Even thought the structure and process that the U.S. State Department has established for developing U.S. positions have, in general, worked satisfactorily. Bellcore recently provided some suggestions for improvement to this process directly to the State Department.

We suggested that State could enhance the process by placing greater emphasis on developing negotiating strategies, timing as well as technical objectives, including evaluating the impact of potential concessions, prior to attending the standards meeting. We believe this is a legitimate and valuable role for the government.

Because in a few cases technical positions developed by U.S. standards groups had been overturned by last minute interventions to the State Department, we recommended that inputs to the State Department from national standards bodies ought to be weighted most heavily in establishing a U.S. position.

We also suggested to the State Department that they encourage direct interaction between and among the national and regional international telecommunications standards organizations early in the standards development activities to facilitate harmonization and to improve the likelihood of expeditiously developing and obtaining worldwide agreements through CCITT.

It is not felt that any major changes to the process, however, would be beneficial. It would be especially detrimental if any changes were to be implemented that increased the length of the time that it takes to develop a U.S. position either through additional coordination, oversight, or reviews.

So as a result of this hearing, shortcomings in the present system are identified, I feel that NIST should work to encourage changes within and through the current structure rather than to propose structural modifications.

the overall standards process could be enhanced by increasing peer level participation of government experts to work along with industry experts in the early stages of standards development.

This would, in many cases, allow for the development of better standards that would be used more widely, however much can be accomplished by the government adhering more strictly to the standards developed by industry in its own procurement process.

That would be another way that Government can improve the way standards are adopted and used.

In the development of national telecommunications standards and the technical aspects of positions for international standards in the United States, we had a vigorous, sophisticated and successful total open standards organization. In our case, it is T1 which operates under the ANSI model procedures.

In addition, we have strong liaison and interactions with other ANSI-accredited standards bodies. For example, IEEE as in the case of the IEEE 802.6 in the development of Broadband standards.

We encourage the continuation of the entire voluntary system of industrial standards that has proven so effective and productive in the United States.

In the development of international telecommunications standards, because of the need to work with other governments, the U.S. Government through the State Department, is already significantly involved and works in partnership with U.s. industry.

Bellcore also endorses this process and is actively involved in the process and will help to improve it.

Thank you.

CHAIRMAN WARSHAW: Thank you very much, Mr. Handler. Are there any questions from the panel?

Well, thank you very much. We appreciate your comments.

MR. HANDLER: Thank you.

CHAIRMAN WARSHAW: Ms. Williams.

MS. WILLIAMS: Can you hear me all right? How about that? Is that better?

CHAIRMAN WARSHAW: Yes.

MS. WILLIAMS: The American Speech-Language-Hearing Association, ASHA, representing more than 61,000 audiologists and speech-language-pathologists nationwide, is pleased to have this opportunity to provide comments on issues concerning standards development activities in the United States.

In this statement, we will discuss ASHA's involvement in standards development experience with the present standards development system, concerns regarding changes in the system and the resulting impact on consumers, and recommendations for improving the standards development system.

ASHA is a national professional and scientific association for audiologists and speech-langauge pathologists who provide diagnostic and rehabilitation services to children and adults with hearing, speech and language disorders.

ASHA is a voluntary standard-setting organization that accredits graduate programs in speech-language pathology and audiology and service delivery programs. ASHA also sets criteria for credentials to practice as a qualified provider of audiology and speech-language pathology services.

ASHA members are employed in both the private and public sectors as clinical service providers, researchers, product developers and university faculty. Employment settings include schools, private practice, federal and state regulatory agencies, community clinics, hospitals, universities, and the military.

ASHA participates in standards development activities through representation on standards development committees, promotion of member involvement in standards development activities at a grass root level, and by serving as a technical assistance network for promulgating standards affecting the practice of our professions.

ASHa is one of the 250 paid organizational members of the American National Standards Institute, ANSI, and a paid member of two standards development committees, acoustics and bioacoustics, of the Acoustical Society of America, ASA.

ASHA pays the expenses for organizational representation at standards development committee meetings, at ANSI meetings, and for some of the expenses associated with ASHA committees responsible for ASHa's review of proposed standards.

ASHA encourages broad-based member participation in standards development activities by keeping members informed about proposed and current standardse through professional publications and through its committee and board structure.

Additionally, many ASHA members are involved in the U.S. and international standards development system outside of the Association structure through participation in working groups, technical advisory groups and standards review processes.

ASHA strongly supports consumer protection efforts and quality assurance methods. For these reasons ASHA participates in standards development activities and the voluntary system administered through ANSI, and encourages broad-based participation of our members in the standards development process.

The current U.S. standards development process using input from industry, researchers, consumers, government employees, and clinical service providers is an excellent system for standards development pertaining to acoustics, bioacoustics and noise.

The end result of this process is the creation of standards that truly serve the purpose of quality assurance and consumer protection. ASHA's support for the process is reflected by the incorporation of the standards developed into the Association's guidelines for clinical and professional practice.

Although ASHA's direct and indirect financial support of standards development is substantial, we do not, and could not, pay for all of the time or expenses of our members involved in standards development activities.

The current system relies on professionals' interest and voluntary cooperation. We understand the concerns of some regarding the length of time for developing standards, particularly in light of the European Community '92 objectives.

However, the present U.S. process has proven effective in developing excellent standards that are acceptable to both the private and public sectors in our professions.

We have serious reservations about changing to a standards development system that expedites the process, but reduces or limits the range and depth of input or that produces inferior standards that do not protect the consumer. We caution against adding another layer of bureaucracy that may slow down the existing standards development process.

Our past experience with government standards development activities does not encourage us to support a government-controlled model. Areas that were government regulated at one time have been de-regulated.

For example, a federal community noise standard developed and enforced by the Environmental Protection Agency is no longer available to protect the public because the EPA was instructed to close its Office of Noise Abatement and Control.

In other cases, were regulations exist, they are not kept current with state-of-the-art technology and information. For example, the Occupational Safety and Health Administration Noise Standard for occupational hearing conservation for industrial workers refers to outdated ANSI standards and mandates activities that do not provide optimal protection for the worker.

As another example, it has taken more than three years to update standards in the Food and Drug Administration covering hearing aid technical specifications. Fortunately for the consumer, most hearing aid manufacturers and audiologists have been following current ANSI standards and their stricter specifications rather than the outdated standards specified in the federal regulations.

For the most part, the U.S. standards for acoustics and bioacoustics have been adopted as international standards. However, one example of the difference in standards quality between the U.S. standards system and the more expedient approach of the Europeans is the international standard for hearing aids that requires measurement of hearing aid reference test gain at only one frequency.

The ANSI U.S. standard requires measurement at three frequencies. This different in standards can have major significance for product quality and consumer benefit. This example underscores ASHA's concern regarding radical changes in U.S. standards development and the potential detrimental effect on the consumer.

With respect to the proposal for replicating the Canadian model for standards development, it is our impression that the Canadians have essentially adopted U.S. ANSI standards and rely heavily on U.S. regulatory and standards development procedures in the areas of acoustics and noise.

Thus, we do not see the advantage of the Canadian model over the current U.S. system.

Our recommendations, number one, ASHA supports the concept of better cooperation and communication between the public and private sectors in standards development. The need clearly exists for integrating and updating standards contained within federal regulations.

Our understanding is that funding has not been earmarked by government agencies for ANSI standards development activities. This results in reduced participation of the public sector in standards development.

We urge the U.S. Government to provide monies for increased participation by allocating travel money for federal representatives to attend standards development meetings.

Number two, we recommend also that the government provide financial support for the standards development system. Offering incentives such as tax deductions may also serve to broaden participation by smaller companies and other interested parties.

Number three, at this time, based upon the above comments and our experience with voluntary and government standards development, the American Speech-Language-Hearing Association supports the model proposed by ANSI for an expanded private-public sector partnership as a way to improve U.S. participation in international standards activities.

Thank you for the opportunity to present our comments on standards development activities. The American-Speech-Language-Hearing Association and its members look forward to working with the National Institute of Standards and Technology to improve participation in the U.S. and international standards development system while maintaining the high quality of U.S. standards that are in the best interests of consumers.

CHAIRMAN WARSHAW: Thank you very much, Ms.

Williams. We did allow you time to get your coat off.

Are there any questions from the panel for Ms. Williams?

Well, thank you. If you could leave a copy with the transcriber, it would be useful.

MS. WILLIAMS: Okay.

CHAIRMAN WARSHAW: Now I would like to call Mr. Peter Yurcisin of the Office of the Assistant Secretary of Defense for Production and Logistics.

(Pause.)

Welcome, Mr. Yurcisin. We would be pleased to receive your comments and for you to introduce your associate.

MR. YURCISIN: Well, good afternoon, Mr. Chairman, distinguished panel and ladies and gentlemen of the audience. I am Peter Yurcisin, the Director of Standardization and Data Management in the Office of the Secretary of Defense.

I am accompanied today by Mr. Lee Rogers of our Defense Quality and Standards Office.

we are here today to present the Department of Defense's views on the main purpose of this hearing as described in the Federal Register Notice of November the 27th, 1989, namely improving U.S. participation in national standards activities, and to the related purpose as described in Dr. Warshaw's memorandum of December 20, 1989 in which he offered a model for a Standards Council of the United States of America, or SCUSA as we have heard.

I am truly delighted to be here, but at the same time, I do regret Mr. Chairman, being denied the opportunity to have joined my esteemed ICSP colleagues as a member of your august body.

As background, I would like to tell you some details about the DOD standardization program, as required by Public Law, and how we participate in both national and international standardization activities.

I venture to believe most of you know that DoD has a single, integrated standardization program executed by more than 100 technical standardization activities throughout the Department, and we are the free world's largest developer of standards, and I might say, largest user of standards and product specifications.

These activities, in addition to preparing military specifications and standards, work very closely with the private sector through non-government standards bodies to develop voluntary or industry standards, or as we in DoD call them, non-government standards, and international standards, and of course, to participate with our NATO allies in developing NATO standardization agreements or STANAG's, as they are often called.

DoD technical activities are also responsible for the technical content of the documents, for ensuring that the Military Services' needs are met, for incorporating requirements of our laws and regulations, and finally, for providing concurrence for standards used in the acquisition of weapon systems.

As you will better understand as I proceed, there is a need for better governmental and private sector cooperation, and in fact, a partnership between government and the private sector.

We in DoD feel that the current infrastructure is sound, and there is no need to attempt to superimpose government control in its place or over it.

The American National Standards Institute, ANSI, should be formally recognized by government as the privately funded membership organization that serves as the umbrella organization for the U.S. federation of voluntary standards bodies, and as the U.S. member body to the non-treaty international standards bodies of the ISo and the IEC through the U.S. National Committee, as well as with CEN and CENELEC, the private sector arm of the European community.

By our participation with non-government national and international standards bodies thorough ANSI, DoD has found that significant savings can accrue to the entire nation, not just to DoD, by our participation with these organizations.

Our defense representatives are active at virtually every level of non-government standards work starting with ANSI where I serve on its Board of Directors. In addition, my staff and I are involved in a variety of activities with several non-government standards bodies.

At the field activity level, our participation multiplies with thousands of technical representatives participating on committees and working groups throughout the ANSI federation.

As examples, we have almost 1000 people alone involved just with ASTM committees. In the international scene, the DoD provides more representation to ISO TC-1 than any other organization. We are deeply involved.

We strongly recommend that we in the government make full use of the avenues already available to make the government/non-government standards bodies partnership more viable. We need to increase the activity of the ICSP, which has only met once in the past several years, and to increase government participation in ANSI's government member council. This council, which I chair, has met quarterly since it was established by the ANSI Board of Directors.

For some time, DoD policy has been to use U.S. and international non-government standards in preference to developing our own military specifications and standards.

As a result of our policy, and participation in the aforementioned groups, the Department has adopted almost 5,000 non-government standards for use in defense acquisitions, and let me just remind you that in the Department of Defense, the 1987 figures show some $170 billion of procurements which far exceed the procurements of GM, Exxon and IBM. That translates to 15 million contract activities per year, or 56,000 each work day, or two every second of the day. We represent 80 percent of the government procurement activity.

In addition to adopting these 5,000 non-government standards, we have also identified thousands more that we use and plan to adopt as we implement our new streamlined adoption process.

We did this as an equal partner through the U.S. voluntary standards system administered by ANSI. I am sure that you are aware of our biannual series of Equal Partner Conferences, usually hosted in Williamsburg, the 1989 being hosted by ANSI. This series addresses the continued need for cooperation between government -- not just Dod -- and the non-government standards bodies. We are proud of these activities.

At the same time, we shifted our efforts away from the development and use of government specifications and standards. Government personnel from all federal agencies should participate in the non-government standards process in a manner similar to the DoD, and give preference to the resultant private sector standards whenever possible.

In recent years, DoD has continually used more non-government standards with which to procure commercial products and services.

Because of our success with commercial products, we will continue to seek and require the continued support of every non-government standards organization in the development of more product-oriented non-government specifications and standards.

Out goal is to expand the use of commercial products and processes in meeting defense acquisition needs. This is especially important in view of the strong congressional interest and emphasis on our moving towards commercial products and commercial buying practices.

The Department knows that by purchasing commercial products, we are contributing to the good health of the U.S. industrial base. Also, the other big advantage of using the same items and processes readily available in the commercial world would come during a national emergency, when we could mobilize our industries much quicker to support the surge and sustained levels required by our fighting forces.

The more reliance we place on commercial products, the faster and easier it will be to obtain these products from a broader base of suppliers. Our goal is to reduce costs, improve the quality of our acquisitions, and take advantage of state-of-the-art technologies resulting from the commercial marketplaces.

In this regard, we have taken several recent steps to expand our policy on buying commercial products. One change eliminated the preference for using military specifications and standards, and directing the use of simplified commercial item description -- called CID's -- when procuring commercial products.

This makes our dependence on ANSI and its federation of standards developing organizations even more important.

DoD has paid increasing attention to the area of specifications and standards in the past several years. Certainly it has drawn attention from outside parties, in particular the Congress and the Packard Commission.

Most recently, specifications and standards are a major segment of Secretary Cheney's Defense Management Review through which we are well on the way to accomplishing this and a number of other needed improvements in defense management.

As the result of this DMR, a specifications and standards working group has been formed with the prime objective to identify military specs and standards which could be replaced by non-government ones, CID's, or multiple award schedules. I chair that working party.

DoD is not the only customer with a critical need for non-government standards. Our defense industry needs them also, so that they can become more competitive in the world market.

NATO, the North Atlantic Treaty Alliance, like CEN and CENELEC, gives first preference to ISO and IEC standards and ANSI is the channel to ISO and IEC> That is why, to quote from the presentation given by the Honorable John Betti, the Under Secretary of Defense for Acquisition, on March 27 ANSI public conference, "the DoD's face to international standardization is through NATO and ANSI as the official U.S. member of the International Organization for Standardization, and the International Electrotechnical Commission."

NATO has a broad range of activities too numerous for me to mention here, but it will be included in my text submitted to you and there are several models there that could be used in this particular aspect.

In closing, I would like to quote the closing of the presentation given by the also Honorable John BEtti at the public conference that ANSI sponsored. He said, "We in the DoD will continue to provide vigorous support through NATO and ANSI to effect international standards. I cannot stress enough the importance of industry and non-government standards bodies providing the same vigorous support through ANSI to be sure that the U.S. positions receive proper attention in the development of international standards."

He then answered in a response to a question from the floor, and I quote, "I think that organizations such as ANSI are doing an effective job and we are probably better off not meddling with further government insertion in the process."

Thank you, Mr. Chairman, for giving us the opportunity for us to bring our case to you and without our having to insert into the record our 37,000 specifications and standards, and as you know, they are not copyrighted but I would be very happy to present them and other supporting evidence, if you so chose.

Thank you.

CHAIRMAN WARSHAW: Thank you, Mr. Yurcisin. We appreciate your comments and your full comments will be entered into the record.

Are there any questions from the panel?

Thank you again, Mr. Yurcisin.

MR. YURCISIN: Thank you.

CHAIRMAN WARSHAW: We will now hear from Mr. Piersall and Mr. Jenkins and Mr. Hahn of their respective TAGS indicated in the agenda, the TAG to ISO TC 8 and the

TAG for ISO TC 23.

(Pause.)

MR. PIERSALL: Good morning, Dr. Warshaw.

CHAIRMAN WARSHAW: Good afternoon.

MR. PIERSALL: Gentlemen.

CHAIRMAN WARSHAW: We will wait for the others to get down here.

MR. PIERSALL: Sure.

CHAIRMAN WARSHAW: We won't start the clock yet.

MR. PIERSALL: Oh, I don't care. I am normally used to trying to shorten up and catch up on time as a program manager, but this time I see you are ahead of schedule inspite of the lengthy comments.

CHAIRMAN WARSHAW: Yes, we are ahead because a couple of them cancelled out. Everybody has been holding pretty good.

Mr. Piersall, if we could begin with you, please.

MR. PIERSALL: Good afternoon. I'm Charles Piersall, the Chairman of the U.S. Technical Advisory Group to ISO TC-8, shipbuilding and marine structures.

We have been principal members of TC-8 since 1984 and are chartered by ANSI. Our TAG administrator is presently the ASTM.

I have personally been in the standards world since 1978.

You have just heard some of the testimony from Peter Yurcisin. The President's Commission on Defense Management, referred to as the Packard Commission, strongly recommended increased utilization of industry standards such as those promulgated by the American National Standards Institute and the American Society for Testing and Materials.

This concept of increased use of commercial products and standards was endorsed by the Secretary of Defense in the Defense Management Report to the President in July of 1989.

We are all becoming acutely aware of the potential impact of EC 1992 on the U.S. industry. With the retirement of older merchant ships worldwide and the environmental pressures to convert single hull tankers to double hull as well as constructing new tankers as double hull to avoid oil spillage, there appears to be a new life being breathed into merchant ship construction and conversions.

But will the U.S. be a player? At present, all ship construction in the U.S. is for the U.S. Navy and so one could argue that funding support, technical support, management support or even moral support should rest with the DoD for the shipbuilding industry. That's not going to support U.S. shipbuilders in competing worldwide for merchant ship work.

Since 1984, we in the U.S. TAG to TC-8 and our solid bank of technical experts backing us up -- roughly 300 persons strong -- have been performing the volunteer efforts for the review, comment, modifications and generation of standards to the ISO TC-8 which would represent the technical and manufacturing requirements of the U.S. shipbuilding industry and its supporting infrastructure.

The Maritime Administration has had a program office to administer contracts in support of the National Shipbuilding Research Program.

The program office has been operated by a shipbuilder, and it still is. It has gone from Bath Iron Works to Avondale to Peterson Builders, and now is in transit to Newport News Shipbuilding and Dry Dock Company.

The Maritime Administration has been transferring control of the program to the Navy with David Taylor Research Center, Carderock administering.

What this instability has caused us since our formation in 1984 is an ever-changing new bureaucracy to deal with for any funding support and a continuing education of each new player. We essentially go back to ground zero everytime -- and that is most frustrating.

What is needed? We have plenty of qualified technical expert volunteers. We have support from ANSI in transmitting information to and from the TAB and ISO, and the ASTM committee support for technical expertise has been fine, as has been technical support from others such as the U.S. Coast Guard.

Under this seemingly good situation, what is the problem?

There is a need for a single organization, and I believe that is the Department of Commerce, to assist by providing some minimal financial assistance so our volunteers can contrive in TAB participation. Specifically, we need funding to cover such as things as travel costs for delegates to attend TC-8 meetings, clerical support for administrative support to the TAG -- processing, tracking and mailing out correspondence, draft standards, comments, etc., and the postage.

Not a large sum of money, in itself, probably around $10,000 a year, but the lack of it is crippling. We managed to get money to send a delegate to the last TC-8 meeting, but we are in trouble.

I can't speak to the need for a government controlled standards body except to say that we don't need control over the volunteer technical expert support and we certainly don't need to replace them. We certainly do need a mechanism for financial assistance for administrative support and I believe the Department of Commerce should undertake that support.

There is a provision in the Trade Agreements Act of 1979 that authorizes the Secretary of Commerce to make appropriate arrangements to see to it that the United States is properly represented in the ISO.

Gentlemen, we are part of the thousand points of light and it is ironic, or timely, that this is volunteer month as we address this issue. Thank you very much for the opportunity to voice our concerns.

CHAIRMAN WARSHAW: Thank you very much, Mr. Piersall. Any questions?

Mr. Donaldson.

MR. DONALDSON: Sir, in terms of your 300 volunteers, is there a rough distribution between private sector persons and government persons?

MR. PIERSALL: Oh yes, I would say that the preponderance of that is private sector.

MR. DONALDSON: Private sector.

MR. PIERSALL: We do get a fair number of Department of Defense participants in the ASTM F-25 which is the ASTM committee for shipbuilding and marine standards, but it is an overwhelming population of the private sector.

MR. DONALDSON: If one can believe the implications of the intention to reduce the Defense budget and therefore experience cut-backs somewhere, presumably the Navy might take its share.

If that were to happen and there were reductions in demands placed on the shipyards, could you foresee that slack being taken up by the civilian economy in terms of building the new ships to which you were referring?

MR. PIERSALL: Well, unfortunately I think the time delay that you see in a shipbuilding construction type of program, right now the entire industry and I think it could be argued that there are probably more shipyards than there is work today to support the Defense Department, and there are a monopsonistic buyer.

They are the only guys that are buying. That is the only game in town. They set the ground rules. They set the price and through the spirit of good competition, many of the shipyards are going belly-up.

Now, if the Defense Department pulled out at this time, the over-the-horizon merchant ship increased program one, could not fill the slack in time. The second thing is we haven't had a strong enough participation to really be able to compete against the Koreans and others who have been able to build ships far more economically, far faster and I think a lot of that has to do with the fact that their governments provide a subsidy to them, so that they are competitive worldwide and not necessarily competitive within their country.

MR. DONALDSON: What are our basic objectives with respect to our representative in the international standards arena at the present time.

MR. PIERSALL: Okay, our objectives there are to try to be sure that we get a voice from our U.S. shipbuilding industry in the development of the international standards since we understand that the EC 92, for example, has indicated that they will use ISO standards wherever they exist, and that as you look at these standards that are coming from the ISO, they are basically performance standards where most of the types of standards and specifications that we use in the shipbuilding world are more detailed -- how to rather than what to.

Our desire is to be able to get the U.S. input into those standards developed so that we are not locked out. I can give you a simple example that may seem almost to the point of ridiculousness, but a standard developed for international size of pallets to be used on commercial ships is such that when we load cargo onto a U.S. pallet, it won't fit.

So if we don't get on-board and get ourselves inputted into that process, I think our friends who are telling us that there is going to be free trade and a great love-in, we are going to find that the United States is locked out.

MR. DONALDSON: The last comment I would make, we heard Mr. Yurcisin say that NATO is committed to use first and foremost international standards from ISO and other bodies and if we are talking primarily defense shipping as representative of our industry, it would seem to me that the U.S. Defense community should be concerned with your representation in ISO on that basis.

I presume since that is sort of obvious to me, it must be obvious to the others. Why don't you get support from DoD?

MR. PIERSALL: I guess I would have to defer that question. I have been chasing this little rat since 1978 and with the ISO since 1984.

Perhaps I glossed over it too rapidly when I pointed out that the Maritime Administration had a program office.

MR. DONALDSON: Yes, yes.

MR. PIERSALL: Supporting the National Shipbuilding Research Program and I am here to tell you, if you are familiar with procurement documentation -- they used to call them 638 forms and now they are 1411's -- and you will find that to try, it took us three years to get our hands on $5,000 to be able to support the effort, and the documentation that the TAG put forth to get into MARAD, to get the approval of that $5,000 would have matched a General Dynamic's bid for the TRIDENT submarine.

MR. DONALDSON: Thank you.

CHAIRMAN WARSHAW: Thank you very much, Mr. Piersall.

MR. PIERSALL: Yes, sir.

CHAIRMAN WARSHAW: Any additional information you or others can furnish us between now and June 5th, we would appreciate it.

Mr. Jenkins and Mr. Hahn.

MR. JENKINS: Yes. Thanks for allowing us to present these comments. Your program shows Russell Hahn will be here. Russell was here earlier in the week but he had to return so with me is John Crowley who is director of engineering programs for the Equipment Manufacturers Institute in Chicago. You may know it as EMI.

It is appropriate that he is here because, in fact, it is EMI that administrates the TAG for TC 23.

MR. DONALDSON: Yes, EMI spoke yesterday.

MR. JENKINS: Yes.

MR. DONALDSON: EMI made a presentation.

MR. JENKINS: That's correct, yes. I was a part of that. I am Willard Jenkins. I work for John Deere as manager of Large Tractor Planning in Waterloo, Iowa.

We did provide you with some written comments on the 20th of March and I trust that those are a part of the record of this hearing.

TC 23 is the ISO Committee for Tractor and Machinery for Agriculture and Forestry. TC 23 has 18 subcommittees covering products ranging from farm tractors to irrigation equipment.

The U.S. holds three of the Secretariats for the subcommittees and participates in 11 other subcommittees.

In the original notice for this hearing, you asked several questions and we will only amplify on those that relate specifically to our TAG.

The first one we would like to address is the question that said is there broad and adequate representation and participation by the public and the private sector?

Our answer is that we believe that the private sector participation is adequate and that the public sector participation is marginal.

The U.S. TAG for ISO/TC 23 actually is composed of several sub-TAG's for each of the subcommittees. Each of the sub-TAG's is networked with the industry groups, standards organizations, university people, USDA people and so on.

While it is true that some of the smaller companies do not participate personally in some of these meetings, many of them do vote on the various documents that come their way by letter.

We would like to have more participation by the

U.S. Government and we have a specific example we would like to present.

We have procedures to test and approve roll-over protection structures, more commonly known as ROBS for agricultural tractors. These procedures exist within ISO, OECD and the EC and also OSHA has a set of procedures.

The problem is that the OSHA procedures are technically a bit different than the other three. The OSHA rule was developed or was adopted in 1975. It hasn't been updated or reviewed since then.

We believe that the EC, the ISO and the OECD standards provide safety equivalent to what the OSHA does. The OSHA rule is viewed by our trading partners in the common market and OECD nations as a technical barrier to trade since this technical difference requires a separate test to demonstrate conformance with OSHA.

These tests are time-consuming and expensive because they are destructive tests.

This also applies to us as U.S. exporters of tractors because we also have to provide the two tests: One for OSHA and then one for the overseas countries.

We believe that if OSHA had participated in the development of these worldwide standards, that they would have gained the necessary expertise to update their 1975 rule.

So that is one example on one side. On the positive side, the Consumer Product Safety Commission has participated in TAG activities and we believe this has strongly enhanced the U.S. position in the eyes of ISO delegates from other nations.

We believe there is no need to change the organization or structure of the existing voluntary standards system in order to gain the benefits of federal agency personnel participation.

Participation within the current system in accordance with OMB Circular A-119 seems to us as being sufficient.

The second question that we would like to address is does committee organization and procedures facilitate or hinder adequate participation and are other countries' systems more effective than ours?

Simply, we haven't seen a system that is more effective than ours. We think ours is pretty good. The differences that do exist probably relate to people and funding.

The third question is does the TAG provide the needed forum for developing the U.S. position, and are U.S. delegates able to gain international acceptance of a U.S. TAG position?

In our experience, the TAG and the sub-TAG approach, when it is used during the early and formative stages of the ISO document are efficient and effective.

We seem to be able to gain acceptance when our delegates are capable and knowledgeable and well-prepared. We don't see any structural or any kind of a procedural deficiency in our system that places us at some kind of a disadvantage.

The fourth question that we will answer is how can appropriate technical and financial support be assured? Should the U.S. Government help finance participation, especially by small and medium-sized companies?

As many of you know, the U.S. agricultural economy had a severe downturn in the 1980's and this affected all of us that supplied equipment to that economy, that segment of the economy.

Sales of some of our product lines went down as much as 70 percent compared to 1979 levels, but even then, our industry participated and supported the ISO, ALAE, SAE organizations at near full strength.

This was true not only for the major companies, but was also true for many of the smaller companies.

ISO work is partially funded by EMI and partially funded by ALAE. Typically, they would pay one-half of the delegates' expense to ISO meetings.

So we think we have experience that shows that TC

23 has satisfactory funding, at a minimum level of technical support, however it is realized that some additional incentives are needed to achieve even more participation by some of the smaller and medium-sized companies.

A government scheme to provide incentives for technical experts to participate in international meetings would be helpful. This should be complementary to existing public or private sector funding.

Governmental funding incentives should be available to all companies, large or small, as well as to public sector people who have gainfully contributed their expertise.

I have heard several other people make this same point, and several have given a precise formula as to how they would approach it. We really haven't a new candidate to offer in this respect, but we think that something would be helpful.

We believe that it is especially important to ensure that there is a continuity of any kind of a funding program so that there is consistency of over-the-long-term, putting it in this year, out next year won't work.

We also believe that the administration of the incentive program should be done to the existing system of TAG secretariats and administrators.

The last question that we will address is identify any weakness that requires strengthening should the U.S. Government play a more active role?

From the weakness, ISO is recognizably slow to develop standards. This problem has been accentuated by the EC 92 efforts, particularly in those cases where the subcommittees secretariat is held by one of the European countries, because the European people, there are just so many of them to go around and they are clearly putting their efforts on the CEN activities rather than the ISO at this time.

It seems to us like that with the emphasis on CEN, that any ISO document that is not fairly well along at this point probably will not be picked up by the CEN for the EC 92, or by that date, anyhow.

Because of the priority demands on European resources related to the EC 92 effort, we do not foresee great progress being made towards international standardization until after the flurry of getting ready for EC 92 has subsided.

While slowness is a concern, we frankly don't see a way that the U.S. Government can help us speed up that whole process. We have listened to some of the other presenters, hoping that they would give an idea and we haven't found good ones there in speeding up the process.

The second part of the question was should the government play a more active role? Our answer is yes. We have given a couple of examples earlier in this presentation as to how, but we think really the key to this is a joint effort for those that have been involved many years to make an already strong program even stronger.

In our written comments, we had seven recommendations and I will only hit three of those, the three that play directly on government involvement.

Those three are number one, the government should continue pursuing openness and transparency of the EC standardization process.

Number two, U.S. Government people should be made available to help with Technical Society Standards efforts and U.S. TAG's within the current system.

Third, a funding incentive scheme should be explored for all organizations who can contribute expertise. This should have continuity and should be done through current structures.

I know that listening or yesterday when I was here, and the day before you had some questions in general and we would certainly be happy to answer anything that you might have at this point.

Thank you.

CHAIRMAN WARSHAW: Thank you very much, Mr. Jenkins.

Any questions? Mr. Donaldson.

MR. DONALDSON: Mr. Jenkins, I was quite interested to note that you feel that the committee, the ISO committee has already experienced a downturn in the activity level as a result of the activities going on in Europe.

Is this demonstrable in terms of the frequency of subcommittee meetings called, working groups, or is it in terms of the attendance by the European community representative, or in terms of the rate of progress in developing drafts?

What kinds of measures have you seen?

MR. JENKINS: I think the answer is, is the last possibility that you gave. We are still having meetings on essentially the same frequency. They are well-attended but we can see that the progress between meetings is slower than it was in previous years.

MR. DONALDSON: So they are not doing their homework.

MR. JENKINS: Yeah, yeah.

MR. CROWLEY: If I may, I will add something.

MR. DONALDSON: Sure.

MR. CROWLEY: In the case of subcommittee 3 of PC 23 which is safety and comfort of the operator, and it is of course where the CEN priorities are focused now, on safety and health, the U.S.A. did explore with the British

Secretariat the possibility of increasing the frequency of those meetings.

The British Secretariat said that they just weren't going to do it and they couldn't do it for the reasons that we have already explained.

MR. DONALDSON: Thank you.

CHAIRMAN WARSHAW: Mr. Leight.

MR. LEIGHT: I would like to follow that up with the related question. Since CEN and CENELEK have indicated that they would use international standards wherever possible, and if they are withdrawing or drawing on their resources to work on CEN/CENELEK standards before international, do you have any comments on what this forebodes with regard to future development of international standards, if they are not in place and CEN/CENELEK has a legitimate reason for saying that they will go their own way?

MR. JENKINS: What we think will happen, and hope will happen, is that what they are really saying is right now CEN and CENELEK, they took everything that was existing as an ISO standard or was very close to being published.

Then we are seeing a slacking off of the ISO effort and their effort is being put on CEN. What we hope happens is after the CEN standards become in place, then they will go back to supporting ISO.

MR. LEIGHT: Thank you.

MR. JENKINS: One thing that is kind of a tag-on to that is that particularly for agricultural tractors, the EC directives are extremely important to us, maybe more so than some of the CEN standardization process, and so we have had a lot of conversation about the sequence between an EC directive and an ISO standard.

For several of the European countries, they would really like to say the model is the EC directive and now, let's pattern the ISO standard after it. Most of the other nations say you have got it backwards. We would rather have the ISO go ahead.

MR. LEIGHT: I would like to follow that up, then, if I may.

MR. JENKINS: Okay.

MR. LEIGHT: The EC has said that the primary way available, in quotes if you will, "available", for indicating that you are satisfying the EC directives is to show that you have satisfied the EC directives.

As a secondary way, if you satisfy the CEN or CENELEK standard, that that is a way of approval.

Have you had any experience, or do you have any predictions of how easy it may be to convince the Europeans that the essential requirements of the directives have been met?

MR. JENKINS: That they have been met. I am not sure ---

MR. LEIGHT: Met in the sense not of going through the CEN/CENELEK standards but demonstration that the essential requirements specified in the EC directives, that they have been met. That is the primary way on paper, in principle, that one can get products into the EC.

MR. JENKINS: For agricultural tractors, our approach is essentially bring an inspector from Europe to our facilities and have him inspect the tractor with the EC directives in place.

The other alternative is to send the product over there and let them do it there.

To us, the test is did we get signature that the tractor met what was the inspector said was in the directive. Now, is that answering your question?

MR. LEIGHT: Yes. Well, it bears on it, certainly.

MR. JENKINS: Yes. What we don't have a lot of experience with at this time is where we believe that the EC directive isn't correct or could be improved, we don't have a lot of experience in how to influence the upgrading of that.

Someday that experience will come.

CHAIRMAN WARSHAW: Mr. Donaldson.

MR. DONALDSON: Mr. Jenkins, a slight digression, but how does the work of the TC and you work with the TAG relate to the involvement in OECD?

MR. JENKINS: This is a growing relationship and there is not total consensus on this point. There are several of us that say the long-term relationship should be that ISO is the standards-writing organization and OECD is the testing organization.

Right now, OECD has what they call codes which really are standards that they go by. There is a reluctance on the part of some of the test stations to turn loose of that power that comes in writing their own codes.

So there is a reluctance there to go over and to pick up the ISO standard, but I think over the long-term, if we keep pushing at that, that it will happen.

MR. DONALDSON: Do you think the OECD work will see less emphasis in the same way that you are seeing some problems in the TC activity from the Europeans?

MR. JENKINS: I would doubt that because the ISO effort tends to be strongly industry-involved, and the OECD is typically a government organization or a pseudo-government organization at one type or another.

MR. DONALDSON: Open area.

MR. JENKINS: Thank you.

CHAIRMAN WARSHAW: Thank you very much, Mr.

Jenkins.

MR. JENKINS: Well, thank you.

CHAIRMAN WARSHAW: We appreciate it.

I would now like to ask the TAG's for ISO TC 121, subcommittee 3 and ISO TC 127 if they could come forth.

(Pause.)

MR. HEDLEY-WHYTE. Good afternoon.

CHAIRMAN WARSHAW: Good afternoon.

MR. HEDLEY-WHYTE. My name is John Hedley-Whyte. I am the chairman of ISO TC 121 SC 3. I am professor of health policy and management at Harvard University and also a professor of anesthesia and respiratory therapy.

I have been involved with international standards work either as a leader of the U.S. technical advisor group, or as chairman of an ISO TC 121, subcommittee since 1967.

I am entirely dependent for my income on my chair at Harvard University and have taken no consulting fees and taken no part in medical malpractice actions since 1966, so that I think I am in a position that is at least monetarily unbiased about the medical device industry and the international standards organization activities of the United States.

The medical device area is a large industry and the area of operating rooms and intensive care and of patient monitoring accounts for approximately 60, between 60 and 70 percent of the expenditures in this area.

If you take the figures for 1989 -- these are U.S. Government figures -- we are talking about a $24.3 billion a year industry of which imports to the United States are $3 billion a year, exports are $4.3 billion a year, and the import share of that is around 13 percent.

From the 1987 figures, the imports come from the countries you would expect -- West Germany, about a quarter; Japan, about a quarter; other, about a quarter; and small amounts from the United Kingdom, Mexico and the Netherlands.

There is evidence that our trade surplus is dependent upon the strength or weakness of the dollar, and not of standard activities.

However, how have we performed since 1966 in the medical device area?

I think I can say without doubt that the United States' participation has been stronger, both intellectually and from the manufacturing point-of-view -- and I don't mean to say that manufacturing doesn't have an intellectual component in the medical device area because overwhelming it is an intellectual component -- we have been stronger than any other country.

We are still stronger than any other country.

We have had a lot of input from entrepreneurial, high-tech owner-led companies that have opened up markets.

The market we see for medical devices is totally unrecognizable from the devices of 1966.

The turnover time of new devices, as you know, is very fast in the medical device area.

The leadership of the United States activities in the international standards area in medical devices has overwhelmingly been from the major research universities of this country -- Harvard, the University of Pennsylvania, Duke, Temple and Stanford in particular.

Both ANSI, whom we worked under directly until 1983, and subsequently ASTM who we have worked under as the administrator for the U.S. TAG since 1983, basically require that an academic be chairman of the committee and leader of the U.S. TAG.

Such is the demand for knowledge and possibly impartiality that that really means that it has to be an academic from one of the major research medical schools of this country.

The government intervention on behalf of the German, Japanese, British, French and Scandinavian standards activities I think has not lead to the degree of flexibility that we have had. But you must also realize that their leadership is almost invariably the United States trained, and it is trained by the research universities that I have named here.

For instance, the leader of the Japanese delegation is an MIT graduate who was trained in the post-graduate training at the University of Pennsylvania by the account leader of the ASTM F 29, so that we have an area that requires training in a limited number of institutions.

I think that the only problem is the problem of breaking in to what you might call a high-tech intellectual cartel that the leading research universities of this world have at the moment, or the western world have at the moment.

Do we have enough money to carry out the maximum strength U.S. participation in these activities?

My own personal feeling is yes, we do. From a combination of the funds of the research universities, from ASTM and from industry, funneled -- we require -- through ASTM so that there can be no direct bias for the person traveling on funds that go from industry to ASTM.

Of course, there is always grumbling about lack of money. But as chairman of the committee, I don't think I was ever unable to get a U.S. expert to a meeting that I thought we needed to have to espouse the U.S. position.

I have found that the staff of ASTM, of ANSI, of the FDA, of the Emergency Care Research Institute which is not actually a standard-setting body, but a non-profit organization which looks into medical device failures, and advises both hospitals and manufacturers on potential pitfalls in their equipment, I found that the staff of these institutions are very helpful.

I have also found that when the physicians and bio-engineers on a committee have formed a view which is really in opposition to the manufacturers, but if there is necessity to bring pressure on manufacturers, I found that the Department of Defense had been extremely helpful.

The manufacturer really cannot fight the combined research medical schools and the Department of Defense and continue to have the market.

Would increased government participation as outlined in the Federal Register help?

I think in the medical device area, it wouldn't. There are occasions when one wishes the designated FDA representative to stay right to the end of the meeting, and because he has to go back on AmTrak or not go back on the most expensive air carrier, he leaves.

Well, these are inevitable problems, I think, in the running of any complex organization.

So I would make a plea that the current governmental participation be fully implemented. By fully implemented, I mean that the governmental people stay to the end of the meetings wherever possible.

(Laughter.)

MR. HEDLEY-WHYTE. In the area of standards usage, ASTM and ISO and IEC and ANSI, particularly laterally, are working very closely together. We feel that their cooperation in our area of medical devices could probably not be improved.

Sure, there are problems sometimes when ISO and IEC get into jurisdictional disputes. There haven't laterally been any problems about ASTM staff feuding with ANSI staff.

You may ask why did we move from ANSI to ASTM? The only reason that we moved was that we were offered better legal coverage by ASTM than by ANSI.

That brings up one area, because standards usage by hospitals and by physicians is almost universal in this country because of the problems of litigation if you don't follow standards.

Coverage, medical/legal coverage of committee members is important. I found the memorandum that was recently sent 'round by the Department of Commerce, Swankin's memorandum, absolutely ideal. That is just the kind of help that the standards chairman needs.

I think that the area of conflict of interest should possibly be strengthened by the government. It is important that the chairman and the members of committees not have a financial interest with what they are deciding on.

I think that either the voluntary consensus standards organizations should ask for the kind of openness that there is in other affairs of government.

That I think is my main suggestion. Thank you very much.

CHAIRMAN WARSHAW: Thank you, Professor Hedley-Whyte for a very vivid and articulate presentation. We would be most happy to receive any additional comments you have and the record is open until June 5th for additional comments.

Mr. White. Mr. White is from the FDA.

MR. WHITE: I am from the Center for Devices and Radiological Health of FDA and I just wanted to tell you that we have doubled our travel budget for international standards activities for this fiscal year, so we will be able to stay a little longer and maybe travel a little longer, or travel a little more.

MR. HEDLEY-WHYTE. Thank you very much.

MR. WHITE: The question has to do with a little more information about the participation by the medical device industry in standards activities.

Do you think enough members of the medical device industry are funding the standards activities of ASTM and ANSI, based on your experience?

MR. HEDLEY-WHYTE. Well, you have to remember that the medical device industry unfortunately, in my view, has become very compressed. Eighty or ninety percent, for instance, of the anesthesia-machine manufacturers in the western world is by two companies, and so on and we can go through all the medical devices and I can give you a rough idea of how very few companies are, if you like, providing it for the whole of the Western World.

I think that they show up, but of course, when you are sitting down with the equivalent of Boeing and Airbus, people who want to start manufacturing the equivalent of jetliners, feel that there are two few of you.

Well, of course, there are too few of you. So my answer to you is I think it is adequate, yes, but unfortunately the market has contracted too much.

MR. WHITE: Okay. Another area of interest to FDA, and I assume it is to you too, is the IEC 606-1, safety of medical electrical equipment.

Could you tell us what your forecast is in terms of the U.S. adoption of that standard?

MR. HEDLEY-WHYTE. Well, we are writing, as you may know, essentially all international standards and IEC standards in an IEC 601 compatible format. ASTM has agreed that all United States standards in our area will be in an IEC compatible format, with reference to the IEC 601 text.

I think it is inevitable that within a year or two, that it will be universally adopted.

You do have problems in this country, for instance, as you know, a fire marshall in New York or Chicago may decide that he doesn't like to read the however many pages there are in EIC 601, and he will not have it, and that leads to problems.

But when it comes to litigation, the juries and judges are sensible enough to see that the approaches that have been taken in relation to 601 shall prevail over the idiosyncracies of an individual local official, or for that matter, of a state official.

MR. WHITE: I guess more specifically, again, just for the record, do you think there's adequate financial support for the U.S. IEC 601-1 activity?

MR. HEDLEY-WHYTE. I personally do, but that is a view that is coming from a research university, and I think if you ask people in smaller medical institutions, they might not agree with me.

MR. WHITE: Okay. Thank you, sir.

CHAIRMAN WARSHAW: Mr. Barbely.

MR. BARBELY: Professor, let me ask you a question that kind of covers the whole standard area, alluding to a comment that you felt that we would have to be very careful on the financial interests of the people that are going to these meetings, if they have a financial interest, therefore you had some concern.

Well, most of the people that are involved in the standards are involved because they have "a financial interest." How would you then suggest that we are able to take the experts or have spokesmen who do not have a financial interest -- or you saying then that your honest broker or your leader of your delegation then cannot have a financial interest? Does that mean he has to be a government spokesman in many cases?

How do you view that as a general question?

MR. HEDLEY-WHYTE. Well, as I said, the chairman has to effectively be an academic from a major research university. I don't think he should have any financial interest, period, and I don't think he should testify in medical malpractice actions, either for the plaintiff or the defense, because that is invariably misconstrued as having an interest, a financial interest.

Obviously, the individual members of the committee representing a company, their views can be discounted or strengthened by one's knowledge that they have a financial interest in that company.

But I think my main comment about financial, lack of financial interest obviously applies to the chairman and to governmental representatives.

We have had incidents during my chairmanship in the mid-70's whereby when an academic from a medical school in New York at the time was engaged in medical malpractice litigation, and that lead to an awful mess because his views were misconstrued probably wrongly as being related to his work in medical/legal work.

CHAIRMAN WARSHAW: Any additional questions?

I want to thank you very much, Professor. For the record, I won't ask where Harvard University is located.

(Laughter.)

CHAIRMAN WARSHAW: Mr. Eckert and Mr. Ritterbusch.

MR. ECKERT: Good afternoon. My name is Ed Eckert and I am the present chairman of Subcommittee 3 of the U.S. TAG for ISO and with me today is Gerald Ritterbusch, the chairman of the U.S. TAG.

ISO TC 127 covers earth-moving machines and was formed in 1968, with the U.S. providing the secretariat. The US TAG for TC 127 is administered by the Society of Automotive Engineers.

ISO TC 127 has completed some 70 standards and has 40 work items presently in process. The U.S. has an active TAG which has taken on the development of many of the work items. The TAB uses the infrastructure provided by SAE in the development process, and as a result, has a rather high percentage of the ISO standards that are technically equivalent to the SAE standards.

Therefore, it can be concluded U.S. TAG has been very effective into the international standards activity conducted by the TC 127.

The following comments will provide additional details of some of the specific points that will illustrate the work that has been accomplished by the USA TAG for ISO TC 127.

The construction/earthmoving machinery industry has been a multi-national industry for many years. As a result, there has been substantial interest in the development of international standards, rather than just national standards.

Part of the reason for this is that machines used in these industries really have to do the same thing regardless of whether they are used in the world. Thus, there is no need for differing standards.

The remaining differing standards today exist because of national government and individual laws in the national governments. This has required and is requiring aggressive action by private and public sectors, including the U.S. Department of Commerce to negotiate removal of both domestic and international barriers to trade.

The principal participators in TC 127 are the United States, Germany, the United Kingdom, France, Sweden, Japan, Italy, the USSR, Australia, Poland, Czechoslovakia, Indian, Finland, China and Belgium.

Attendees at meetings usually range for about 13 countries and about 40 delegates. This has become a very workable group and has been effective in transacting business at its meetings.

Documents are circulated in an organized manner and agendas are prepared prior to the meetings.

ANSI provides the necessary support as the Secretariat of both the Technical Committee and one of the subcommittees.

The hallmark for this ISO TC is in respect to the EC 92 initiative. It has either completed standards or has work items for all the identified EC objectives for our machines. Attaining this status is really all we can ask from the standpoint of an international standards harmonization.

It has been said before: CEN will use international standards, if they exist.

Most of the participating countries in TC 127 have already adopted the completed ISO standards, or are in a position where their existing national standards are equivalent to the ISO standards.

The U.S. TAb thus views with no concern the EC 92 objective as it is developing.

With regard to the questions that you brought up specifically in the notice of this meeting, the U.S. TAG feels that the present system in the United States for developing a national standard in the organization of the TAG promotes the national position in the international arena is adequate.

The level of participation is a function of the number of interested parties. As the complexion of the industry has changed with mergers/consolidations and a reduced size market, the number of interested parties has ebbed somewhat to a lower level.

Only if this trend reverses and the industry fully recovers, will the likelihood of expanded participation occur.

There is a lack of public participation in this work. In the past, participants from OSHA and DoD did participate. With budget restrictions, this participation has disappeared in our technical committee.

A benefit of this participation in addition to added expertise is the higher likelihood that the ISO standards would be adopted into the national regulations.

In dealing with delegates of the various other countries that participate in TC 127, we have come to know a great deal about how other delegates operate. Our conclusion is that there really is little differences between the performance of the various active delegations.

Where there is direct government involvement, there is no better contribution than that obtained by the U.S. In most instances, there are less contributions to the work.

With regard to the issue of the Standards Council of Canada, Canada is not even participating in the technical committee. We don't believe that there really is a benefit to that kind of organization.

The U.S. TAG has always maintained active participation and has, by far, been responsible for the largest number of the documents in the various work stages.

It has a better record of completing drafts on time, responding to comments, and producing re-drafts then any of the other major participants.

The TAG has a very supportive infrastructure in SAE that provides in-depth expertise to take the commitment of the developing documents and providing valuable comment. Just a little aside here, all of the members of the TAG are also participants in SA.

As a result, the TAG is able to prepare the most thorough and technically valid comments and re-drafts. Through the use of the infrastructure, the TAG has been able to call on various experts to help in developing position that can be presented to the Technical Committee.

As a result, we have not encountered any lack of expertise to develop these positions. This also ensures that we have broader support for these positions that are taken, and has resulted in ISO standards that are acceptable in the United States.

While the TAG has normal turnover of personnel, there has been sufficient continuity in personnel so that the working relationship has been effective. As new people are brought into the TAG, they are counseled by the experienced members.

This is a passing on of the methodology to work with the delegates and also a knowledge of the personalities involved.

Financial support has not been a specific problem with the TAG. The major industry supported participants have been able to obtain the necessary fund from their employers.

Even during times of down-turn we have been able to get sufficient funding -- sometimes now as much as we would like.

Obviously, any scheme that would provide more funding from all benefactors of the work of this TAG would better balance the drain on the resources of those bearing the current costs.

In conclusion, the U.S. TAG has concluded that the present system in the United States has been very adequate to accomplish the needed work. The result is that a very suitable set of international standards are available to fill the needs of the industry, or are in process.

The U.S. has adequate input in these and can be assured that their use will meet our needs in the standards. The TAG continues to work with the introduction of new technology into the existing standards, and proposes new work items where they are justified.

The operation of the TAG has been one of building consensus, build on application, engineering principles and not encountering unrealistic resistance from members of the other delegates.

The TAG also promotes the use of the ISO standards. It believes that our government should be much more aggressive in putting those standards into our regulations.

The TAG feels that its performance can be used as a model for other TAG's so they can be equally effective in standards development and obtain the goal of worldwide standards harmonization.

Thank you.

CHAIRMAN WARSHAW: Thank you, Mr. Eckert, for your very responsive comments.

Are there any questions from the panel?

Mr. Donaldson.

MR. DONALDSON: Mr. Eckert, I believe I understood you to say that for the most part, the ISO standards work has pretty much met the objectives that CEN, the corresponding CEN work program would call for.

Have the CEN people recognized that and begun to assimilate that? What has been their reaction?

MR. ECKERT: Other than they are over-worked trying to develop the CEN standards, we have experienced good cooperation and as a matter of fact, held an interim meeting specifically to move the end work items so that they would be complete and be useful to the CEN writers, so that they wouldn't have to develop their own.

MR. DONALDSON: So they are carrying through with their principles that they have espoused that they would use the ISO standards where possible.

MR. RITTERBUSCH: I would like to just add one additional comment to that. The first document that we have seen from CEN, they have their technical committee 151 which is analogous to 127, and from that working group, they have made references to the authority of the ISO standards from 127, they are normative references in the CEN document.

This is what we are especially proud of because we think that's setting the trend.

MR. DONALDSON: So as an industry, you are satisfied that it is going the right way.

MR. RITTERBUSCH: Yes.

MR. DONALDSON: Thank you.

CHAIRMAN WARSHAW: Are there any other questions?

MR. CRIDER: Yes. Several speakers have addressed the fact of funding support for standardization activity, and your sister industry, the agricultural industry, mentioned a while ago that perhaps they would desire some incentives for participating in standardization activity.

From your industry standpoint, would you like to see incentives as direct incentives or indirect incentives through taxing structure?

MR. RITTERBUSCH: Well, I think we would like to see indirect incentives through the taxing system or something like that. I think it would be a lot easier to administer -- there is a system there much like the R&D credit that we are utilizing in a number of our areas.

I think if standards could be built into that, that would be a very low overhead way of making it work and provides the additional funding that I think we could very effectively use.

CHAIRMAN WARSHAW: Any more questions?

Well, Mr. Eckert and Mr. Ritterbusch, we thank you very much for your contributions, your time. Thank you.

Those are our last scheduled presentations. I would like to see if two of those who did not notify us that they were cancelling are yet present. Kathleen Hennessey of Texas Tech?

Or Steven Hellum of the U.S. Advanced Ceramic Association?

Well, then that concludes our hearing and I thank everybody for their contributions and patience and most especially for everybody's courtesy in terms of honoring the time frame.

Thank you.

(Whereupon, at 2:15 p.m., the hearing was adjourned.)

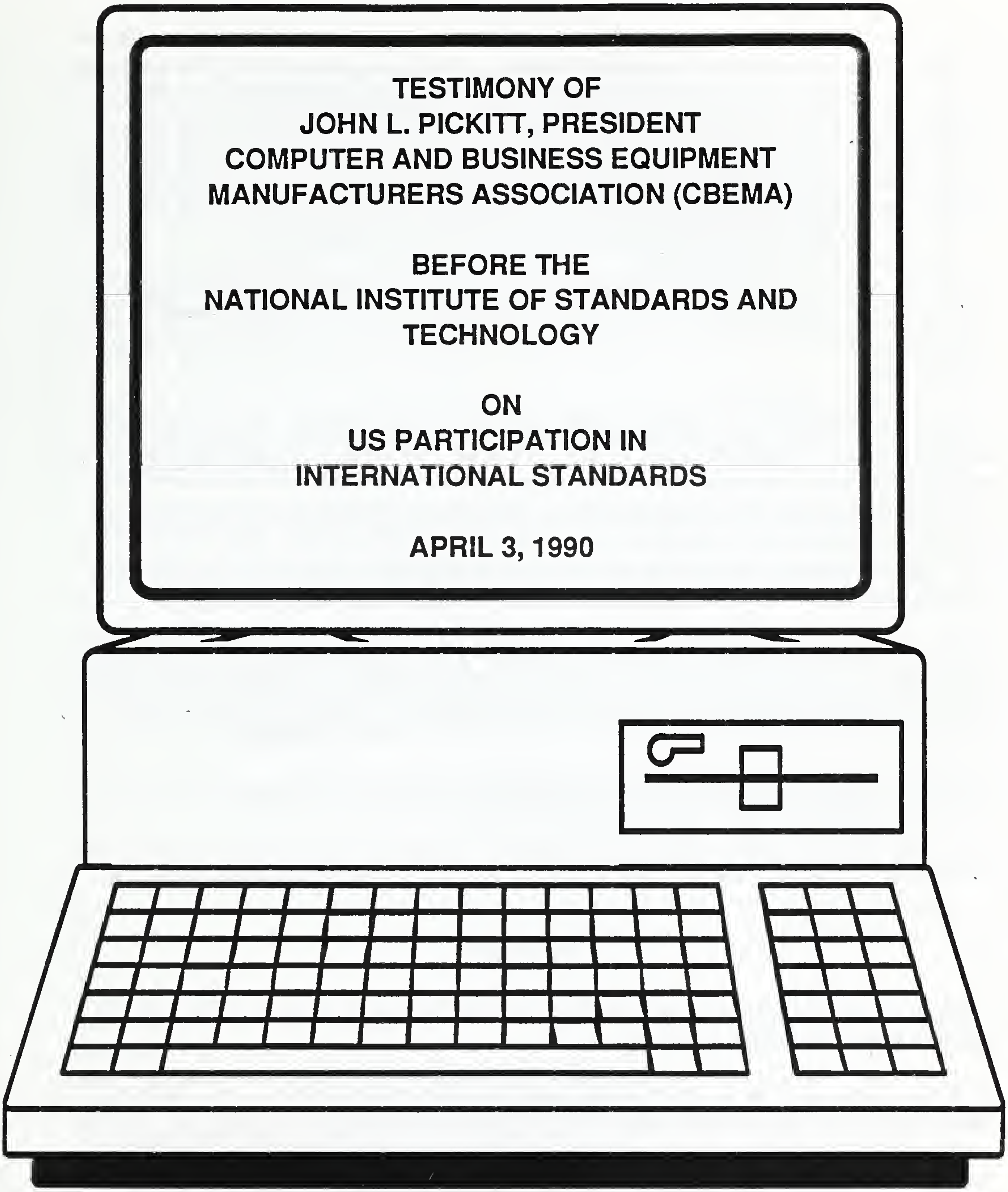
REPORTER'S CERTIFICATE

DOCKET NO.: National Institute of Standards and Technology
CASE TITLE: Department of Commerce
HEARING DATE: April 5, 1990
LOCATION: Washington, D.C.

I hereby certify that the proceedings and evidence are contained fully and accurately on the tapes and notes reported by me at the hearing in the above case before the Department of Commerce, National Institute of Standards and Technology

Date: March 6, 1990

Shelley B. Heller
SHELLEY B. HELLER
Official Reporter
Heritage Reporting Corporation
1220 L Street, N.W.
Washington, D.C. 20005



TESTIMONY OF
JOHN L. PICKITT, PRESIDENT
COMPUTER AND BUSINESS EQUIPMENT MANUFACTURERS ASSOCIATION (CBEMA)

BEFORE THE
NATIONAL INSTITUTE OF STANDARDS AND TECHNOLOGY

ON
US PARTICIPATION IN INTERNATIONAL STANDARDS

APRIL 3, 1990

Computer and Business Equipment Manufacturers Association
311 First Street, N.W., Suite 500 Washington, D.C. 20001 202/626-5757

The Computer and Business Equipment Manufacturers Association (CBEMA) has consistently supported voluntary standards for computers and office equipment--information technology--since 1959. We support the voluntary domestic standards system as participants in the American National Standards Institute (ANSI), and efforts to harmonize information technology standards worldwide through sponsorship of international standards technical advisory groups for information technology. Our experience gives us rather a different view of the situation facing our industry and the US currently and in the future than that implied by the hearings notice. In short, the government misperceives the current and future challenges, therefore proposes steps counterproductive to our country's and our industry's needs.

CBEMA represents the leading edge of American high technology companies in computers, business equipment and telecommunications. Its members had combined sales of more than $250 billion in 1989, representing 4.8% of our nation's gross national product. They employ over 1.5 million people in the United States.

We estimate that our members spent at least $50 million in personnel and direct costs to participate in voluntary standards in 1989. Total US spending on information technology standards, domestic and international must be in the range of $75 million, especially including the significant level of participation of US government agencies on technical committees. Data from our Standards Secretariats staff indicate that standards activities are increasing at a rate between 20% and 30% per year. Most of the voluntary standards projects in our area currently active and planned contemplate development of an international standard followed by or contemporaneous with adoption of a US national standard.

CBEMA also addresses regulatory health and safety standards. Specifically we have concentrated on product electrical safety, electromagnetic emissions, acoustical emissions, laser safety, and visual display safety. Our current highest priority project in this area is creation of one worldwide electrical safety standard for office, computing and customer premises telecommunications equipment.

Our industry has gone through the transition to face global competition, to market globally and to have to cope with numerous standards, testing and certification schemes.

The remainder of this statement addresses each of the questions raised in the hearing notice.

OVERVIEW

Does the US standards system, as presently constituted, adequately serve the nation's trading needs in today's international climate?

First, the US voluntary system--with its built-in checks and balances of government, user, consumer and producer involvement--is a unique system which has evolved sensibly to serve our nation well, nationally and internationally. A healthy private sector standards structure--currently embodied in the American National Standards Institute (ANSI)--is the way to maintain our strength and effectiveness, and the best safeguard for protection of US interests abroad is to reinforce the US member body in its role in both the International Organization for Standardization (ISO) and the International Electrotechnical Commission (IEC). The US standards system should not reorganize itself merely to be consonant with the Canadian, German or some other standards organization. Such a change may be inconsistent with the strong, effective mechanism that is already in place. Certainly, let us look at other systems and learn from them, but in the final analysis, let us retain that which has a history of meeting US needs.

Second, the US voluntary standards system is entirely consonant with the implementation of the General Agreement on Tariffs and Trade (GATT) standards code and the Trade Agreements Act of 1979. Regarding the latter, the current US set-up enables the Secretary of Commerce to identify easily specific problem situations in the standards arena *vis a vis* international standardization efforts and to recommend improvements. As such, the Act is a good example of the US evolving and adapting as it should to enhance government and private sector cooperation in meeting international requirements. The Act as we see it is designed to insure the national interest is supported institutionally and to facilitate federal government participation in the US voluntary standards system as it exists; there has been no demonstrated need to re-design the system to fit the requirements of the Act.

Can we identify any weaknesses that require strengthening?

If anything needs to be fixed, it cannot be fixed by the government alone. All participants in the system--government, users and producers--would have to meet the challenge of raising standards productivity or timeliness, for example.

Is there adequate participation by representatives of the public and private sectors?

The US information technology (IT) standards community served by CBEMA's secretariat activities includes 3360 individual participants representing producers, consumers and other interested parties. At this time, 1796 organizations participate, with only 1.5% being the manufacturers belonging to CBEMA; 2.2% are government agencies. On the consensus body, ANSI Accredited Standards Committee X3-Information Processing (as opposed to the technical committees that actually develop IT standards), 10% are government agencies with private sector users and producers making up the balance in almost equal number.

Clearly, then, the IT standards community encompasses the range of US interests and carries this forward as a great strength in representing the US in international standards organizations, e.g., ISO and IEC, mentioned above, and the International Telegraph and Telephone Consultative Committee (CCITT). The information technology industry is also well represented in the European Telecommunications Standards Institute (ETSI), as well as the IEC System for Conformity Testing to Standards or Safety of Electrical Equipment (IECEE) and the European Computer Manufacturers Association (ECMA).

The IT standards community has recognized the value of making the transition from unique, national standards to harmonized, international standards for several years and has organized itself to lead that effort. We have an acknowledged leadership role in that field.

Further, we want to log our disagreement with those who would do away with ANSI. ANSI is a creation of the voluntary standards system. It is not "national" in the sense that it is a government-mandated entity, but it is truly "national" in that it encompasses the concerns, input, products and needs of an entire nation, not just a region.

The United States government can and should support this voluntary standards system, without damaging the integrity of it, by continuing to enhance the current government-consumer-producer participation *via* ANSI in the international voluntary standards system. This will optimize working relationships among all involved; re-designing the system is clearly unnecessary.

In other countries governments play a more formal role in standards. Are their systems more effective than ours?

No. The effectiveness of the US system is clear: At the last JTC 1 (the ISO/IEC Joint Information Technology committee) plenary meeting, the US position prevailed in 105 of 106 issues. How? Through the diligence of all US participants expressing consistent, consensus positions.

In contrast to most other countries, the national standardization system in the US is independent of government control. It is a profoundly democratic process, and as such, has the weaknesses as well as the many strengths that characterize democracy as a political system. Challenges which must be met by the voluntary process to ensure successful standards development in the US environment include assuring adequate representation of users; achieving a fair balance among competing industry interests; avoiding fragmentation, duplication, and inefficiency in standards committee activities; and most importantly, establishing a clear consensus vision of the future we seek.

We should not change our process just because other nations organize their systems in a different way. The EC, for example, aims to conquer a range of diversities to create an internal market free of barriers--a short-term challenge we do not have. The top-down approach the EC has chosen is antithetical to ours.

What should be the US Government's role?

The US government should participate as an equal in the ANSI system. It should identify and support technical work that it perceives to be in the national interest. Where it identifies or where the private sector brings to its attention foreign activities that will reduce the competitiveness of US firms, it should take steps to remedy the situation. Where it identifies or where the private sector brings to its attention foreign government acts which breach international agreements, trade remedies should be aggressively pursued.

A US government-run program would not be better than one dependent on voluntary action. Aside from the proper government concern for equitable international action, a government-run system contemplates a remedy inappropriate to the government's role: In standards the government acts primarily to satisfy its proprietary, not its sovereign, interests. Its sovereign interests are met through enforcement of the antitrust laws and technical regulation of commerce under statute.

Further, a government-run system, while it may appear to promise abundant support, is no panacea. A danger of government getting too deeply involved in voluntary programs is that government funds become scarce when they are shifted in response to political needs. Examples of this in the standards environment include:

- NIST/NCSL Reference Materials Program, a very valuable service for manufacturers and one that directly improved a customer's ability to interoperate, was reduced to a minimum effort funded 99% by the private sector.
- NIST/NCSL development of IT Conformance Tests was aborted.
- NIST relinquished the Secretariat of ISO/TC 154, Documents and Data Elements in Administration, Commerce and Industry.
- NIST relinquished the Secretariat of ISO/TC 97/SC14, Representation of Data Elements.
- NIST offered to take the Secretariat of ISO/TC 97/SC 11, Flexible Magnetic Media for Digital Data Interchange, then later had to withdraw the offer.

The Government could improve its support by pursuing:

- ■ harmonization of national and international standards;
- ■ a single standard or set of standards worldwide for each discipline to provide the capability to test products once and then be able to market them anywhere in the world;
- ■ participation in the voluntary standards process and adoption of voluntary standards for government purposes in accordance with OMB Circular A-119, as NIST/NCSL (National Computer Systems Laboratory) has done with GOSIP, Government Open Systems Interconnection Profile.

Other welcome support would be for:

- ■ NIST as the central point for coordinating government application of voluntary standards;
- ■ NIST as sponsor of the OSI Implementers' Workshop and ISDN Workshop;
- ■ NIST testing of reference materials.

If more coordination is needed among the many US interests concerned with standards and trade, what changes might be beneficial?

Improved coordination means shared support for:

- ■ industry efforts in the international environment to ensure that standards, testing, certification and accreditation procedures do not lead to a non-tariff trade barriers.
- ■ mutual acceptance of manufacturer's declaration of conformance.
- ■ mutual acceptance of test data.
- ■ mutual recognition of qualified testing laboratories, both manufacturer's and third-party.
- ■ better inter-agency coordination on standards and trade issues.

Is the Standards Council of Canada a model which the United States should consider?

No, it is not an applicable model for the US.

Even if it works for Canada, where government and industry have a fundamentally different relationship, there is no reason to think such a top-down approach will work for the US. Further, recent Canadian government budget reductions reinforce the point regarding funding made above.

STANDARDS PARTICIPATION

Does your organization send representatives to participate in international standards committee meetings?

Yes. We do so directly as a trade association and as secretariat to the US Technical Advisory Group for information technology. Our members do so directly, and the various technical advisory groups form delegations for almost all international meetings in our area of technology.

On a regular and continuing basis?

Yes, weekly.

Cite mechanisms which permit such participation and possible techniques for improvement.

X3 and the USTAG for the ISO/IEC JTC 1 (JTC 1 TAG) on Information Technology procedures, which are based upon ANSI and ISO/IEC procedures permit and encourage participation by all interested and materially affected parties.

CBEMA has served as the Secretariat for ANSI Accredited Standards Committee X3, Information Processing Systems, since it was formed in 1960. CBEMA is also accredited by ANSI as the TAG Administrator for JTC 1 TAG. JTC 1 is the largest standards activity in ISO and IEC. The US has held the Secretariat and the Chair of this committee since its predecessor was formed in 1960. CBEMA, in its efforts to steadily improve the process, has developed a recommended reorganization of the US IT Standards Committee to make it more effective and efficient in view of the changing technical nature of the IT standards arena. This proposal will be subjected to review by the participants as we seek a consensus on the best organization to meet the needs of the 1990's.

More generally we recommend that the US delegations to ISO plenary meetings have the same accountability as US delegations to technical committee meetings. We are planning to recommend to ANSI as a possible improvement that ANSI form a US National Committee for the ISO similar to the USNC for the IEC for representation to executive and policy levels of ISO. The USNC for the ISO would afford direct participation with accountability back to the interested and materially affected parties. This proposal will also undergo extensive review as ISO is of much broader scope than IEC.

The point is that mechanisms exist to make changes in the ANSI structure to optimize our international capabilities as conditions change.

Who in your organization has responsibility for international standards activities?

There is a twofold responsibility:

1. Through the Standards and Technology program at CBEMA, the association participates actively in all activities related to our industry's products in the area of standards, certification, validation, accreditation and related legislation and regulation in all the countries of the world where they're produced, marketed and serviced.
2. There is broader involvement as the Administrator for JTC 1 TAG, accredited by ANSI, with responsibility for developing and promoting US positions on IT user oriented international standards activities.

Describe the degree to which committee organization and procedures facilitate or hinder adequate participation and compare with efforts from other countries.

Under Accredited Standards Committee X3 and the JTC 1 TAG, technical committees and subcommittees are organized by technical discipline in one-to-one correspondence to the ISO/IEC JTC 1.

Participation in the work of any or all of these committees is open to all interested parties on a non-discriminatory basis. There is a USTAG for each of the Subcommittees of JTC 1. Participation on these TAGs is open to all interested US parties on a non-discriminatory basis.

Participants on X3, its 90+ technical committees, task groups and the USTAGs come from all segments of the US population. They work on over 700 projects (technical reports, draft standards, approved American National Standards and international projects).

The organization and these procedures cannot be compared, only contrasted, with efforts from other countries. Participants will, at times, express frustration with standards development, but primarily because the consensus approach, like democracy, is not simple and authoritarian. Further, significant efforts go to prevent antitrust or other abuse of the process. In our experience, parties who have material interests, no matter what the size of their organization, can and do participate effectively.

Is the current US standards infrastructure sufficiently supportive of and adequate for your interests?

Yes.

Suggest any mechanisms that might improve the situation for your organization.

CBEMA, in its roles as Secretariat and TAG Administrator, has modified the infrastructure applicable to its work from time to time to adjust to the changing nature of the international standards arena. It is currently proposing a new US IT infrastructure, as noted above.

A mechanism is also needed for better coordination to avoid possible overlap, duplication and conflict among the US groups working on IT standards, e.g., X3-Information processsing, X9-Financial Services, X12-Electronic Business Interchange, T1-Telecommunications, EIA-Electronic Industries Association, IEEE-Institute for Electrical and Electronic Engineers, et al. We believe this can be achieved through mutual cooperation among these organizations.

Are you an active participant in one or more technical advisory groups (TAGs)?

Yes, as explained above.

Is there broad and adequate representation from the various US interests?

Yes.

Describe the success or failure of the TAG in providing the needed forum for developing the US position, and the ability of US delegates to gain international acceptance of a US TAG position.

At the last JTC 1 plenary meeting, the US position prevailed in 105 of 106 issues. This is evidence of the US' strong leadership in this very important area and it highlights the effectiveness of having developed positions by broad participation.

The US holds the Secretariat and Chair for ISO/IEC JTC 1, the largest international standards activity in ISO and IEC. The US also holds the Secretariats and Chairs for some of the Subcommittees of greatest importance to the Information Technology industry, SC 6, Telecommunications and Information Exchange between Systems, SC 11, Flexible Magnetic Media for Digital Interchange, SC 18, Text and Office Systems, SC 21, Information Retrieval, Transfer & Management of OSI.

The Information Technology sector does not need any additional management help from the Government in the international standards arena. Government support *via* participation is very good.

What factors contribute to success and/or failure?

Diligent preparation of US positions by the USTAGs, careful selection of well qualified US delegates, clear instructions on their presentation of the US positions, and prompt peer review of the results achieved contribute to su ccess.

How can we best ensure appropriate technical and financial support for international standardization activities?

The technical and financial support from participants in the IT standards process is adequate. Organizations of all sizes, including the US government, that are sufficiently interested and materially affected can afford to and do participate.

Should the Government help finance participation, especially by small and medium-sized companies?

No. The structure exists so that small and medium sized companies can and do participate to the extent that they have an interest, financial or otherwise. Their participation is just as effective as larger companies on any given subject: One organization one vote.

STANDARDS USAGE

What is the relative utility of domestic and international standards for your operations?

For the IT industry, over 95% of the standards are being developed in the international arena. Our industry competes in a global market. Its products must be usable in all countries worldwide. Many users, government and private sector, have systems spanning multiple countries. US IT companies are major exporters to developing as well as developed countries.

What standards do you use for trading in foreign markets?

Our industry complies with applicable national and international standards and regulations required to sell our products.

Describe any problems you encounter with language, units of measure, obsolescence, etc.

International standards are all published in English. Many companies have or have access to local nationals to translate local standards written in the local language.

Units of measure have not presented any problems. The IT industry integrated the use of metric measurement in its products over a decade ago.

Have you encountered any standards-related trade barriers?

One of the potentially greatest barriers to trade exists in the misapplication of the ISO 9000 Series of standards covering certification of Quality Management and Quality Assurance Systems. These are voluntary standards covering design, development, production, installation and servicing of all products; they are being imposed inappropriately by the European Community as requirements to getting accepted into commerce. They are specifically written to address voluntary two-party contractual standards, not the competitive marketplace. They presume a separately defined statement/specification of customer quality requirement(s).

The IT industry feels it has excellent quality and has gone far beyond the ISO 9000 quality requirements but, since we do not conform to the method of determining levels specified in ISO 9000, it would cost us a great deal of money to convert to that format.

It is significant to note that the US Department of Commerce does not use the 9000 Series as a criterion for the Baldrige Award.

TESTING AND CERTIFICATION

Describe any problems associated with acceptance of your products in foreign markets, including any burdensome testing or re-testing that you have experienced.

Before addressing specific problem areas related to testing, it is essential to state CBEMA's goals:

- to have one standard or set of standards per application recognized everywhere in the world,

- to test our products once and be free to offer them for use anywhere in the world, and

- to develop standards as functional specifications, not as design specifications.

Attachment A is CBEMA's paper setting forth the views of its member companies on the subject of standards, testing, certification and accreditation.

TYPICAL PROBLEM EXAMPLES: MODEMS, DISPLAYS, FACSIMILE PRODUCTS

The following is a summary of key problems; Attachment B provides specifics on each.

Modems - Two difficulties exist in marketing Laptop or Notebook computers in Europe. One is caused by technical requirements and the other by conformance testing requirements.

Displays - Germany in its standard DIN 66 234 VDU (Visual Display Unit) Workstations has set workstation requirements which are being developed as design specifications.

Facsimile Products - The acceptance of a facsimile product in many countries is an interactive process requiring a large amount of resources for each product. As a result, many markets will not be pursued since the cost of entering exceeds the return a company will realize from this market. Acceptance involves two critical elements:

1. the process of understanding country requirements, and
2. the difference in country certification test procedures.

Do you rely on any existing agreements for acceptance of US test data?

No.

Do you use the services of domestic testing and certification bodies, and have you relied on self-certification for either domestic or foreign sales?

There is no simple yes or no answer. The best way to approach the question is to state our position: The IT industry believes in the principle of Manufacturer Self-Testing and Declaration of Conformance to standards. We are not opposed to voluntary third-party testing and certification for those manufacturers who desire it as an alternative. We are opposed to unnecessary government regulation of testing and certification programs.

We call upon the government to support our position.

What is the impact of the cost of testing and/or certification on your gaining product acceptance?

Testing is an integral part of the manufacturing process and an essential requirement for an IT manufacturer to provide an acceptable product and to remain in business. Additional testing, if required, would be redundant, time-consuming and would escalate costs for consumers.

Certification implies a guarantee and a legal responsibility. The perception of the buyer is that certification carries a guarantee by the certifier.

What strategies do you recommend for improving export potential?

Acceptance of Manufacturers Declaration of Conformance to standards.

A single standard or set of standards with single test or set of tests accepted worldwide.

SCUSA PROPOSAL

After publication of the Federal Register notice of these hearings a specific proposal for a Standards Council of the USA was proposed and comments on it were requested. We submit the following comments.

SCUSA PROPOSED PURPOSE

To enhance US international commercial interests by creating an infrastructure to sustain a cohesive National Standards System, with oversight by a Board of Governors comprised of representative public and private interests.

There is no demonstrated need for the Federal Government to enhance US commercial interests by creating a standards infrastructure.

The infrastructure for voluntary standards already exists--ANSI. A Federal Government created infrastructure would add nothing.

SCUSA PROPOSED SCOPE

1. Encourage Government participation in the development and use of voluntary standards for regulatory and procurement purposes.

The mechanism to do this has been in place since 1982 (OMB Circular A-119, Federal Participation in the Development and Use of Voluntary Standards). This Circular applies to all executive agency participation in voluntary standards activities, domestic and international, but not to activities carried out pursuant to treaties and international standardization agreements. The Secretary of Commerce has the responsibility to coordinate and foster executive branch implementation of the policy. Agency heads are responsible for implementing the policy.

The Federal Government should continue to adhere to this policy; there is no need for a SCUSA or other such organization to implement it.

2. Provide information to US interests on specific standards, product certification and testing programs of the United States, other nations or regions, and treaty or non-treaty international organizations; and operate the GATT "Inquiry Point."

This information is currently available to those who want and need it. There are several sources, e.g., ANSI, several US Government agencies, and private companies. An organization such as SCUSA is not needed to distribute this type of information.

3. Effect agreements through the Secretary of Commerce with foreign governmental entities (national and regional) for transparency in standards development and the acceptance of conformity assessment results (product certification, quality system recognition, laboratory accreditation, type approval, etc.)

This is a current and appropriate responsibility of the US Trade Representative and the Department of Commerce with input from the private sector.

4. Provide financial assistance for US representation in foreign national, regional or international standards forums.

We are opposed to government funding for participation in standards other than to support the Government's own representatives. This type of funding can lead to wasteful expenditure of taxpayers' money. Our view on participation in standards development work is, if it is of sufficient importance, those materially affected will support it.

The US government should not send representatives to regional or foreign national standards developing organizations unless the US government is a member of those organizations.

We support government contracting of experts to represent the US government, if the required expertise could not be found within the government.

5. Promote and coordinate US technical and management assistance to the standards programs of developing and middle-income countries.

The Trade Act of 1988 provides for NIST to cooperate with the government of other nations and international organizations in establishing standard practices, codes, specifications, and voluntary consensus standards. In keeping with its policy to promote exports, the Federal Government should authorize the necessary resources to accomplish this.

The GATT Standards Code, approved by Congress as well as our leading trading partners, seeks to promote the creation of non-discriminatory product standards. The US trade policy should encourage developing countries to become signatories to the GATT Code and to adhere to it.

The US government should strongly urge developing and newly industrialized countries to adopt and implement international standards. The private sector and the Federal Government should play an equal role in this effort.

The appropriate organizations to assist developing and newly industrialized countries in establishing national standards programs should be the voluntary international standards organizations, ISO and IEC. All the member countries of these organizations should contribute to this effort.

6. Coordinate within the United States the harmonization between the United States and Canada of Federal, provincial, state, and local standards related requirements.

This is already the responsibility of the Federal Government under the US-Canada Free Trade Agreement with the input and cooperation of industry.

In the IT industry CBEMA and its Canadian comparable organization, Information Technology Association of Canada, are working with the National Fire Protection Association in the US and Canadian Standards Association to harmonize the pertinent sections of the respective electrical codes.

At the international standards level, we should interact with Canada in the same way we do with other countries.

7. Accredit National Standards Developers and US Member Bodies to International or Regional Standards Development Organizations.

ANSI currently accredits National Standards Developing Organizations (SDOs).

ANSI is currently the recognized Member Body to ISO.

The USNC/IEC, an ANSI organization, is currently the recognized National (i.e., member) Body to IEC.

Since regional organizations do not extend membership to the US, there is no need for accreditation of US Member Bodies.

8. Recognize National Conformity Assurance Programs, including product certification, laboratory accreditation, and quality system assessment registration.

This is not a government issue in the US. It is a private industry issue, which should continue to be handled by private industry.

Government recognition (accreditation) of such programs discriminates against those who are not recognized (accredited). At the same time, it creates all the well-known problems found in licensed occupations. Lack of recognition by a private, voluntary, organization does not carry the same disadvantage.

We believe in the principle of Manufacturer Self-Testing and Declaration of Conformance. We are not opposed to voluntary third-party testing and certification for those manufacturers who desire it as an alternative, but use of third party testing services should not be a condition of doing business.

With regard to quality system assessment registration, quality is a competitive factor. The level of quality other than essential levels of safety and consumer protection should be determined by the private sector, not by regulations. Quality is not created by stamps and seals on products. Vendors create quality in response to the demands of the marketplace. The marketplace will decide on quality taking into account the need and the cost.

In summary, SCUSA is unnecessary. Most of the functions appropriate to the Federal Government are already assigned or should be covered in the current GATT negotiations. We should go full speed ahead with them.

ATTACHMENT A

CBEMA POSITION ON STANDARDS, TESTING, CERTIFICATION AND ACCREDITATION

Executive Summary

CBEMA advocates the principle of manufacturer self-testing and declaration of conformance to standards particularly in the area of providing functional capabilities to the user. Under this principle, the manufacturer may exercise its option to conduct tests on its own products and services and declare that they are in conformance with the relevant standards.

CBEMA recognizes and agrees that certain products must be tested to determine their conformance to base standards, functional standards, e.g., International Standardized Profiles, and purchasing specifications, e.g., MAP/TOP, GOSIP, CALS. CBEMA supports the use of an internationally accepted conformance testing methodology based upon international voluntary consensus standards. This can provide benefits for producers and users alike. However, CBEMA questions whether it is appropriate to require certification of functional capabilities.

CBEMA is not opposed to third party conformance testing for those who do not have the capability or, for other reasons, do not choose to self-test.

CBEMA believes that a Third Party Testing and Certification system, imposed on the Information Technology (IT) industry either by regulation or by unrealistic user expectations, would add costs ultimately borne by the user without any identifiable commensurate benefit. In addition, a limited number of qualified third party test facilities could result in queuing problems for manufacturers. This would cause delays in introduction of products into the marketplace and delivery to the users. Such delays would adversely affect the industry's revenues, growth rate and responsiveness.

All Certification can do in such an environment is create the potential for increased expense, more bureaucracy, additional regulation of products, user frustration, and impede what would otherwise be a free market beneficial to both vendors and users.

Finally, Certification may be used as a non-tariff trade barrier--especially when the certification authority is a national or regional government. A government can require that conformance tests be conducted in their country or region by their people and their testing houses using their tests (which may be unnecessarily stringent) and test tools (which may be different or unique). We have seen instances of this tactic in other product categories.

It is CBEMA's position that manufacturers' self-testing and declaration of conformance provides the best method for assurance that their products conform to standards, since the manufacturers have the primary responsibility for implementation of the standards in their products.

Principles On Self-testing, Certification And Conformance

CBEMA believes that the Information Technology (IT) industry should affirm the following principles, and that they should be a framework for any discussion on Certification and conformance.

1. Certification--the granting of a document declaring that a particular product conforms to a standard or set of specifications--should be limited to health, safety, environmental protection issues, national security and, where appropriate, homologation.

2. Conformance to base standards, International Standardized Profiles (ISPs) and procurement specifications is a requirement for achieving portability of assets and interoperability of IT systems. This conformance encourages the growth of the market and provides a basis of understanding of complex systems requirements to both the user and the provider. The ultimate purpose of conformance to standards is to benefit the user by increasing the potential market for systems that can interoperate and support portability of assets.

3. The systems that are being requested and provided in the commercial environment today are highly complex. Conformance testing is needed to assure both providers and users that the systems meet the specified requirements.

4. The standards from which conformance tests are derived should be international voluntary consensus standards as a first choice, with other voluntary consensus standards being a second choice. Such standards tend to represent a consensus of all affected parties, providers and users alike.

5. There should be only a single set of conformance criteria for each conformance test. The use of a single set of criteria will allow users and providers to understand the metrics of the system. This set of criteria should have worldwide recognition.

6. There should be a single set of test tools available and accepted on a worldwide basis. This will prevent the expenditure of scarce resources on a multitude of tests and test tools which may or may not produce the same results. Additionally, this will help to preclude the possibility of a single nation or region using the concept of conformance as a non-tariff trade barrier.

7. Providers should have the option to perform conformance tests as an integral part of their development or manufacturing process and have the results stand on an equal basis with tests performed by third parties.

8. Because the provider may wish to use proprietary technologies to insure conformance, we believe that the Manufacturer's Declaration of Conformance should be an accepted statement of conformance. The Manufacturer's Declaration of Conformance should be seen as an assurance by the manufacturer that the product conforms to the applicable standards.

9. In any contract situation, the user has the right to demand that a vendor conforms to its purchase specifications and to request independent verification of the terms of a contract.

10. Third party testers must accept liability for their testing activities, thereby assuring that their tests are rigorous in methodology and have substantial meaning to the provider and user.

11. There should be procedures for accreditation of third party testing laboratories. These procedures should not apply to a manufacturer's testing operations.

12. There must be mutual acceptance of tests and test results by providers, governments and users, domestically and internationally, on the part of all concerned.

13. All conformance and certification schemes should be economically and technically justified before being implemented.

Conclusion

Providers are responsible for helping users to solve their problems--and users are responsible for clearly defining their needs and requirements. This is a mutually dependent relationship, and if the users and providers work together, then there is not a need for Certification. There is no need for the establishment of Certification schemes in order to insure proper implementation of IT standards. Users and providers have traditionally worked together to implement new technologies and find new solutions to complex systems problems. This cooperation has helped to create a formidable industry and has increased the benefits of Information Technology in quantum steps. There is no reason to doubt that this formula of cooperation will work equally well in the future. It is this cooperation between provider and user that has caused the industry to succeed and grow as it has--and it is this cooperation which, if left unregulated, will be the primary force in the continued growth of the industry and information technology.

ATTACHMENT B

TYPICAL PROBLEMS EXAMPLES:
MODEMS, DISPLAYS, FACSIMILE PRODUCTS

MODEMS - Two difficulties exist in marketing Laptop or Notebook computers in Europe. One is caused by technical requirements and the other by conformance testing requirements. These areas are undergoing change which in some cases may resolve the problem or may just create confusion.

Some PTTs will not allow a telephone and a modem to be on the line at the same time. An accepted solution for this is to use relays to electrically switch lines. Due to the size of relays, it is not possible to package modems which will fit into Laptop and Notebook computers. As a result, a technical requirement will not allow usage of current technology.

Conformance/certification requirements vary from country to country and agency approvals in one country are not recognized in another country. Many PTTs publish conformance criteria as opposed to procedures. The PTT lab is the only one who knows how tests to this criteria will be performed so the only way a manufacturer can understand the design requirements is to be on site while the test is being run. It requires multiple iterations in each country to develop a product which will pass the test.

External modems are generally locally purchased as the most common solution for the European market as a result of the difficulty of designing acceptable products.

DISPLAYS - Germany in its standard DIN 66 234 VDU (Visual Display Unit) Workstations has set workstation requirements which affect color, keyboard physical characteristics and display visual characteristics.

The display requirements are based on characteristics of Cathode Ray Tube (CRT) technology. Liquid Crystal Display (LCD) and Plasma panels have different characteristics so measurements based on CRT technology may eliminate them from being marketed. Some of these requirements are positive video with no border, page white, phosphor color, ratio of dark vs. light and light intensity.

FACSIMILE PRODUCTS - The preferred goal of manufacturers is to develop a single multi-national (MN) design for facsimile products. This objective is often compromised because of the varying technical and language requirements from country to country. These requirements are usually associated with the certification test procedures which are different for many countries. Instead of a single MN design, a minimum of four or five MN designs must be developed. The multiple designs require that finished products be partially disassembled and rebuilt using several rebuild kits to nationalize the product to meet the certification requirements at the destination country. This rebuilding for national certification obviously introduces an additional cost of doing business and delays product delivery.

In a recently conducted study with 25 National Technical Specialists, it was found that, generally, requirements for each country are based on one or more national or international standards but, because of subtleties of interpretation or unexpected idiosyncrasies unique to the country, a myriad of testing requirements result and no single design can meet these requirements. A further complication is that while each country has defined specifications, the interpretation and unique requirements based on those specifications often change in subtle ways, even from month to month. Effectiveness of the relationship between the National Technical Specialists and the national examiner (tester) frequently spells the difference between easy vs. difficult qualification.

Some manufacturers have safety testing performed in the U.S. to the IEC 950 specifications. These test results are generally accepted throughout Europe with a few exceptions. Variations to the IEC specifications are required and tested for in some Scandinavian countries, such as a special power line cord requirement for use in Norway.

Communications interface requirements differ in many European countries. Such testing is typically different from safety testing and the testing authorities in most countries have slightly different ranges or tolerances on dial tone or ring tone detect. Such differing parameters as inter-digit timing (make/break tolerances) and signal levels only add to the multiplicity of designs and subsequent re-testing.

When seeking facsimile product approval, the approval scenario usually involves payment of a fee and submission of the product to the PTT Examiner. The PTT Examiner will occasionally halt the examination the moment s/he discovers a disqualifying problem, rather than finishing the examination and reporting multiple disqualifiers. This can cause considerable bureaucratic delay. Each time a rejection occurs, the problem must be remedied and if re-submission isn't within a given time period, the fee has to be paid again.

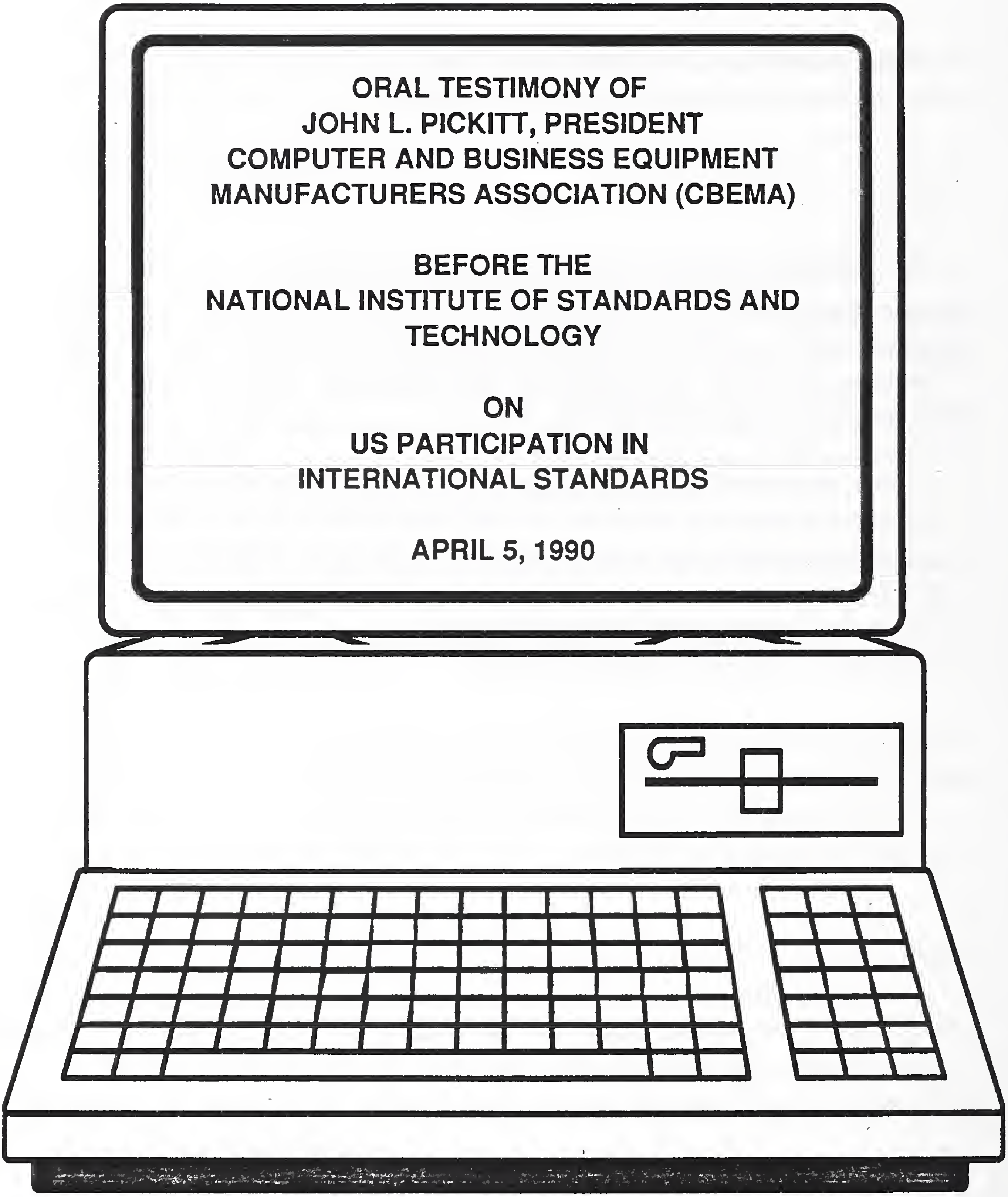
GERMANY is one of the most restrictive of all European markets and facsimile product approval can take up to nine months. Germany is by far the most rigorous in the areas of machine performance, electromagnetic emissions and safety. Although Germany may be the most rigorous, there is the advantage that the testing approach appears to be uniform and fairly administered. Once a facsimile product has received testing approval in Germany It is often approved without delay in other countries.

DENMARK is not lax in qualifying products, but is far more accommodating in expediting the process. Approval can be obtained in as little as three weeks.

In ITALY and SPAIN, more extensive translation is required prior to submission to the PTT Examiner. Some countries are quite restrictive about translation requirements, while others will test and approve product, not requiring translation until selling of the product begins. Recently, the PTT in Portugal has initiated language requirements that specify that product displays and printed status messages must be in Portuguese in order to obtain product approval.

In summary, the acceptance of a facsimile product in many countries is an interactive process requiring a large amount of resources for each product. As a result, many markets will not be pursued since the cost of entering exceeds the return a company will realize from this market. Acceptance involves two critical elements:

1. the process of understanding country requirements, and
2. the difference in country certification test procedures.



ORAL TESTIMONY OF
JOHN L. PICKITT, PRESIDENT
COMPUTER AND BUSINESS EQUIPMENT MANUFACTURERS ASSOCIATION (CBEMA)

BEFORE THE
NATIONAL INSTITUTE OF STANDARDS AND TECHNOLOGY

ON
US PARTICIPATION IN INTERNATIONAL STANDARDS

APRIL 5, 1990

Computer and Business Equipment Manufacturers Association
311 First Street, N.W., Suite 500   Washington, D.C. 20001   202/626-5757

Good morning and thank you for the opportunity to express views of the Computer and Business Equipment Manufacturers Association on US participation in international standards. On behalf of our membership, information technology companies responsible for nearly 5% of the US gross national product, I am pleased to tell the Department of Commerce that the United States has an effective and democratic process for developing technical standards, and we strongly urge that it not be replaced by the government.

Since 1960, CBEMA has consistently supported the voluntary standards process, which the American National Standards Institute (ANSI) embodies. We also consistently participate, through ANSI, in the effective efforts to harmonize information technology standards worldwide.

An alternative to ANSI is now under consideration within the US government. The proposal--Standards Council of the USA (SCUSA)--we believe, demonstrates a misperception of the current and future challenges in standards. SCUSA would add unneeded bureaucracy, but no value.

Our experience gives us a different view of the situation facing our industry and the US.

We want to register our disagreement with those who would replace the voluntary system led by ANSI with a government-mandated system. ANSI is the foundation of our voluntary standards system. The American National Standards Institute is not "National" in the sense that it is a government-mandated entity, but it is truly "national" in that it encompasses the concerns, input, products and needs of our entire nation: Producers, private-sector users and government. All those interested in standards may participate equally in the ANSI system.

American industry faces global competition. To succeed it must market globally and cope with numerous standards, testing and certification schemes around the world. In meeting this challenge, industry joined with consumers in the US voluntary standards process, is making progress in the all-important effort to internationally harmonize standards and conformance testing. This process, therefore, does serve the nation's trading needs in today's international climate.

In fact, in a recent international information technology standards meeting, the US position prevailed 105 out of 106 times. This stands out as a prime accomplishment of a process wherein government serves as a participant, not as a ruling or administrative body.

There is more than adequate participation by representatives of the public and private sectors in this process. The US information technology standards community served by secretariat activities of CBEMA alone includes almost 1800 organizations representing major manufacturers, private-sector consumers, government and other interested parties. Moreover, under the ANSI rules, participation of smaller companies is just as effective as larger companies on any given subject: One organization one vote.

Clearly, then, the information technology standards community encompasses the range of US interests and carries their interests forward as a great strength in representing the US in international standards organizations.

The United States government can and should support this voluntary standards system, without damaging the integrity of it, by continuing:

1. to participate in the voluntary process and adopt voluntary standards for government purposes in accordance with OMB Circular A-119, as NIST's National Computer Systems Laboratory has done with GOSIP, the Government Open Systems Interconnection Profile;
2. to take aggressive action when standards or testing procedures in other countries are used as a trade barrier against US companies; and
3. to urge other countries to adopt and implement international voluntary standards.

In contrast to most other countries, the national standardization system in the US is a profoundly democratic process. Challenges which must be met by our voluntary process to ensure successful standards development in the US environment include assuring adequate representation of users; achieving a fair balance among competing industry interests; avoiding fragmentation, duplication, and inefficiency in standards committee activities; and most importantly, establishing a clear consensus vision of the future we seek. We should not change our process just because other nations organize their internal systems in a different way.

A government-run standards system, such as that embodied in the proposed SCUSA, contemplates a remedy inappropriate to the government's role and unnecessary for the effectiveness of the process here and abroad: Within our standards process the government should continue to act primarily to satisfy its proprietary, not its sovereign, interests. Its sovereign interests are met through enforcement of the antitrust laws and technical regulation of commerce under statute, such as carried out by the FCC and OSHA.

Among the duplicative and intrusive tasks for SCUSA outlined in the published proposal, two of the most harmful relate to testing and certification, and to accreditation.

First, a shift from the voluntary process in the private sector to a government-centered program could have an extreme adverse effect on current testing and certification programs. The information technology industry believes in the principle of Manufacturer Self-Testing and Declaration of Conformance to standards. We are not opposed to voluntary third-party testing and certification for manufacturers who desire it as an alternative. We are opposed to unnecessary government regulation of testing and certification programs. Testing is an integral part of the manufacturing process and an essential requirement for an information technology manufacturer to provide an acceptable product and to remain in business. Additional testing, if required, would be redundant, time-consuming and would escalate costs for consumers.

Secondly, SCUSA as proposed would involve the government in recognition, or accreditation, of testing and conformance programs. Requiring these programs to have a government "seal of approval" or license would institutionalize discrimination against those groups that are not accredited. Lack of accreditation by a private voluntary organization does not carry the same stigma. The marketplace, in effect, "accredits" them by accepting their products. If the government were to become more involved in the accredidation process, that would do great harm to the current system.

Further, a danger of government getting too deeply involved in voluntary programs is that government funds become scarce when they are shifted in response to political needs. Examples of this in the standards environment include such actions as NIST being forced to drop, or renege, on offers to take the Secretariats of several technical committees due to lack of resources. For example, NIST relinquished the Secretariats for the ISO standards committees on Documents and Data Elements in Administration, Commerce and Industry, and on Representation of Data Elements. NIST offered to take the Secretariat of the ISO committee on Flexible Magnetic Media for Digital Data Interchange, then later had to withdraw the offer.

In summary, CBEMA member companies are strongly opposed to a federal government created infrastructure such as SCUSA. It would not enhance US international commercial interests as stated in its proposed purpose. It would add no value, only unneeded bureaucracy. All the functions in the proposed scope of SCUSA are currently provided for within the government or are functions which are currently the responsibility of private industry and should remain so.

CBEMA's goals in the areas of standards and testing are very straightforward:

- to develop standards as functional specifications, not as design specifications (which could inhibit development and introduction of innovative products)
- to have one standard or set of standards per application recognized everywhere in the world,
- to have acceptance of manufacturer's declaration of conformance to standards,
- to test our products once and be free to offer them for use anywhere in the world.

These goals can be met within the current system and we call upon the government to support our position.

The US voluntary system--with its built-in checks and balances of government, private-sector user, and producer involvement--is a unique system which has evolved sensibly to serve our nation well, nationally and internationally.

A healthy private sector standards structure is the mechanism to maintain our strength and effectiveness, and the best safeguard for protection of US interests abroad is to reinforce ANSI in its role in international standards organizations. It is not necessary that the internal US standards system mimic some other nation's structure. Let us retain that which has a successful history of satisfying US needs nationally and internationally.

EXCHANGE CARRIERS STANDARDS ASSOCIATION
5430 Grosvenor Lane ▪ Bethesda ▪ Maryland 20814-2122 ▪ 301▪564▪4505

Attached please find a copy of my testimony as presented at the National Institute of Standards and Technology Hearing on Improving U.S. Participation in International Standards Activities on April 5, 1990. I request that it be included in the record of the hearing. If there are any questions or comments with respect to my testimony, I can be reached at Ameritech Mobile Communications Inc., 1515 Woodfield Road, Suite 1400, Schaumburg, IL 60173, (Phone: 708-706-7601).

Sincerely,

Bruce R. DeMaeyer, Chairman
Exchange Carriers Standards
Association, Inc.

Bruce R. DeMaeyer
Chairman
Ameritech Services, Inc.

Frank D. Reese
Vice Chairman
North Pittsburgh Telephone Co.

William D. Wilson
Treasurer
GTE SC/Telephone Operations

O.J. Gusella
Secretary
ECSA

STATEMENT OF BRUCE R. DEMAEYER

PRESIDENT, AMERITECH MOBILE COMMUNICATIONS INC.

AND

CHAIRMAN OF THE
BOARD OF THE EXCHANGE CARRIERS
STANDARDS ASSOCIATION, INC.

BEFORE THE

NATIONAL INSTITUTE OF STANDARDS AND TECHNOLOGY
OF THE
DEPARTMENT OF COMMERCE

APRIL 5, 1990

INTRODUCTION

Good morning, my name is Bruce R. DeMaeyer, and I am submitting this statement in my capacity as the President of Ameritech Mobile Communications and as the Chairman of the Board of the Exchange Carriers Standards Association ("ECSA"). I have been President of Ameritech Mobile Communications since September 1, 1989. Prior to that time I was President of Ameritech Services, a position I held since April of 1985. I am also a member of the Board of the American National Standards Institute ("ANSI"), of which ECSA is one of the largest members.

I am particularly pleased to have the opportunity to present these comments today because of my involvement in the U.S. standards community and my strong belief that the current private voluntary standards process administered by ANSI is the most sound, efficient and effective means for achieving essential standardization, particularly as it relates to telecommunications products and services. Moreover, based on the performance and results of the present process, there can be no doubt that U.S. interests are not only adequately being represented in the global standards arena, but that they are assuming a leadership position.

For these reasons, I believe it would be a grave error if any effort were undertaken to redesign the domestic standards infrastructure so that greater government involvement would result. Government representatives already play an important role in the development of voluntary standards. As respects telecommunications, for example, the government is perhaps the largest consumer of products and services, and as a result has an enormous influence on the direction of standards development and the priorities placed on specific projects. This traditional role should no doubt be reaffirmed.

On the other hand, structural modifications to the current process resulting in an increased administrative or regulatory role for the government, or any of its agencies, would only lead to a slower, less responsive system for the development of standards. Resources would not be allocated as efficiently and priorities would be misdirected. As a result, U.S. industry would be negatively impacted because it would find itself in even a less advantageous position for purposes of competing in the global marketplace.

That is not to say, however, that the government has no role to play relative to standards, or that its role cannot be enhanced. At the present time, there can be no doubt that competition is global in nature. This is true for telecommunications and many other industries which benefit from standardization. There also should be little question that there exists a pressing need for the government to enhance the ability of domestic firms to compete in world markets. The task that remains, then, is how to coordinate the efforts of the government and those of the private sector so that foreign markets are made fully accessible and free from artificial barriers to all forms of trade, including standards developed in the United States.

One way would be to establish a well-defined complementary partnership between government and the private sector that relies on the respective strengths of each. Thus, substantive standards development should remain the responsibility of private sector standards developers, and the government should have the task of exercising its influence so that the fruits of the private sector's efforts would be provided the fullest access available to all markets of the world. Such a division of responsibility would not encumber the existing highly productive efforts of the private sector, and would not impose layers of bureaucracy or regulation on a process that has become recognized as the leader in its field. It would, however, serve U.S. interests and make U.S. industry an even stronger competitive force throughout the world. U.S. interests would be able to rely on the technological advancements that readily result from the current standards process.

In support of these views, I would like to present some hard facts. In particular, the success and influence of the ECSA-sponsored Committee T1 stands as a compelling example of the effectiveness of the current voluntary standards system. Not only has T1 assumed the leading position for telecommunications standards domestically, its preeminence is recognized worldwide. I would also like to provide some additional comments on how coordination could be improved between private sector standards bodies and governmental entities.

TELECOMMUNICATIONS STANDARDS DEVELOPMENT ACTIVITIES

The development of standards took on new importance for those of us in the telecommunications industry at the time of the AT&T divestiture. It became clear that we could no longer rely on a monolithic Bell System to ensure compatibility and interoperability of networks and equipment. Nor could we predict how increased competition for service and equipment offerings would impact our ability to deliver first rate telecommunications services. To say the least, as the President of the service company for one of the Regional Bell Operating Companies, the prospect of operating a large network without standardized equipment and services was frightening to me, as was the possibility that critical efforts in developing more advanced telecommunications technologies would be delayed.

In part, for these reasons, I joined with others in the telecommunications industry, in 1983 in anticipation of divestiture, in an effort to establish a standards development group. The purpose of this group was to prepare for divestiture and the fragmented highly-competitive marketplace which was sure to and which in fact did follow. In particular, we took it upon ourselves to draw up plans that we thought would permit the continued availability of the high quality of telephone service to which we have all grown accustomed in this country. The importance of and the need for developing new services and keeping pace with emerging technologies was recognized as well.

From this effort, ECSA was born. ECSA, a non-profit trade association, was incorporated in the summer of 1983 for the purpose of providing a forum for and representation of wireline exchange carrier interests in connection with standards and related activity affecting the telecommunications industry. ECSA was also formed to provide the sponsoring organization for an independent standards committee. Presently, ECSA has as its members one hundred and fifty (150) wireline exchange carriers, ranging in size from the Regional Bell Operating Companies with millions of access lines, to small rural carriers with only a hundred or so lines.

When we were formulating the T1 committee, we researched other standards developing organizations to look for success and failure elements. We found that all of the successful standards developers were a part of the ANSI federation. ANSI due process concepts fit our needs precisely, and accordingly requested that ANSI sanction our request to become Secretariat of the newly-proposed T1 committee on Telecommunications. ANSI provided provisional acceptance on January, 1984 and permanent accreditation on September 20, 1984. Committee T1 Telecommunication held its first official meeting in February 1984, and commenced its operations under procedures proscribed by ANSI.

As an ANSI-accredited committee, T1 is open in membership to all persons with a direct and material interest in its activities, which, as set forth in its bylaws, include:

> develop[ing] standards and technical reports related to interfaces for U.S. telecommunications networks; some of which are associated with other North American networks. T1 also develops positions on related subjects under consideration in various international standards bodies. Specifically, T1 focuses on those functions and characteristics associated with the interconnection and interoperability of telecommunications networks at interfaces with end user systems, carriers, and information and enhanced service providers. These include switching, signaling, transmission, performance, operation, administration and maintenance aspects. Committee T1 is also concerned with procedural matters at points of interconnection, such as maintenance and provisioning methods and documentation, for which standardization would benefit the telecommunications industry.[1]

From the outset, as required by ANSI, a broad cross-section of the industry has been represented in Committee T1. The Committee currently has ninety (90) members, representing, in addition to exchange carriers such as Ameritech; interexchange carriers such as AT&T and MCI; manufacturers such as Rockwell International, Northern Telecom and AT&T; and members of the user community, including many representatives of U.S. government agencies. Notably, T1's members also include many foreign firms, including those from EC countries and Japan such as Fujitsu, NEC, Seimens, Ericsson and Alcatel. Representatives from foreign telecommunications administrations and associations such as British Telecom and the Canadian Standards Association also participate in T1. In addition, a significant number of foreign interests maintain observer status in T1, which entitles them to full access to the Committee's work product. These entities include the PTT of the Netherlands, Telecom Australia, and Telecommunication Laboratories from Taiwan.

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[1] Bylaws of Standards Committee T1-Telecommunications, Art. I. § 1.

Perhaps most important, however, is the high level of productivity Committee T1 has been able to achieve during its short existence. As of last count, fifty (50) standards developed by Committee T1 have been approved as American National Standards. In addition, another one hundred and fifty (150) projects continue to be worked on in Committee T1, many of which will also result in American National Standards.

Thus, in only a little over six years, Committee T1 has been able to establish a forum where over one hundred participants from all aspects of the telecommunications industry have been able to engage in a consensus process and develop technical standards relating to existing and newly-emerging technologies. Such success, I strongly believe, could not have been achieved through government mandate. To the contrary, Committee T1's effectiveness can be attributed only to the voluntary nature of the current process of standards development as managed by ANSI. Through this process, industry participants are able to define priorities and utilize and allocate resources for achieving specific goals in the most efficient and cost effective manner.

What's more, such success reflects T1's effectiveness in managing the flow of critical technical information to interested parties throughout the industry and globally. Specifically, procedures exist which ensure the timely, comprehensive and cost-effective distribution of information to members and non-members of T1 alike. Moreover, in response to requests from Japan's Telecommunications Technology Committee (TTC) and the European Telecommunications Standards Institute (ETSI), T1 has established arrangements for the sharing of documentation concerning each others respective standards work. T1 also has established a formal liaison relationship with ETSI. It should be noted, however, that the amount of information flowing towards T1 pales in comparison to that which is going in the direction of ETSI and the TTC. While this may merely be a result of the preeminence T1 has achieved in the global telecommunications standards community, it might also illustrate an area in which the U.S. government could exert its influence in an effort to level the playing field.

Committee T1's preeminence throughout the world is reflected in yet other ways. For example, Committee T1 stands as a model for the TTC in Japan and ETSI in Europe. Each of these entities have contacted the Committee T1 Secretariat seeking advice and guidance regarding their structures and procedures. While, of course, these organizations do not mirror T1 identically, its influence is clearly discernable.

Foreign standards bodies have further emulated T1's work product by reproducing T1 standards as their own. In particular, the Canadian Standards Association and ECSA have recently consummated a publishing agreement pursuant to which the CSA may republish and distribute T1-developed American National Standards in Canada as Canadian National Standards with only slight modifications to reflect Canadian regulatory requirements. Similarly, ECSA has recently extended permission to the Swiss PTT to reprint a T1 standard relating to ISDN signalling technologies for distribution to suppliers of equipment used in the Swiss PTT's internal network.

Mention also must be made of the Interregional Telecommunications Standards Council meeting held in Fredericksburg, Virginia on February 20 and 21, 1990. This meeting was convened at the invitation of Committee T1 for the purpose of urging the International Telecommunication Union (ITU) Administrative Council to consider changes within the International Telegraph and Telephone Consultative Committee (CCITT) structure to maintain its preeminence as a worldwide telecommunications standards body. Specifically, these changes included the need for CCITT to give priority to modernization, flexibility, and efficiency of its organization and working methods. Representatives from telecommunications administrations throughout the world attended, including Europe, Japan, Canada, and Australia. This meeting established even further T1's recognition and leadership position in the international standards community.

Finally, Committee T1's influence internationally is reflected by the large number of contributions emanating from T1 to the State Department's U.S. National Committee, which has the responsibility for U.S. positions to CCITT. This has been particularly the case as respects contributions developed within T1 relating to the emerging ISDN technology. I should also note that the T1 technical subcommittee that has been primarily responsible for these contributions has been led since T1's creation by Dr. William Utlaut of the Commerce Department's National Telecommunications and Information Agency.

Thus, through the success of its efforts to date, Committee T1 has established its positions as a leading, if not the leading body for the development of telecommunications standards throughout the world. It has achieved this position through the use of ANSI's consensus procedures which have permitted it to react quickly and effectively to the ever-changing technological demands of the highly-competitive telecommunications markets within the U.S. and internationally.

WHAT SHOULD BE THE GOVERNMENT'S ROLE

Given such unmitigated success, it is my view, as a representative of the private sector and a highly committed participant in the standards process, that imposing governmental administrative or regulatory control over standards developers in the U.S. would be a terrible mistake. Such a step would compromise the effectiveness of committees such as T1, and potentially redirect their efforts to projects deemed important from a government perspective, rather than as demanded by the marketplace. This would especially be true if standards developers were made dependent, even to the slightest degree, upon the government for funding. Political or bureaucratic infighting could be rife and budgetary constraints devastating, all to the detriment of the standards process.

But, as I indicated earlier in my remarks, there are initiatives which the government could undertake to make U.S. industry even more successful in its efforts to remain competitive in the global marketplace. Most importantly, through existing legislative authorizations, the Department of Commerce and the United States Trade Representative's office must make every effort to ensure that a level competitive playing field exists throughout the world. Foreign markets must be made free of trade barriers for U.S. products and services. Achieving full and complete transparency of standards on an international basis must also be a primary undertaking.

To ensure that any such efforts are pursued in a coherent fashion will require both greater coordination among the various government agencies involved in standards and trade issues (e.g., the Department of State, the Department of Commerce, and the USTR), and better communications between the private sector and such government agencies.

To achieve improved coordination and communication may be the easiest aspect of all, however. ANSI already serves as a coordinating force for the voluntary standards developers that operate under its auspices, and would be an appropriate and logical liaison between U.S. government representatives and the private sector. By playing such a role, ANSI would also enhance its position as the focal point for managing non-treaty U.S. positions internationally. ANSI's recently opened Washington and Brussels offices would also enhance its ability to perform such a function.

CONCLUSION

In sum, as a general proposition, the effectiveness of U.S. standards development cannot be questioned. Committee T1, as just one example, has already demonstrated in its short lifetime the preeminence of its technical expertise and the leading position it has assumed in the world standards community. No steps should be taken to hinder these efforts. Rather, a coordinated effort between private industry and all relevant government entities must be developed so that the opportunities for U.S. industry to compete abroad are maximized.

L. John Rankine
CONSULTING SERVICES
231 BAYBERRY LANE WESTPORT, CONNECTICUT 06880
(203) 226-0657 FAX (203) 222-7978

U.S.G. HEARINGS 4/3-5/1990, ORAL STATEMENT BY L. JOHN RANKINE

Mr Chairman, Members of the Committee, Ladies and Gentleman,

I appreciate this opportunity to appear before you and I shall not waste your time by re-iterating my written statement nor its executive summary nor my credentials since they are all on the record and are easily read. Instead I should like to take the few minutes available to me to focus on what I believe to be some fundamental delusions that are implicit in these discussions. This is necessary because as Edmund Burke once reminded us, " people never give up their liberty but under some delusion. "

One delusion is that because we are confronted with EC-1992 we should rush to change our national standards structure. I submit to you the reverse conclusion, namely that this is the very time to stand by what we have and focus on intelligent actions rather than distract ourselves with hypothetical and unproven structures.

Another delusion is that the Canadian model is the one the U.S. should follow. I have nothing against the Canadian approach. As an international chairman I enjoy working with it as I do working with all of the differing systems that nations have evolved over the years to best represent their needs in terms of their heritage and political system. But, if the U.S. is hell bent to throw out its own system which it too has evolved over the years in terms of its heritage and its needs, it should look at the field - not just at Canada. The result might well be to conclude that there are other systems that fit U.S. needs better and also to find, perhaps to the surprise of many, that they involve even less government influence than does today's U.S. system.

A third delusion is that the standards systems of the other nations, particularly those in Europe, are run by their governments and the U.S. by comparison is an anomaly. On the contrary and again, as an international chairman dealing with many countries several of which are European, I note the U.S. is somewhat unique in including U.S. governmental representation in its delegations. I am not speaking against the U.S. doing so because again it is what the U.S. has decided is best in terms of its interests.

A fourth delusion is that the standards process will somehow be more fair and efficient if it is run by government. I am not sure I agree entirely with Thoreau's comment " that government is best which governs not at all " but it is very pertinent in regard to a voluntary consensus standards process wherein government should be a participant in terms of its many interests as a user along with other users, producers, consumers and general interest groups. None should govern but all should serve as in the U.S. system today.

One more delusion is that anyone who wants to participate in international standardization but cannot pay his or her way should have the U.S. government pay for it as is supposedly the case in some other countries. This is an issue with several sides to it more fully dealt with in my written statement. At this stage I shall do no more than remind you of Adam Smith's caution that " there is no art which one government sooner learns of another than that of draining money from the pockets of the people. "

Of much more immediate concern to me at this time than the several delusions I have touched on is how the U.S. is spending its time and resources in these and other associated national discussions.

By the conclusion of these Hearings we shall have heard from more than four score speakers representing an immense spectrum of interests from government, industry, users and academe and contributing thousands of pages of testimony.

Useful as these Hearings might be, how much better might the interests of this nation have been served by focussing this impressive assembly of talent and experience on the implications of a changing Europe beyond EC-1992. How much better might the national interest have been served by a thoughtful examination of the role of the European Free Trade Association and that of the rapidly crumbling Eastern Bloc of nations many of whom will exert an increasingly significant influence on the directions in international standardization. How much better to have looked also at Asia and what is implicit in the developments relating to Japan, Hongkong 1997 and the other key players in the Pacific Rim. How much better to have grappled in depth with key issues such as the multi-facetted subject of testing and certification and what strategies best apply in the several industrial sectors involved. How much better to have decided how best the public and private sector should work in harmony with what we have in order to achieve that which we need.

Instead we pre-occupy ourselves with matters of structure and organization and, in many cases, self rather than national interest. We have become fascinated with how best to impose proposed Councils and huge Advisory Committees upon carefully evolved and proven structures.

How necessary it has become to remember Voltaire's advice that "God is on the side, not of the heavy battalions, but of the best shots." How vital it has become to follow Candide's advice " il faut cultiver votre jardin ". The need is to cultivate our own garden; to stay lean and move forward in harmony and close cooperation with all of the public and private sector resources that this nation has developed so well and with which it has accomplished so much.

hp HEWLETT
PACKARD

INFORMATION NETWORKS GROUP • 19420 Homestead Road, Cupertino, California 95014, Telephone (408) 725-8111

3 April 1990

Dr. Stanley I. Warshaw
Director, Office of Standards Services
National Institute of Standards and Technology
Administrative Building, Room A-603
Gaithersburg, MD 20899

Dear Dr. Warshaw:

The Hewlett-Packard Company submits the enclosed testimony for presentation at the NIST hearing on government involvement in U.S. standards activities to be held April 5, 1990 at the U. S. Department of Commerce Auditorium, Washington, D. C.

We appreciate the opportunity to be present for the hearing.

Sincerely,

Donald C. Loughry

Donald C. Loughry

DCL:als
Encl.

cc: Marv Patterson
Bob Dudley
Mary Dee Beall

HEWLETT-PACKARD TESTIMONY BEFORE THE NIST PANEL ON "IMPROVING U.S. PARTICIPATION IN INTERNATIONAL STANDARDS ACTIVITIES", 5 APRIL 1990

Mr. Chairman, ladies and gentlemen:

Hewlett-Packard Company appreciates the opportunity to present its views relevant to U.S. participation in international standards-related activities and the role it believes the U.S. Government should take in respect to such participation. Hewlett-Packard Company is an international manufacturer of measurement and computation products and systems recognized for excellence in quality and support. The company's products and services are used in industry, business, engineering, science, medicine and education in approximately 100 countries. HP has 95,000 employees and had revenue of $11.9 billion in its 1989 fiscal year.

As a context for our comments, it is important to realize that in he Informantion Technology (IT) field, Hewlett-Packard Company bases much of its networking technologies and resultant product development on the Open Systems Interconnection standards as pioneered by the ISO international community. HP considers the global marketplace a critical element of its business and, as such, international standards are an important consideration. John Young, HP's CEO and President, has said repeatedly that, "standards and open systems really are going to be the way of the future". HP personnel participate actively in many JTC-1 SC's standards projects (e.g., 2, 6, 18, 21, 22, 24.) and the TAG's that help to formulate US positions. We participate on an ongoing basis and take on leadership roles where appropriate. In summary, HP personnel participate in a wide range of national and international standards development as such work is essential to our business needs.

TODAY'S VOLUNTARY SYSTEM AND GLOBAL STANDARDS NEEDS:

The U.S. IT community provides more than 5000 volunteers, is open to all interested parties, and is quite responsive to new technology and the need to create relevant standards. HP, along with many other companies, affirms the need for international standards as critical and works toward that end. In recent years, there has been an increasing number of international participants in U.S. based standards development work. This helps promote a growing level of consensus among the international community at an early stage of standard development work and enables significant U.S. leadership. The subject matter to be standardized, the evolution of the technology, the relevancy to changing needs, and the responsiveness of the participants and their companies are generally met by the present voluntary system. Since the preponderance of the participants are from the vendor community, there is direct and effective input to standards work based on current business and market needs. This interaction with business needs is absolutely essential and much more responsive in the present voluntary system than is likely to be in one dominated by government interests.

The financial resources for IT standards work have come under recent stress as a result of burgeoning standards work loads and the growing needs of the user community. Some steps have been taken to build up the funds to support this work and those most impacted have shared the load. In the long term, the entire community of IT standards participants will need to both contribute to and benefit from the necessary financial support It is far better to have those directly involved share in all aspects of the work, technical and financial, rather than have a few or one major entity provide the financial support.

There needs to be some improvement in the present system such that it is more pro-active and responsive to changing needs. Pressures from an ever growing number of consortia that want to utilize base standards, demands for shorter development times, flexibility to keep up with new addenda to standards before the first one is completed are all examples of areas in which a more pro-active stance would benefit the U.S. position. These improvements are feasible within the present system. To change the present responsibility for managing the standards process in the U.S. could be most disruptive and detrimental to the IT community. The U.S. can not afford such disruption if it is to maintain or increase its competitiveness.

U.S. GOVERNMENT ROLE IN THE STANDARDS PROCESS

Today, there are a significant number of standards development participants from governmental agencies. They and their private sector peers make meaningful contributions to the overall process. HP considers this team relationship, this partnership, needs to grow and be further strengthened within the voluntary, ANSI managed system we now have. In some instances, there appears to be a rather weak partnership. When the rate of development of the voluntary standards necessary to satisfy NIST needs is too slow, then perhaps added resources (people, support) should be applied by NIST and other government agencies, at the technical committee level, to speed up the development work. In this way, added resources should facilitate ANSI standard approval for subsequent use as a FIPS rather than forge ahead on FIPS before industry standards, such as IEEE and ASC X3, are produced.

There are a number of ways government resources might be applied to achieve improvements in the overall standards process. Tax incentives (possibly tax credits in addition to tax deductions) ought to be considered for contributions that would make the development process more effective. For example, just as tax incentives have been applied to R&D investments in various research fields, it could prove very beneficial to allow some form of tax incentive to private sector companies that provide extra ordinary funding for US support of the international JTC-1 standards communit Secretariats. Similarly, a tax incentive for direct travel expenses and wages during international related standards meetings could also be used to increase participation by highly qualified individuals who might otherwise be unable to attend (particularly those from smaller companies).

A government provided network and host facilities to enable widespread mechanization technology could prove very beneficial. Such a government (i.e., non-vendor) hardware and software network (e.g., ARPANET, OSI NET) that supports an electronic conferencing system and provides host computer nodes at minimal connect charges might well shorten standard development time and improve the quality of the resultant standards.

Another possibility worth considering is one of recognizing new technologi that are reaching a point where standardization is both needed and feasible and then initiating the standards work at an early stage. This has been done in the past with LAN and I/O interface standards work.

Additionally, the government might also serve as a focal point for user community participation. This function might be accomplished by government sponsorship of user groups comprised of both government and private users to help define more thoroughly user requirements, objectives, goals, and relative priorities for pending standards projects. Such an action might well achieve three things; (1) supplement the relatively thin population of user participants in typical standards meetings, (2) decrease the time to develop standards, (3) provide added focus to the standards projects such that they better meet end user needs. This possibility seems to serve both the government mission as a large user and as a rallying point for other users (small & large) in the private sector.

The intention of all of these proposals (i.e., forums, leading edge chnology, and tax incentives) is to have government agencies provide appropriate tools and resources without managing or controlling the standards process.

It would seem appropriate for the government to negotiate the political issues on standards matters where other governments were directly affected. The need to understand the base issues, explore alternative solutions, and communicate these to the relevant standards committees could prove beneficial since the technical committee participants are not usually expert in these matters.

TESTING AND CERTIFICATION CONCERNS

Government agencies could provide help in the area of testing and certification. There is a lack of common worldwide requirements and operating procedures for conformance testing laboratories and organizations. ften, there are no consistent standards for testing and certification of products, which leads to credibility and acceptance problems for companies located in countries different from where the testing organization is located. It is frequently necessary to test products several times in different countries to get certification in a global market.

In addition, there appears to be a lack of customer recognition of requirements other than their own national standards. Many potential customers do not understand or even know about international standards. Local companies throughout the world are often not aware of international standards, and consequently develop their own standards not consistent with international and multinational agreements.

These problems are among many presently being addressed by ANSI and CEN/CENELEC. It is felt, however, that the emerging solutions must be einforced by appropriate negotiations between governments.

SUMMARY

In summary, the U.S. Government agencies are of critical importance to the formulation of base standards and the resultant policies for subsequent interaction in the international arena. Significant government contributions can be made to this process not only by direct participation in the numerous standards committees but also in such areas as network facilities support, tax incentives, user group mentoring, contribution of technology, and direct negotiations with foreign governments.

One role that is NOT considered appropriate for government is that of managing all standards development activities. Sudden shifts in funding and administration policy or undue influence from the political process could seriously disrupt essential standards activity. Abrupt changes in support level will damage U.S. credibility and leadership. In addition, a government sponsored council that has as a major goal the production and promotion of mandatory "regulatory and procurement" standards in a "voluntary" standards environment appears to create significant contradictions. With some exceptions, the general level of urgency and focus on key business basics and efficiency do not appear to be high priorities in traditional government managed activities.

What is needed is a solid partnership among private industry vendors, government agencies, IT community users from many categories, the growing category of consortia interests, and the existing ANSI managed voluntary standards federation. We, at Hewlett-Packard, look forward to participating along with you in this process of vital interest to the United States and its leadership position in the international standards community.

Before the
NATIONAL INSTITUTE OF STANDARDS AND TECHNOLOGY

In the Matter of

NIST Notice of Public Hearing
Dated November 21, 1989
"Improving U.S. Participation in
International Standards Activities:
Opportunity for Interested Parties to
Comment"

Written Comments of

American Telephone and Telegraph Company
Route 202/206 North
Bedminster, New Jersey 07921

March 19, 1990

- COMMENTS -

INTRODUCTION

We believe that effective mechanisms are in place to coordinate U.S. positions concerning both treaty and non-treaty organizations which prepare standards. In the telecommunications and information technology industry there are well defined processes that permit development of U.S. positions on international standards with ANSI providing coordination and process for non-treaty bodies and the Department of State providing coordination and oversight in the treaty organization domain. It is our strong belief that both these mechanisms have and continue to foster a high degree of productivity in the development of national and international standards and have placed the U.S. in an unparalled position of leadership in the international standards arena. Thus we do not understand the apparent motivation to replace the present system rather than address its real or perceived deficiencies.

Private sector machinery as it currently operates in concert with government has served the Nation's needs well. The United States fundamentally utilizes a voluntary system of standards development and application which permits a public and private sector participatory partnership. Indeed, government agencies are major participants in the standards process, and by virtue of their procurement role, are probably the largest users of the standards produced by the system. The United States approach allows broad industry and government cooperation and has proven to be extremely effective.

Any current signs of stress in the standards processes of our industries are a function of the enormous technological changes of the recent past and the success of the standards which already support the industry. The infrastructure for standards activities and related initiatives is expanding. The need to develop, and in particular to utilize standards, has generated a variety of consortia, workshops, user groups as well as a number of bilateral and multi-lateral corporate agreements to address specific subject areas. These new mechanisms supplement the more formal public process that continues to serve the U.S. community as the primary consensus mechanism for participation in global standards work. The present U.S. system permits a rich variety of options, including government support, for meeting the essential requirement of obtaining the resources necessary to address perceived standards needs. We should not require that this free market allocation of resources be constrained to operate within a confined discipline, or expect it to appear orderly in comparison to other countries which do not address the resource allocation problem the same way.

What we have now is not perfect. We must continue to avoid unnecessary duplication in the system. We must also recognize that, as standards work draws closer to leading edge technology, we can expect multiple standards initiatives in a given domain for technology yet untried in the marketplace. We should not give up the freedom and flexibility of the present system which allows the market place to make the final choice for a discipline that prevents duplication at all cost. We can, however, plan better milestones and schedules and we can manage our corporate representation so as to focus on really significant goals.

We do not wish to scrap a successful U.S. institution. Extensive change at this time could interfere with our international effectiveness. We are particularly dependent upon a stable international infrastructure in which the U.S. plays an important role based on American standards machinery that is effective. We therefore support continuing the existing industry-government partnership utilizing the infrastructure that is currently in place while resolving problems and new issues, such as certification and aid for standards development in non-industrialized countries, as they mature.

SPECIFIC QUESTIONS ADDRESSED IN THE NIST NOTICE

Are there standards development systems more effective than ours?

There may be systems which produce more rapid results but they do not produce the high degree of consensus of the U.S. and international public process and some function in environments of government control that are inconsistent with the American fabric of free enterprise and consensual public process. Our standards products effectively serve a very broad constituency after the process completes its sometimes stressful interactions.

Does your organization participate in international standards meetings?

AT&T is very active in both national and international standards committees on a regular and continuing basis. This includes participation in CCITT, CCIR, ISO, IEC, and JTC1.

Who has international standards responsibility in your organization?

All relevant AT&T Business Units participate in an internal process, managed by an organization charged with this responsibility, to develop external standards positions. Experts from the various technical disciplines within AT&T are utilized. Representation at various international standards bodies is also managed by this process.

What should be the U.S. Government's role in standards?

The U.S. Government actively participates in many areas of telecommunications and information technology standards development. Certainly, as a very large procurer of products and services that rely on standards, it needs to protect its interests in the development of these standards. NIST and some other U.S. government agencies perform that function concerning information technology and related telecommunications standards. Also, the U.S. Government has a fundamental role to play in establishing and maintaining relationships with foreign governments at a policy level which promotes U.S. industry competiveness in the global market place. A close partnership with the private sector is necessary to assure that U.S. Government policies and the fundamental standards making process managed by the private sector are in concert.

Is the U.S. standards infrastructure sufficiently supportive?

We believe the answer is affirmative, however, one current problem comes to mind. In telecommunications, the Department of State has supported and provides oversight for U.S. participation in the International Telecommunication's Union (ITU). Here government is seriously constrained in ensuring the continued success of the ITU in terms of funding to the extent that it must conform to broad budget principles that generally limit expenditures to international organizations. An exception providing for flexibility concerning this unique and important international body would provide the United States with important strength to ensure the continued effectiveness and viability of the ITU. In this arena, the responsibility clearly lies with government to fund the treaty organization while the private sector expends the significant resources needed to carry on the technical work in the body.

Does your organization participate in TAGs?

AT&T is an active participant in a number of Technical Advisory Groups (TAGs). Our impression is that broad representation is normally the rule in the U.S. voluntary process. Continuing effort is needed by all concerned to ensure the future success of the public process but it does not appear to be in any serious difficulties in our industry at this time.

Reliance Upon Standards

In our areas of business interests we rely on both national and international standards with perhaps a greater need for the latter as we expand our international sales and services.

Standards as Trade Barriers

The subject of standards trade barriers bears careful monitoring. In our view, it is too soon to determine whether this will become a serious problem. It is also our opinion that the domain of testing and certification is not yet mature enough to determine the extent to which we will encounter significant difficulties abroad. It can perhaps be observed that the subject is not as well developed in the U.S. as it appears to be in the European Community in view of strong American desires for self-testing and self-certification. There is not yet complete consensus as to what mechanisms would serve U.S. interests should some products have to submit to third party testing and certification. We are confident that when a consensus is worked, appropriate mechanisms within the current infrastructure can be found to address the problems.

Summary of Current Environment

None of the above is intended to suggest this is a static field without problems. Certainly new mechanisms are emerging such as consortia, user groups, regional standards bodies, workshops, etc., to develop agreements that relate to standards. Some of these fill the need for rapid decision making in specific subject areas. Better means to relate these bodies to the public standards process are evolving and some progress has been made in this respect. "Quality" standards are emerging that are subject to interpretation and implementation machinery. Certification looms as a potentially important problem. Both the Corporation for Open Systems (COS) and NIST have been involved in conformance issues. The emergence of the European Telecommunications Standards Institute (ETSI) with dedicated technical developers and a weighted consensus system that does not demand unanimity or near unanimity makes it a body with potentially enormous strength. Yet, there are signs that suggest it is not in the interests of its constituents to dilute the possibility for standards with global agreement. One of those hopeful signs was the recent meeting of the T1, ETSI and TTC committees with the CCITT and CCIR Directors to consider more cooperation. In that respect we are hopeful that global standards are achievable for the most part notwithstanding the emergence of regional standards bodies such as ETSI.

In conclusion, AT&T welcomes the inquiry as a sign of U.S. Government interest and cooperation in this very important arena. It favors a continuing U.S. Government interest and willingness to partner with the private sector along the lines of today's system to find the best means to facilitate American trade and support American producers.

INTRODUCTION

First of all, let me introduce myself and who I represent here this morning. I am Ken Hutcheson and I am employed by the Du Pont Company as the Program Manager for Electronic Data Interchange (EDI). For those of you who aren't aware EDI is the name commonly given to the technical discipline used by business partners to exchange information electronically between computer systems in a pre-~~determined~~ standard format. Almost any information can be exchanged via EDI, but most often business partners exchange business information such as purchase orders, invoices, etc. using this technique.

In addition to being involved in Du Pont's EDI program for the past 6 years I have also been very actively involved throughout that period in the national standards organization for EDI: the ANSI Accredited Standards Committee X12. And I am currently the Chair of that Committee.

Chartered by ANSI in 1979, ASC X12 has grown from limited participation by fewer than 100 organizations in the early 80's to nearly 350 dues-paying member companies, trade associations, government agencies, and financial and educational institutions. In the private sector, nearly every industry is represented: chemical, auto, textile, banking, utilities, grocery, metals, paper, electronics, telecommunications, retail, transportation, health care, petroleum, agriculture, etc. Although ASC X12 is driven primarily by the needs of the private sector, government, particularly the various agencies of the Federal Government, is playing an increasing role. In fact, ASC X12 has provided a Government Subcommittee to allow government organizations (local, state, and federal) a platform from which to discuss their special needs for EDI and to develop standards to exchange data that is unique to the government, such as tax returns.

AFFILIATION WITH ANSI

Since it was formed more than 10 years ago, ASC X12 has published standards covering more than 30 types of information and there are over 30 more in development among the 10 technical subcommittees. In developing and maintaining these standards, the committee has followed religiously the ANSI Procedures for the Development and Coordination of Standards, which calls for rigorous discussion in open forum leading to consensus among interested and materially-affected parties involved. I don't have the slightest doubt that, given the enormous number and diversity of the participants in ASC X12, that consensus would be nearly impossible to reach without the structure and fairness of the ANSI process. I also believe that the success the committee has had in becoming the pre-eminant EDI standards organization in the United States is due in large part to the stability that the ANSI banner provides.

INTERNATIONAL STANDARDS ACTIVITIES

Since your notice of this hearing emphasizes the coordination of United States participation in international standards activities, I have to assume that you believe that current activities might benefit from greater government coordination. I don't believe this is true for EDI.

International EDI standards (called UN/EDIFACT - EDI for Administration, Commerce and Transport) are developed under the auspices of the United Nations Economic Commission for Europe. ASC X12 has been instrumental in the UN/EDIFACT movement since it began in 1985, working closely with representatives ~~for~~ from Europe to establish the technical structure of the standards and the regional advisory process used to develop and maintain the standards. In fact, the regional advisory group for North America, called the North American EDIFACT Board, which serves as the forum for developing North American technical positions, is officially a part of ASC X12 and the ASC X12 Secretariat, the Data Interchange Standards Association, also serves as the North American EDIFACT Board's Secretariat.

In 1988, the ASC X12 membership overwhelmingly approved the integration of UN/EDIFACT development and maintenance into the existing ASC X12 environment. This means that UN/EDIFACT standards are processed within ASC X12 exactly the same way domestic standards are processed. So far, this has worked out extremely well for both the United States and Canada; in fact, I doubt that Canada would have agreed to house the North American EDIFACT Board within ASC X12 if it weren't for the maturity and reputation of the ANSI process.

While the UN/EDIFACT standards are new and the process for developing these is not mature, it does seem to be working well. The movement could certainly benefit from stronger government participation, but greater government coordination is, in my opinion, not needed.

ENCOURAGE GREATER GOVERNMENT PARTICIPATION

Use of EDI by government is relatively new, but growing rapidly. There is enormous potential for EDI to be used for procurement of goods and services from the private sector and for reporting information to the government by the private sector. One of the most important players in this will be the Department of Defense, which has two procurement-related programs, CALS and MODELS. Because the defense industry is so large, the emergence of DoD as a major EDI player will influence literally thousands of companies to invest in EDI capability, which, because of the trickle-down effect, will move EDI even closer to becoming the prevalent way of conducting business in the United States.

Because government is a major potential user of EDI, the ASC X12 Committee needs broad government participation in both the national and international standards-setting process. Government representatives working side-by-side with those from the private sector will yield better standards under the open-forum, ANSI process than either working independently.

CONCLUSION

In conclusion, I'd like to thank you for the opportunity to speak to you today about EDI standards-setting. At ASC X12, we believe very strongly in the ANSI process and don't wish to see it changed in any significant way; the introduction of government coordination of EDI standards would be disruptive and, therefore, would be unacceptable to the private sector participants at ASC X12. Rather than taking over coordination, we would prefer to see active government participation in developing standards and positive government influence of the growth of EDI by implementing major programs such as those being undertaken by the Department of Defense.

Thank you very much.

National Institute of Standards & Technology Hearing

04/05/90

Good morning ladies and gentlemen. My name is Samuel D. Cheatham, Vice President of Engineering responsible for Tape and Library Systems at Storage Technology Corporation in Louisville, Colorado. We are a $1 billion worldwide corporation engaged in design, development, sales and service of computer peripheral systems and products.

I appreciate this opportunity to provide testimony concerning the U.S. standards program. I have been directly involved in the standards development and application process for approximately 11 years, and in the electronics business for over 25 years.

The current ANSI standards development process benefits from a wide range of producers and consumers, allowing standards to be developed which have the widest practical application.

I believe the governments' proper role in standards is to support and participate in the process and be responsible for trade policy and assurance that trade barriers are not created. The government sector should also assist in information transfer and communication within the domestic and international standards community. The EEC, via EC '92 represents a challenge to U.S. leadership in international standards. We must work as a team.

The NIST mission is often cited as the only federal laboratory with the primary mission of aiding U.S. Industry. While there are areas of industry where this fundamental requirement is probably met, there are instances where it can be more effective. A major reason for this situation is inadequate coordination of NIST Standards reference material support being provided for standards developed under the ANSI process.

Participation by the Director of NIST in ANSI board activities has recently improved and needs to be sustained. NIST and ANSI need to be more closely linked at the policy and priority level.

An organizational link is needed between NIST and ANSI. One way that this could be accomplished would be to formalize the working partnership between the Director of NIST and the President of ANSI. This would help assure proper NIST support provisions for standards developed under the public sector process. Timely and adequate support for developed standards is critical to their implementation and effectiveness.

Computer Sciences and Technology traditionally receive the lowest level of funding in allocation of the NIST budget. This remains true in the 1991 budget request as well.

During 1987 & 1988 lack of funding priority for a reference material project generated a need for an industry solicitation campaign to co-fund the effort with NIST. I was personally involved in this solicitation campaign. Correspondence and meetings appealing for a minor reallocation to cover this shortfall with NIST were to no avail. This amount constituted less than .002% of the NIST budget!

This situation illustrates the point that the key process requirement, leadership in standards implementation support was lost in a miniscule budget fight. Priority coordination with ANSI is fundamental. This example ties to one area where the U.S. still has a good international position in trade. The United States has traditionally been the worldwide leader in establishing standards for data processing products. Priority support of reference material development is one key ingredient required to maintain this leadership position.

TRADE VALUES: (approximate)

- o Peripheral products - worldwide 50b 1990, 80b 1993 (domestic is approx. 55%).
- o Removable media
    - Domestic
    - Worldwide

ADDITIONAL POINTS FOR CONSIDERATION ARE:

In conclusion, I believe that the current infrastructure between the private sector and government, working as partners, is effective in U.S. standards setting activities and global competitiveness. Our challenge is to strengthen support provided for implementation of those standards.

There needs to be a supportive relationship between the private sector and government to effectively handle EC 92 conformance testing and certification. Without such a relationship U.S. made products will suffer limitations in their access to European markets.

Restructure of ISO/IEC voting and operations is needed to ensure that ISO/IEC participation remains as a viable forum for expression of U.S. interests in European and Global markets. A key part of this effort is to change the inequitable voting leverage of the EC through their having 13 votes versus 1 for the U.S.

SUMMARY:

The ANSI system of standards development is strong and effective. The U.S. Government needs to strengthen focus on U.S. trade policy and coordinate government agency participation in standards development efforts. Government should provide strong application support of voluntary standards rather than altering the current standards development process.

4/4/90

Many Publics, Many Interests:
Electronic Publishing and the Social Good

Prepared by
Erick C. Duesing, PhD
Infolink Solutions
for
Dr. Jon Cunnyngham
Foundation for Electronic Publishing
1880 Mackenzie Drive, Suite 111
Columbus, Ohio 43220-2956
(614) 442-3909

The mission of the Foundation for Electronic Publishing is to advance the development and use of enabling technologies for electronic publishing. To attain this goal, the Foundation will contribute to the development of standards included in various Application Profiles for electronic publishing. Several such standards are now in various stages of development, with work proceeding both domestically and internationally in various organizations and forums. While standards setting relies on considerable technical knowledge, the process must be guided by a deep understanding of the many and diverse needs which are being served. The work of the Foundation will focus the inquiry, widen the dialogue, stimulate the discussion and provide a forum for the debate through which this understanding is gained and applied to electronic publishing. Through its services to the community of interests engaged in the cooperative production of these public goods, it will serve those who share in the benefits of their use.

> *The cooperative development of standards for open system interconnection represents a discontinuity in the historical relationship between the vendors and the users of information technologies.*

Electronic publishing is but one of the diverse application domains of digital information technologies, whose capabilities and promise have captivated the human imagination. Unlike any previous artifacts, these are truly tools of the mind, extending its presence in time and space while amplifying its powers for calculation and for reorganization of information. The pace of product, process, and organizational innovations based on these technologies ever continues to quicken. However, as now implemented in computer and communications systems, promises of gains in timeliness, efficiency, and effectiveness are thwarted or impaired by many artificial barriers to widespread integration. The integration of disparate systems requires standardized interfaces, which are specified, designed, and implemented through a diverse variety of processes and relationships.

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The cooperative development of standards for open system interconnection represents a discontinuity in the historical relationship between the vendors and the users of information technologies. In effect, it is as if the users have proclaimed a Declaration of Independence from the vendors of hardware, software, and communications services. Users seek freedom of choice when matching capabilities of tools to the needs of applications, without added pressures of vendor tyranny. They demand the right to assemble data from diverse sources; they want liberation from constraints on where, when, and how they do their work. Globally, this lessons the strategic advantage that multinational firms gain through their private telecommunication networks, to the benefit of both their business rivals and national governments. In Europe it represents a victory of commercial interests over the entrenched government monopoly of Postal, Telephone and Telegraph agencies, levelling the playing field so smaller players can compete. Everywhere, it weakens the hegemony of dominant vendors over the choices of other parties, whether customers or competitors.

As we gain the ability to control remote resources and do so at our convenience, we alter the relationships through which work is done and the boundaries of organizations.

Interconnecting systems through data interchange standards benefits the users of each system, for data becomes more valuable as the cost of sharing it falls. Timeliness of access, accuracy and quality of data resources are all enhanced through interconnection. Logically, standards establish well-defined interfaces between systems. In use, they provide a means to decouple functional subsystems for the acquisition, communication, storage, processing, and presentation of information. When widely accepted, they increase the extent of the market and thereby the scope for independent choice in system integration. Eventually, they offer the promise that the user of applications will make choices based on preferences for features with direct utility, independently of concern about the "How?" and "Where?" of the resources which implement this functionality.

As we extend our presence in time and place by creating the means to interconnect our information systems, we discover that we want to command remote resources to do our bidding as if these resources were local. That is, we want our applications to be interoperable, so that we interact with what is familiar, and physical location becomes transparent. Similarly, we seek to escape demands of synchrony, looking for ways to express volition without the necessity of immediate response. We will seek to do so both because of needs for individuals to collaborate without linking personal schedules, and because organizations need to achieve uniform, predictable outcomes in processes that can only be incompletely specified *a priori.*

As we gain the ability to control remote resources and do so at our convenience, we alter the relationships through which work is done and the boundaries of organizations. For example, by relaxing constraints on time and location, and with means for collaboration in the creative process, we may organize *ad hoc* team efforts that use resources owned by several organizations. Doing so, however, may require both that contracts between organizations be specified according to process rather than product, and that the expectations of the employer/employee relationship be rethought.

Developing standards for electronic publishing is part of the much larger effort on open systems standards, yet both are important arenas in which the Foundation will work. The issues surrounding intellectual property rights are of critical economic significance for electronic publishing. While the public interest demands that the products and services of the information industry are integral components of the open systems environment, their production must remain an economically viable undertaking. Securing a means that accommodates the needs of both the consumer and the producer will require considerable effort, and may require the joint development of technologies, standards, and institutional arrangements.

Foundation Programs

The work of the Foundation will be organized into four general programs of inquiry. The focus of the **Technology Program** is on understanding technical fundamentals which constrain choice in standards for electronic publishing. The subject domain of the **Social Program** includes public policy issues arising from the tensions between our cultural values, social and individual needs, and institutional structures as they are affected by new technological opportunities for electronic information media and services. The scope of the **Economic Program** includes production and consumption of the existing and proposed products and services of the information industry, the peculiar properties of information as an economic commodity, and its tactical and strategic significance. The **Standards Program** will meet needs of participants in the standardization process, as well as critically appraise the effectiveness of this process in achieving its stated objectives.

ECONOMIC & SOCIAL FACTORS

> *There is reason to believe that the new tools of the mind being forged by integrating computing and communications through digital information technologies have unleashed the Second Information Revolution.*

We live in an Age of Discontinuity, whose effect on our cultural values and our social, economic, and political lives may be as profound as two prior discontinuities that affected Western civilization. The First Information Revolution created the first mass-produced replacement for hand-crafted articles, employing the technology of letterpress printing using plates composed from reusable, interchangeable pieces of type. Its initial social impact of lasting significance was a fractured religious monopoly, tilting the geopolitical balance of power toward secular interests. However, a new concept of the individual emerged with later messages flowing from these presses, forming both our democratic institutions and modern economic organization. Pamphlets and newspapers were early product innovations of the information industry, and its books both enabled the school and created the need for the library.

Similarly, the Industrial Revolution, creating the factory as a new form of social organization in which artisans shared access to power, marks a second social discontinuity. Driving a schism between the producer and the consumer of artifacts, into which a massive infrastructure of distribution and merchandising has since been erected, economic activity was reframed as a positive-sum game. Larger scale enterprises allowed division of labor, with productive efficiency achieved through specialization of tasks, but created new needs for coordinating and controlling organizations. The enabling technologies of this revolution included standards for weights and measures, as well as the legal and financial instruments whose semantics became uniform across political boundaries.

In each Revolution, a technological innovation removed a bottleneck to human effort and unleashed enormous human energy, leaving a reordered society in its wake. Although the mode of transmission involved product, process, and organizational innovation, eventually the institutional landscape was reformed as roles shifted to achieve new purposes. Cultural values were assigned new priorities, symbols acquired new meanings, boundaries between social classes were redrawn.

SECOND INFORMATION REVOLUTION

There is reason to believe that the new tools of the mind being forged by integrating computing and communications through digital information technologies have unleashed the Second Information Revolution. Progress in microelectronics, magnetic storage, and optical waveguide technologies has led to a number of orders of magnitude decrease in the costs of performing fundamental operations on binary data. The creation of standards enables functional decoupling within data processing and communications subsystems, promoting the division of labor for creating useful applications. The bricks and mortar are in place to construct the Global Village, and a few architectural sketches have been drawn. The location and scope of amenities of its Commons has only begun to be addressed; there is concern that the Bazaar not preempt the choicest locations.

The bricks and mortar are in place to construct the Global Village, and a few architectural sketches have been drawn.

Electronic publishing, based on the same fundamental technologies, is being implemented on similar platforms, and will utilize the services of the infrastructure of integrated computer and communications systems that it shares with other application domains. The opportunities are too compelling and the economic stakes too high to slow the momentum of these developments while pondering their effect on either publishing or related information industries. Yet these applications are particularly difficult, as their products and services face great uncertainty while society debates the issues of intellectual property rights.

The Foundation programs must grapple with a most perplexing issue: With no opportunity to turn back, what course should be steered between the Charybdis of open systems standards and the Scylla of intellectual property rights? The economic tide which propels us forward is the confluence of many forces in the broadcasting, entertainment, publishing and telecommunications industries. At stake are the interests of many institutions—educational, governmental, cultural and religious—and the conceptual lifeblood of the professions and many occupations.

How will we co-evolve the technologies with a reliable means of understanding needs, while marshalling public interest and support to sustain the passage?

The risks that society faces in evolving the new integrated information environment arise in considerable part because we are so deeply embedded within our existing information environment. Reflection on several common sense truths reveals some of these dangers.

1. We live in a world of paper documents, whose tangible medium provides the basis for social control of document content, that maddeningly elusive economic concept of information. The social infrastructure necessary for protecting information carried by intangible electronic media may require both technical and institutional innovations that are of a non-evolutionary nature.
2. As we develop disciplines such as cognitive science and new decision and organization theories based on its understanding of human capabilities, reasons for divergences between aspirations and accomplishments become better understood. Such understanding may stimulate the design of better tools for individuals, cooperating groups, and intra- and inter-organizational coordination. However, it also reveals limits on human behavior that may be deeply threatening to prior understandings and interests.
3. Each generation is said to rewrite history to accommodate newly discovered human needs. The rewriting causes established relationships to be reconsidered and new explanations to be found within the historical record.

These considerations become a greater cause for concern when we consider that standards for interconnection are anticipatory, and must be established in advance of widespread experience. Socially, it may be desirable to replace existing products, processes, organizations or institutional arrangements by alternatives whose benefits are not immediately obvious. The status quo may be comfortable, even though its familiarity masks inequities we have come to accept or leaves unmet needs we have forgotten. We may be sensitive to warning signals which at one time informed prudent behavior, but have now become irrelevant in a changed environment. Our competitive behaviors make cooperation difficult, yet it has become imperative for our success.

With no opportunity to turn back, what course should be steered between the Charybdis of open systems standards and the Scylla of intellectual property rights?

THE SOCIAL PROGRAM

In the Social Program, the Foundation will view the world of electronic publishing through a wide angle lens. At first, the field of view may seen to include many items whose relevance to electronic publishing appears questionable. There may be concern that such a broad focus will divert time, attention, and resources from our central concerns. My responses to this concern fall into two categories, including some that address the intrinsic nature of social issues related to electronic publishing in an integrated information environment, as well as others based on the organization of the Foundation and its work.

The purpose of the Social Program is to encourage wise stewardship of resources as society navigates the discontinuity of the Second Information Revolution. We gained social resources of immeasurable value in the turmoil of these earlier social discontinuities: the First Information Revolution brought forth concepts of the individual that underlie our political system, and the Industrial Revolution led to freedom of enterprise in a competitive market economy. Surrendering our precious individual and political freedoms for the sake of expediency in standards-setting, or crippling economic progress by standards which create rather than remove barriers to economic participation, are surely too high a price to pay for integrating our information technologies. Yet there is reason for concern that our present governmental policies, together with limited public awareness and concern over what is at stake, may be leading us directly in these directions. There seems to be almost no recognition that the nature and purpose of open systems standards represent a fundamental change in what is standardized. Moreover, we have had centuries to evolve the cult of the individual and to perfect the institutions of competition. The time available for writing the new rulebook for cooperative sharing of information, for evolving new cultures and establishing their values will be much shorter. Indeed, our very individualism and competitive behaviors will make success more difficult to achieve.

Although a champion of the voluntary, consensus standardization process and committed to standards as a public good, the Foundation must critically evaluate whether the process is equal to the present task.

The magnitudes of both the opportunities and the risks involved in setting public policy and creating the infrastructure for electronic publishing make it imperative that some fixed points be located for charting our course. If the effects of the discontinuity are expected to be wide ranging, it is prudent to conduct a broad inquiry which encompasses diverse interests and multiple points of view. Since existing products, processes, and organization of work are undergoing rapid change even in the absence of standardization, the continued existence of industries and of institutional relationships should not be assumed. Much of the accumulated wisdom from the development of closed systems may be irrelevant or even an impediment to the design of open systems. Thus, an inquiry regarding the optimal social uses of digital information technologies must critically examine the very questions it asks, informed by our knowledge of the limits of human cognition.

The Social Program of the Foundation must inquire boldly and provocatively, yet must do so openly and free of partisan bias. Although a champion of the voluntary, consensus standardization process and committed to standards as a public good, it must critically evaluate whether the process is equal to the present task. Voluntary standards are created by committees of self-selected, self-financed volunteers with the understanding that the acceptance and use of the standards is also voluntary. The integrated information environment is a social infrastructure that all must be able to use, for if technically successful its use will become mandatory *de facto* if not *de jure*.

Yet the private individual, or the small to medium sized organization, can scarcely be expected to represent their own interests in the highly technical and time-consuming process. The Foundation must strive for balance, and be prepared to voice concerns for needs that the individual or small organization may face. In its concern that the process of standards setting is meeting needs that are not represented, it must seek to move the process forward even as it draws new participants into the deliberations.

The work agenda of the Foundation for Electronic Publishing contains items whose success is essential if social needs for universal access to information resources is to be achieved by mastering the potential of digital information technologies. Through its efforts, the significance of the difficult technical work undertaken by participants in the standards-setting process will become better understood by those affected by the standards—whether in the board rooms, the living rooms, the classrooms, or wherever a need for information occurs. Without this understanding, the standards-setting process cannot gain the support to move forward; without the support of users affected by the standards, discovery of their needs becomes difficult. Yet the ultimate success of the standards themselves will be directly related to how well needs are anticipated.

The work of the Foundation should provide a means to discover the best uses of these technologies, whether the need be to access information or to disseminate it, to protect the integrity of existing information or to sustain the processes of creating new information resources.

> *The Foundation must serve as a demonstration for the current standards, as well as provide an experimental test bed for proposed extensions of services.*

THE FOUNDATION ONLINE

Through its activities, its staff, and its resources the Foundation will acquire a symbolic role in the community it serves: It will become a node in their network of information resources. The Foundation must equip itself for this role by a commitment to develop an exemplary system for meeting information needs of its associates, and to share use of the system as well as its content within the community. The system will be referred to as the *Foundation Online*, and its rationale is simply described: While standards for integrated electronic publishing must anticipate public needs, their development must be informed by the shared experiences of the participants in the process. Thus, the Foundation must serve as a demonstration for the current standards, as well as provide an experimental test bed for proposed extensions of services.

The Foundation Online will function as an integrated information repository, providing virtual storage and access to a body of information relevant to electronic publishing standardization. It may be reasonable to consider the content of the repository as a dynamic, organic store of information; dynamic in the sense that the content acquires updated values, and organic by virtue of ongoing operations which interrelate this data. In addition to Foundation publications, categories of information which might be included are statistical data, annotated bibliographies, a database on work-in-progress in electronic publishing, an institutional intelligence database, and a registry of personal interest profiles. Foundation Online should also support the directed transfer of messages, both public and private; they should facilitate the targeting of message dissemination as well as filtered reception of broadcast items.

PDES AND ITS EFFECT ON INTERNATIONAL COMPETITIVENESS

United States industry is no longer the primary dominant force in the world market. Our European and Japanese competitors are becoming more and more successful in introducing new technologies and products rapidly and ahead of U.S. companies. Our industrial base must take every opportunity to ensure a prominent position in world trade and to regain market share and technology leadership. Toward that goal, Product Data Exchange using STEP (PDES) enables a new way of doing business within, between and among technical enterprises. The establishment of PDES is a major milestone in the Information Age of industrial development. PDES is required to take full advantage of the current and emerging product definition technologies, concurrent engineering philosophies, life cycle technical data requirements and acquisition trends for contractor teaming.

The objective of PDES is to facilitate the effort of the proposed international standard -- STEP (Standard for the Exchange of Product Data). This effort will provide a complete, unambiguous, computer interpretable definition of a product through its life cycle. PDES will enable and significantly accelerate implementation of technologies pertinent to the delivery and interpretation of product definition information. As a major cornerstone for the Computer Aided Acquisition and Logistic Support Program, PDES will enable communications among heterogeneous computer environments, integration of systems which support design, manufacturing and logistics functions, and support automatic paperless updates of system documentation.

Work on the PDES effort began in mid-1984 by the voluntary IGES/PDES Organization. In order to accelerate the standard, industry (encouraged by the Department of Defense) began a focused effort in August 1988 to develop, validate and implement segments of the standard, with primary emphasis on mechanical parts. This industry program, PDES, Inc., is schedule driven and uses a disciplined approach, with technical resources provided by the 21 member companies. These companies are: Boeing, General Dynamics, General Electric, Grumman, Lockheed, McDonnell Douglas, Northrop, IBM, Martin Marietta, General Motors, United Technologies, Hewlett Packard, Rockwell, LTV, Computervision, FMC, Digital Equipment Corporation, Westinghouse, Newport News Shipbuilding, TRW and Honeywell. The National Institute of Standards and Technology (NIST) has become a strong contributor and has set up a major testbed to support the PDES, Inc. effort.

The voluntary IGES/PDES Organization has published their first working draft of the PDES specification for broad international review by the ISO (International Standards Organization). This working draft contains thirteen topical product data specifications, including: seven at the shared resource level - Geometry, Topology, Shape Representation, Shape Representation Interface, Form Features, Tolerance, Material, and Product

Structure Configuration Management, and six at the life cycle application-specific level - Architectural Engineering and Construction, Shipbuilding, Electronic Schematic Design, Layered Electrical Product, Finite Element Model, Presentation and Drafting. PDES, Inc., using its concentrated technical staff provided by the member companies, is testing and evaluating selected topical models of the published working draft. While accomplishing this goal, PDES, Inc. has developed a strong technical approach and is producing automated tools to provide a testable PDES implementation in specific application context areas.

PDES has become a major industrial initiative in the field of information technology. Ultimately, it is anticipated that PDES will have a more profound impact on U.S. defense and commercial industry than any other computer-based innovation. Plans are underway to establish a master plan for USA technological leadership in the implementation of PDES.

STATEMENT OF PACIFIC BELL
A PACIFIC TELESIS COMPANY

Concerning

THE VOLUNTARY STANDARDS SYSTEM

Presented by

EILEEN HEALY
ASSOCIATE DIRECTOR, ADVANCED TECHNOLOGY DIVISION

before the

NATIONAL INSTITUTE OF STANDARDS AND TECHNOLOGY
OF THE U.S. DEPARTMENT OF COMMERCE

APRIL 5, 1990

Members of the Panel, Ladies & Gentlemen: My name is Eileen Healy, and I am an Associate Director in the Advanced Technology Division of Pacific Bell, a local exchange service provider in the State of California. In the past five years, I have worked on national and international standards for telecommunications networks at both the technical and leadership levels. I am currently the Vice Chairperson of the National Technical Subcommittee T1X1 and an ex officio officer of the T1 Advisory Group.

Pacific Bell is a corporate member of both ANSI and CCITT. We support the voluntary standards system of the United States. While we participate in several standards forums, the vast majority of our resources are focused on Committee T1 nationally, and the CCITT internationally. We also support Bellcore, our jointly owned research organization, in their participation in standards development. Other speakers at this hearing, including Mr. Handler from Bellcore, have provided factual information on the current standards process for the telecommunications industry. I will not, therefore, repeat these facts, but instead focus on what is good about the U.S. voluntary standards system *and* to tell you about a serious flaw which could affect our long-term competitiveness. I will then propose a way to remedy this situation.

Telecommunications is a critically important industry. It forms the basic invisible infrastructure for access to information. It promises universal access to this information, and it's driven by rapidly advancing technology, strong customer demand, and healthy competition. To remain competitive, it is essential to maintain our superior telecommunications infrastructure and to ensure we do not create an information gap - a gap between information haves and have-nots. It is imperative, therefore, to ensure that standards for the telecommunications industry are developed with the greatest speed and purpose.

W. Edwards Deming in his book Out of Crisis explores the relationship between the voluntary standards system and the government. The role of government is to make policy and to regulate where necessary. A strong, vibrant, voluntary standards system, within a given industry, decreases the need for government regulation. Before 1984, there was no national standards system for telecommunications.

Since its formation in 1984, Committee T1 has become the focal point of telecommunication standards in the United States. It has approved more than 50 standards and has over 150 active projects. Committee T1 has members from the carrier, manufacturing and user sectors. Its members range in size from one person consulting firms to small manufacturers to national service providers. Its form and process were studied carefully by both the Europeans and the Japanese before the formation of their counterpart organizations ETSI and the TTC. Committee T1 continues to receive other requests from around the world for information and assistance, including most recently CITL, a Latin American standards body sponsored by the Organization of American States (OSA). In other words, this existing U.S. voluntary system has attributes envied and emulated throughout the world.

This voluntary system has had some significant technical successes as well. Bellcore 's written comments describe the tremendous success of the SONET standards. This standards effort caught the attention of international standards developers in 1986. The international community was astonished at the rate with which the U.S. was able to develop these standards. Furthermore, given the size of the U.S. market, there was great international concern that SONET might become a de facto international standard. This concern resulted in the work being presented to CCITT. With extreme market pressure from the United States, CCITT worked faster than ever before to negotiate changes in these proposed standards which would accommodate both North American and European signals and services. The results are three worldwide recommendations for fundamental infrastructure signal. This entire experience jolted CCITT into approving something called “accelerated procedures”--effectively allowing international standards development to occur within a two-year cycle instead of the previous four-year cycle. With this new two-year cycle, seven additional worldwide recommendations are soon to be completed.

There are several lessons to be learned from this experience. First, a strong, flexible national standards system can have great impact on the development of international standards. Secondly, it would not have been successful if the private sector had not been able to swiftly mobilize and renegotiate positions. Speed was critical. Finally, since 1984 and the breakup of the Bell System, a strong telecommunications standards system has emerged. Now, given Mr. Deming's theories regarding the inverse relationship between a strong standards system and government involvement we need less, not more, government oversight in telecommunications standards.

This is the bright side of the picture; however successful we are in dealing with the standards, they cannot be developed in a vacuum. In the U.S. we have many sources of policy, but *no coherent national telecommunications policy*. The Europeans and Japanese have been more successful than we in defining regional and national policies and technical direction. For example, the so-called "green paper" draft of EC telecommunications policy has galvanized European nations into establishing their own aggressive plans. This helps to focus and concentrate standards development efforts. In the U.S., there are multiple policy authorities--the Department of Justice, State and Commerce, the FCC, and the Congress. This results in telecommunications standards development which is often driven by individual or corporate agendas. As I mentioned, there are over 150 active projects in Committee T1. It is difficult to prioritize these projects without a focused national agenda. A unified telecommunications policy is *essential* to get the private sector to chart its path forward and prioritize its work. This involves introspection, coordination, and planning at the national level that will help us focus our competitive strengths. We support and applaud the work of the FCC, the Departments of Justice, Commerce and State, and the Congress and fully expect these agencies to continue to *implement* telecommunications policy. But now we are poised at a critical junction in our industry; we need a single policy authority in the government to work with the private sector to achieve a cohesive national telecommunications policy.

With such a policy in place, we will be better able to focus our standards work and to preserve our nation's model telecommunications infrastructure. We believe the goals set out in the NTIA's report Telecom 2000 are a good place to start. These goals include a commitment to a superior infrastructure, a commitment to universal access to information services, and a commitment to delivery of critical education and health care services. And, we believe a single policy authority *must* be identified. To that end, we support the existing voluntary standards system and do not support a federal oversight council as proposed. Such a council would result in an increase in bureaucracy, a further multiplication of policy authorities, an increase in regulation, and decrease in the speed with which the voluntary standards system could react in a particular situation.

So, what role *should* government play in the voluntary standards system. In addition to supporting standards in its procurement policies, its role should be one of more participation-- more consistent, persistent, long-term participation. As an exemple, the U.S. delegation, which negotiated the successful SONET standards previously cited, was lead by Dr. Bill Utlaut of the NTIA.

In summary, Pacific Bell commends NIST for focusing the national standards community on the current process and ways to improve it. We believe the independent, voluntary standards system under ANSI is working. However, we also view that lack of a unified national telecommunications policy as an urgent situation. Specifically, there are two areas where government cooperation will help to preserve a strong telecommunications industry in the United States: first, by identifying a single national policy authority for telecommunications; and secondly, by increasing the level of long-term, consistent government participation in the voluntary standards process. We strongly oppose a Standards Council of the United States. We believe this will result in a further multiplication of policy authorities, and an decrease in the speed with which the voluntary standards system can react in a rapidly changing world. Thank you very much.

STATEMENT OF
GARY J. HANDLER
VICE PRESIDENT – NETWORK PLANNING
BELLCORE

CONCERNING IMPROVING U.S. PARTICIPATION IN INTERNATIONAL STANDARDS ACTIVITIES

BEFORE THE
DEPARTMENT OF COMMERCE
NATIONAL INSTITUTE OF STANDARDS AND TECHNOLOGY

April 5, 1990

My name is Gary J. Handler and I am the Vice President of Network Planning at Bell Communications Research, Inc. ("Bellcore"). I have spent 24 years at Bell Telephone Laboratories, AT&T, and Bellcore working on telecommunications research and development, and network planning. My current responsibilities include planning for telecommunications services, architectures, standards, and conceiving and using new network technologies. I am a member of the Board of Directors of the American National Standards Institute (ANSI), and Deputy Chairman of the Exchange Telephone Group Committee of the Exchange Carriers Standards Association (ECSA).

Bellcore is a major telecommunications technology consortium owned by the seven regional Bell telephone companies. It is engaged in leading-edge technical research for its owners and in the technical support of their development and planning for the introduction of new exchange and exchange access telecommunications service capabilities into their networks. A crucial part of Bellcore's mission is to help preserve the technical integrity of the national communications network infrastructure. To this end, Bellcore actively participates in and contributes to national and international standards bodies. The extent of our involvement can be gauged by the fact that we have approximately 200 people directly involved in national standards activities and over 70 involved in international standards activities. Bellcore people have about 30 leadership positions in international activities.

My comments are offered in response to your request "to gather information, insights, and comments related to improving U.S. participation in international standards-related activities and to possible Government actions." Clearly, there are issues facing the U.S.

standards-setting process. Before examining these, however, it is important to emphasize that voluntary, public, consensus-based standards are essential to the development of telecommunications in the United States and for remaining competitive in the international marketplace. Additionally, it is equally important to note, that while the voluntary consensus-based U.S. standards-setting process faces many challenges it has proven successful in the past and can be expected to meet the challenges of the future. Hence it should not be replaced nor should its basic nature be altered. Throughout this discussion I would like you to remember this thought from Peter Drucker's new book, *The New Realities.* In it he states, "Whatever non-governmental organizations can do better, or can do just as well, should not be done by government at all." This is based on several premises: 1) government rarely innovates; 2) government functions poorly in a competitive environment; and 3) once started, government finds it very hard to abandon an activity. While there is a role for the U.S. Government to play, I will demonstrate that the voluntary standards process can work well, and thus the U.S. Government can help in these aspects, but could only harm if its involvement overwhelms or replaces the process.

The major issue impacting U.S. telecommunications standards development today is not the standards process itself, but rather the lack of a clear vision and consensus on how and when the U.S. telecommunications infrastructure should evolve. The U.S. infrastructure today is a conglomeration of networks characterized by a multiplicity of interfaces. These networks are often provided by competing entities and covered by widely different regulations, laws, and court interpretations. Essential to the evolution to the information age is a ubiquitous public network with clearly defined interfaces and end-to-end performance standards. Impeding progress in this direction is the lack of a national agenda that provides an appropriate strategic focus for the industry. This is an area in which we believe that the that government can provide assistance to the telecommunications industry, and I believe the Department of Commerce with its *NTIA – NOI – Domestic Telecommunications Infrastructure* has taken a significant positive step in that direction. One outcome of this initiative I hope will be the development of a timeline for the evolutionary process to ensure continued U.S. competitiveness as the global economy moves into the information age. The timeline will be especially helpful to provide guidance in developing priorities for international standards setting.

In our field of telecommunications, international standards setting takes place in a different environment than for most other fields. International telecommunications standards setting already has significant government oversight and participation. As far back as 1865, twenty countries signed the first International Telegraph Convention and established the International Telegraph Union (which was later renamed the International Telecommunication Union). This is now a specialized United Nations treaty organization of which the U.S. Government itself is the member representing the United States.

The International Telecommunication Union (ITU) has two major standards-setting organizations, the International Telegraph and Telephone Consultative Committee (CCITT) and the International Radio Consultative Committee (CCIR). In 1988, CCITT adopted or reaffirmed almost 1600 telecommunications standards. The U.S. Department of State – with support from the FCC, NTIA, NIST, DoD, and the office of the U.S. Trade

Representative – works in partnership with U.S. industry to develop U.S. positions to these international standards-setting groups. For developing national standards and technical contributions to international telecommunications standards groups, the U.S. telecommunications industry has formed Committee T1 – an organization that is open to all interested parties and operates in a democratic, consensus, due-process mode. To form the U.S. positions at international standards meetings, these technical contributions are then reviewed for consistency with policy and strategy at State Department led U.S. Study Groups. A significant cooperative partnership, therefore, already exists between the voluntary industrial standards groups which create national telecommunications standards and provide the bulk of technical expertise for international standards work, and the government which provides the strategic filter on technology and the voting power in CCITT and CCIR.

Some recent successes in the area of telecommunications standards are worth noting as they demonstrate the effectiveness of the existing processes. Synchronous Optical NETwork (SONET) is an activity that began and matured in the U.S. standards environment and was successfully "exported" into the international standards arena for adoption. These high-speed transmission system interfaces, which operate at 50 million to 2.5 billion bits per second (50 megabits/second to 2.5 gigabits/second) are vital to more economic telecommunications and for future information age services. They provide the ability to interwork on a worldwide basis, high-bandwidth transmission to support voice, data, and video services. In 1984 Bellcore introduced the SONET concept into T1X1, a technical subcommittee of Committee T1. During 1985 and 1986 agreements were being reached in T1X1 to establish a consensus U.S. view and midway through the 1985-88 CCITT Study Period SONET was introduced by the United States into CCITT. Once it was recognized that there might be international agreement on the SONET concepts by the end of 1988, a strong effort was mounted by U.S. industry to achieve that objective. T1X1 developed many draft U.S. contributions through its open consensus process to influence the development of the international SONET standards. In several instances to advance the work in an expeditious manner Bellcore employees met one-on-one with their counterparts around the world to "sell" the concepts involved. For SONET the U.S. standards process worked very well in advancing these standards worldwide. Business motivations requiring early solutions resulted in U.S. industry cooperating to create a national standard and then an international standard years ahead of when it was thought possible. Government support in taking the standard to Europe was critical, but the rest worked well on its own. I can't imagine how pervasive government control would have enhanced this process; in fact, I expect it would have been detrimental.

In a similar manner, Broadband ISDN is another recent example of where U.S. domestic standards organizations have demonstrated world leadership and have helped to influence the achievement of agreements internationally that will help shape the world telecommunications environment of the future. During the 1985-88 CCITT Study Period preliminary agreements were reached and a schedule developed to lead to international standards by the end of 1992. Active U.S. leadership is now leading to a series of 1990 standards. Other recent successes include the worldwide introduction of Integrated Services Digital Network (ISDN) concepts and the introduction of a new system to greatly enhance the signaling capabilities of telecommunications networks – Signaling System 7. Each of these examples demonstrates that the existing processes are working well.

The Notice of Hearing for today's session requested suggestions for improvement in the process. Even though the structure and process that the U.S. Department of State has established for developing U.S. positions have, in general, worked satisfactorily, Bellcore recently provided some suggestions for improvements to this process directly to the State Department. Bellcore has suggested that State could enhance the process by placing greater emphasis on developing negotiating strategies – timing as well as technical objectives – including evaluating the impact of potential concessions, prior to attending standards meetings. This is a legitimate, valuable role for the government.

Because in a few cases technical positions developed by U.S. standards groups had been overturned by last-minute interventions to the State Department, we recommended that inputs into the State Department from national standards bodies ought to be weighed most heavily in establishing U.S. positions. We have also suggested to the State Department that they encourage direct interactions between and among national and regionally international telecommunications standards organizations early in their standards-development activities to facilitate harmonization and improve the likelihood of expeditiously obtaining worldwide agreements through CCITT. Although Bellcore has recommended improvements to the process, we feel that the existing process works well in general and that no major structural changes are warranted. It is not felt that any major changes would be beneficial. It would be especially detrimental if any changes were to be implemented that increased the length of time to develop a U.S. position through additional coordination, oversight, or review. If as a result of this hearing shortcomings in the present system are identified, I feel that NIST should work to encourage changes within and through the current structure rather than propose structural modifications.

Bellcore suggests that the overall standards-setting process could be enhanced by increasing peer level participation of government experts to work along with the industry experts in the early stages of standards development. This would in many cases allow for the development of a better standard that would be used more widely, and would help avoid last-minute interventions to make significant changes. However, much can be accomplished by the government adhering more strictly to the standards developed by industry in its own procurement activities.

Bellcore recognizes that its proposal for the increased government participation and support requires more resources in government agencies (such as the State Department and NIST) and given the critical importance of standards such increases should be supported.

In the development of national telecommunications standards and the technical aspects of positions for international standards the United States currently has a vigorous, sophisticated, successful, totally open standards organization – Committee T1 – which operates under ANSI Model Procedures. In addition, strong liaison and interactions with other ANSI-accredited standards bodies has been developed to deal with the broader information networking issues. Specifically, T1 has been cooperating with IEEE 802.6 in the development of Broadband ISDN standards. Bellcore endorses continuation of the entire voluntary system of industrial standards that has proved so effective and productive in the United States. In the development of international telecommunications standards, because of the need to work with other governments, the U.S. Government, through the State Department, is already significantly involved and works in partnership with U.S. industry. Bellcore also endorses this process and is actively involved in this process and will help to improve it.

I hope you will find the sentiments expressed to be helpful in your endeavor to improve the process and hope that as a result of this hearing NIST will be able to make some recommendations to "fine tune" the existing processes, but to repeat, I believe no major changes are warranted.

AMERICAN SPEECH-LANGUAGE-HEARING ASSOCIATION

Statement on

IMPROVING U.S. PARTICIPATION IN INTERNATIONAL STANDARDS ACTIVITIES

Before the

NATIONAL INSTITUTE OF STANDARDS AND TECHNOLOGY

U.S. DEPARTMENT OF COMMERCE

Presented by

Jo Williams
Manager
Audiology Technical Assistance Section
American Speech-Language-Hearing Association

April 3, 1990

10801 Rockville Pike, Rockville, Maryland 20852 (301) 897-5700

STATEMENT OF THE AMERICAN SPEECH-LANGUAGE-HEARING ASSOCIATION

The American Speech-Language-Hearing Association (ASHA), representing more than 61,000 audiologists and speech-language-pathologists nationwide, is pleased to have this opportunity to provide comments on issues concerning standards development activities in the United States. In this statement we will discuss ASHA's (a) involvement in standards development; (b) experience with the present standards development system; (c) concerns regarding changes in the system and the resulting impact on consumers; and (d) recommendations for improving the standards development system.

ASHA INVOLVEMENT IN STANDARDS DEVELOPMENT

ASHA is the national professional and scientific association for audiologists and speech-language pathologists who provide diagnostic and rehabilitation services to children and adults with hearing, speech and language disorders. ASHA is a voluntary standard-setting organization that accredits graduate programs in speech-language pathology and audiology and service delivery programs. ASHA also sets criteria for credentials to practice as a "qualified provider" of audiology and speech-language pathology services. ASHA members are employed in both the private and public sectors as clinical service providers, researchers, product developers and university faculty. Employment settings include schools, private practice, federal and state regulatory agencies, community clinics, hospitals, universities, and the military. ASHA participates in standards development activities through representation on standards development committees, promotion of member involvement in standards development activities at a grass roots level, and by serving as a technical assistance network for promulgating standards affecting the practice of our professions.

ASHA is one of the 250 paid organizational members of the American National Standards Institute (ANSI) and a paid member of two standards development committees, Acoustics and Bioacoustics, of the Acoustical Society of America (ASA). ASHA pays the expenses for organizational representation at standards development committee meetings, at ANSI meetings, and for some of the expenses associated with ASHA committees responsible for ASHA's review of proposed standards. ASHA encourages broad-based member participation in standards development activities by keeping members informed about proposed and current standards through professional publications and through its committee and board structure. Additionally, many ASHA members are involved in the U.S. and international standards development system outside of the Association structure through participation in working groups, technical advisory groups and standards review processes.

EXPERIENCE WITH THE STANDARDS DEVELOPMENT SYSTEM

ASHA strongly supports consumer protection efforts and quality assurance methods. For these reasons ASHA participates in standards development activities and the voluntary system administered through ANSI, and encourages broad-based participation of our members in the standards development process. The current U.S. standards development process using input from industry, researchers, consumers, government employees and clinical service providers is an excellent system for standards development pertaining to acoustics, bioacoustics and noise. The end result of this process is the creation of standards that truly serve the purpose of quality assurance and consumer protection. ASHA's support for the process is reflected by the incorporation of the standards developed into the Association's guidelines for clinical and professional practice.

PROPOSED CHANGES IN THE STANDARDS DEVELOPMENT SYSTEM

Although ASHA's direct and indirect financial support of standards development is substantial, we do not, and could not, pay for all of the time or expenses of our members involved in standards development activities. The current system relies on professionals' interest and voluntary cooperation. We understand the concerns of some regarding the length of time for developing standards, particularly in light of the European Community '92 objectives. However, the present U.S. process has proven effective in developing excellent standards that are acceptable to both the private and public sectors in our professions. We have serious reservations about changing to a standards development system that expediates the process, but reduces or limits the range and depth of input or that produces inferior standards that do not protect the consumer. We caution against adding another layer of bureaucracy that may slow down the existing standards development process.

Our past experience with government standards development activities does not encourage us to support a government-controlled model. Areas that were government regulated at one time have been deregulated. For example, a federal community noise standard developed and enforced by the Environmental Protection Agency (EPA) is no longer available to protect the public because the EPA was instructed to close its Office of Noise Abatement and Control. In other cases, where regulations exist, they are not kept current with state-of-the-art technology and information. For example, the Occupational Safety and Health Administration (OSHA) Noise Standard for occupational hearing conservation for industrial workers refers to outdated ANSI standards and mandates activities that do not provide optimal protection for the worker. As another example, it has taken more than three years to update standards in the Food and Drug Administration covering hearing aid technical specifications. Fortunately for the consumer, most hearing aid manufacturers and audiologists have been following current ANSI standards and their stricter specifications rather than the outdated standards specified in the federal regulations.

For the most part, the U.S. standards for acoustics and bioacoustics have been adopted as international standards. However, one example of the difference in standards quality between the U.S. standards system and the more expedient approach of the Europeans is the international standard for hearing aids that requires measurement of hearing aid reference test gain at only one frequency. The U.S. ANSI standard requires measurement at three frequencies. This difference in standards can have major significance for product quality and consumer benefit. This example underscores ASHA's concern regarding radical changes in U.S. standards development and the potential detrimental effect on the consumer.

With respect to the proposal for replicating the Canadian model for standards development, it is our impression that the Canadians have essentially adopted U.S. ANSI standards and rely heavily on U.S. regulatory and standards development procedures in the areas of acoustics and noise. Thus, we do not see the advantage of the Canadian model over the current U.S. system.

RECOMMENDATIONS

1. ASHA supports the concept of better cooperation and communication between the public and private sectors in standards development. The need clearly exists for integrating and updating standards contained within federal regulations. Our understanding is that funding has not been earmarked by government agencies for ANSI standards development activities. This results in reduced participation of the public sector in standards development. We urge the U.S. government to provide monies for increased participation by allocating travel money for federal representatives to attend standards development meetings.

2. We recommend also that the government provide financial support for the standards development system. Offering incentives such as tax deductions may also serve to broaden participation by smaller companies and other interested parties.

3. At this time, based upon the above comments and our experience with voluntary and government standards development, the American Speech-Language-Hearing Association supports the model proposed by ANSI for an expanded private-public sector partnership as a way to improve U.S. participation in international standards activities.

Thank you for the opportunity to present our comments on standards development activities. The American Speech-Language-Hearing Association and its members look forward to working with the National Institute of Standards and Technology to improve participation in the U.S. and international standards development system while maintaining the high quality of U.S. standards that are in the best interest of consumers.

Department of Defense
Testimony
to the
National Institute of Standards and Technology
April 5, 1990

Good Afternoon, I am Peter Yurcisin, the Director of Standardization and Data Management in the Office of the Secretary of Defense. I am here today to present the Department of Defense's views on the main purpose of this hearing as described in the Federal Register, Volume 54, Number 226, of Monday, November 27, 1989, Improving U.S. Participation in International Standards Activities, and to the related purpose as described in Dr. Warshaw's memorandum of December 20, 1989, in which he offered a model for a Standards Council of the United States of America. I do regret however Mr. Chairman, being denied the opportunity to have joined my esteemed ICSP colleagues as a member of your august panel.

As background, I would like to tell you some details about the DoD Standardization Program, as required by Public Law, and how we participate in both national and international standardization activities. I venture to believe most of you know that DoD has a single, integrated standardization program executed by more than 100 technical standardization activities throughout the Department, and we are the free world's largest developer of standards and product specifications. These activities, in addition to preparing military specifications and standards, work very closely with the private sector through non-Government standards bodies to develop voluntary or industry standards (or as we in DoD call them, non-Government standards) and international standards, and, of course, to participate with our NATO allies in developing NATO standardization agreements or STANAGs.

DoD technical activities are also responsible for the technical content of the documents, for ensuring that the Military Services' needs are met, for incorporating requirements of our laws and regulations, and finally, for providing concurrence for standards used in the acquisition of weapon systems.

As you will better understand as I proceed, there is a need for better Governmental and private sector cooperation, and in fact a partnership between Government and the private sector. We in DoD feel that the current infrastructure is sound, and there is no need to attempt to superimpose Government control in its place or over it. The American National Standards Institute (ANSI) should be formally recognized by Government as the privately funded membership organization that serves as the "umbrella" organization for the U.S. federation of voluntary standards bodies, and as the U.S. member body to the non-treaty international standards bodies of the ISO and the IEC through the U.S. National Committee, as well as with CEN and CENELEC, the private sector arm of the European Community.

By our participation with non-Government national and international standards bodies through ANSI, DoD has found that significant savings can accrue to the entire nation, not just to DoD, by our participation with these organizations. Our defense representatives are active at virtually every level of non-Government standards work starting with ANSI where I serve on its Board of Directors. In addition, my staff and I are involved in a variety of activities with several non-Government standards bodies. At the field activity level, our participation multiplies with thousands of technical representatives participating on committees and working groups throughout the ANSI federation. As examples, we have almost 1000 people involved just with ASTM committees. In the international scene, the DoD provides more representation to ISO TC-1 than any other organization.

We recommend that we in Government make full use of the avenues already available to make the Government/ non-Government standards bodies partnership more viable. Increase the activity of the ICSP, which has only met once in the past several years, and increase Government participation in ANSI's Government Member Council. This Council, which I chair, has met quarterly since it was established by the ANSI Board of Directors.

For some time, DoD policy has been to use U.S. and international non-Government standards in preference to developing our own military specifications and standards. As a result of our policy, and participation in the aforementioned groups, the Department has adopted almost 5,000 non-Government standards for use in defense acquisition, and we have identified thousands more that we use and plan to adopt as we implement our new streamlined adoption process. We did this as an equal partner through the U.S. voluntary standards system administered by ANSI. I am sure that you are aware of our biannual series of Equal Partner Conferences, the 1989 hosted by ANSI. This series addresses the continued need for cooperation between Government (not just DoD) and the non-Government standards community. At the same time, we shifted our efforts away from the development and use of Government specifications and standards. Government personnel from all Federal agencies should participate in the non-Government standards process in a manner similar to the DoD, and give preference to the resultant private sector standards whenever possible.

In recent years, DoD has continually used more non-Government standards with which to procure commercial products and services.

Because of our success with commercial products, we will continue to seek -- and require -- the continued support of every non-Government standards organization in the development of more product oriented non-Government specifications and standards. Our goal is to expand the use of commercial products and processes in meeting defense acquisition needs. This is especially important in view of the strong Congressional emphasis on our moving towards commercial products and commercial buying practices.

The Department knows that by purchasing commercial products we are contributing to the good health of the U.S. industrial base. Also, the other big advantage of using the same items and processes readily available in the commercial world would come during a national emergency, when we could mobilize our industries much quicker to support the surge and sustained levels required by our fighting forces. The more reliance we place on commercial products, the faster and easier it will be to obtain these products from a broader array of suppliers. Our goal is to reduce costs, improve the quality of our acquisitions, and take advantage of state-of-the-art technologies resulting from the commercial marketplace.

In this regard, we have taken several recent steps to expand our policy on buying commercial products. One change eliminated the preference for using military specifications and standards, establishing a preference for using non-Governmental standards, and directing the use of simplified commercial item descriptions -- CIDs -- when procuring commercial products. This makes our dependence on ANSI and its federation of standards developing organizations even more important.

DoD has paid increasing attention to the area of specifications and standards in the past several years. Certainly it has drawn attention from outside parties, in particular the Congress and the Packard Commission. Most recently, specifications and standards are a major segment of Secretary Cheney's Defense Management Review through which we are well on the way to accomplishing this and a number of other needed improvements in defense management.

As the result of the Defense Management Review, a specifications and standards working group was formed with a prime objective to identify military specifications and standards which could be replaced by non-Government ones, CIDs, or multiple award schedules. I chair this working group.

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DoD is not the only customer with a critical need for non-Government standards. Our defense industry needs them, too, if they are to remain competitive -- better said, to become more competitive -- in global markets. Therefore, U.S.-generated standards must be recognized, accepted, and used internationally. This point is particularly important as the world awaits the advent of the European Community 1992, or EC 92.

NATO like CEN and CENELEC gives first precedence to ISO and IEC standards, and ANSI is the channel to ISO and IEC. That is why, to quote from the presentation given by the Honorable John Betti, the Under Secretary of Defense for Acquisition on March 27, 1990, to the ANSI Public Conference, "The DoD's face to international standardization is through NATO and ANSI, as the official U.S. member of the International Organization for Standardization, and the International Electrotechnical Commission."

Let's look at the NATO affiliation. Our association with NATO is tightly structured, and links our country to all nations of the European Community except one -- Ireland. There are similarities and differences between NATO and the European Community, one of which bears mentioning. That is, unlike the EC which makes decisions on a weighted majority basis, the NATO alliance is an inter-governmental body, not a supra-national organization. Decisions by NATO must be unanimous.

Our efforts within NATO have resulted in establishment of a number of NATO standardization agreements, or STANAGs. Additionally, DoD has bilateral agreements with Canada, Ireland, and Australia regarding mutual acceptance of qualifications of electronic and electrical components.

The Department of Defense also participates on NATO committees which establish NATO preferred parts lists for use by the alliance nations. These committees cover various parts and materials such as fasteners, washers, and rivets; fuels and lubricants; paints; bearings; and the like.

Recently we have noted a rush to initiate and conduct European and U.S. private sector discussions regarding EC 92 in the areas of standards, certification, and testing, to resolve issues of concern and improve communications. Previously, in the early 1980s, some NATO nations, including the U.S., were concerned that many standardization efforts would not be considered by the European Committee for Standardization, and the European Committee for Electrotechnical Standardization, especially in the electronic components area.

A group of NATO nations established the Military Users Ad Hoc Advisory Group, which has worked to ensure maximum utilization of NATO standardization efforts, particularly electronic standards.

Another major concern of NATO addressed in the pending ratification of Edition 4 of the NATO STANAG 4093, titled "Mutual Acceptance by NATO Member Countries of Qualification of Electronic and Electrical Components for Military Use." This STANAG addresses many of the concerns raised in the U.S. concerning the EC's global approach to certification and testing. This agreement is a significant and efficient step in establishing multinational standards for defense acquisition. We feel that the European Community can use the thrust of this revised STANAG in establishing "A Global Approach to Certification and Testing."

A similar approach is needed outside of NATO, and we feel there is a need to formulate a coordinated Government and private sector coordinated approach to laboratory accreditation and certification issues. ANSI could serve as a catalyst to bring together a broad coalition of Government and private sector interests, and with Government cooperation, institute a program to accredit Certification and Laboratory Accreditation programs. Subsequently, Government should support the resultant programs with foreign government entities, and negotiate any required agreements so that the accredited systems are properly recognized in world trade.

There is one other special DoD initiative which should help ensure that U.S. industries are able to participate in the NATO and European Community environment. This is the metric "issue." I say "issue" and not "question," because the matter of metrication has long passed being for the U.S. a "question."

As you probably know, Public Law 100-418, "The Omnibus Trade and Competitiveness Act of 1988," states that the metric system will be the preferred system of weights and measures for trade and commerce. It requires each federal agency, by the end of 1991, to use the metric system in our procurements, grants, and other business related activities. The exceptions -- and they are significant -- state to the extent that such use is impractical or likely to lose markets for U.S. firms.

DoD policy is to use the metric system in all those elements of new defense systems requiring new design, unless not using metric can be justified as in DoD's best interests. Our participation in joint R&D projects with NATO will depend on our using metric.

DoD's transition to metric will enhance our NATO defense needs and strengthen U.S. industry's competitive share of the world markets. It is closely linked to this country's capability to continue to develop technologies and sell weapons abroad considering the shrinking defense budgets. Also, allied defense industries are developing their own technologies, which accounts in part for the fact that some of our overseas markets are drying up.

It is imperative that all American industry wishing to do business overseas seriously not just consider the prospects of "going metric," but the business and financial consequences of NOT "going metric."

In closing, I would like to quote from the closing of the presentation given by the Honorable John Betti, the Under Secretary of Defense for Acquisition on March 27, 1990, to the ANSI Public Conference. He said " We in the DoD will continue to provide vigorous support through NATO and ANSI to effect international standards ....., I cannot stress enough the importance of U.S. industry and non-Government standards bodies providing the same vigorous support through ANSI to be sure that U.S. positions receive proper attention in the development of international standards." He than answered in a response to a question from the floor, and I quote "I think that organizations such as ANSI ...... are doing an effective job and we're probably better off not meddling with further Government insertion in the process."

I want to thank Dr. Warshaw and NIST for giving the DoD an opportunity to present our case for the record, without having to insert our 37,000 specifications and standards in the record. THANK YOU.

NIST Hearing

Oral Comments

Thanks for allowing TC23 to present these comments. With me is John Crowley, Director of ~~Standards~~ for the Equipment Manufacturers Institute in Chicago. I am Willard Jenkins, Manager of Large Tractor Planning for Deere & Company; but, today I'm speaking on behalf of the Industry for the US TAG for TC23 of ISO.

Today, I will only amplify a few of our written comments submitted on 20 March. TC 23 is the ISO Committee for "Tractor and Machinery for Agriculture and Forestry." TC23 has 18 subcommittees covering products from farm tractors to irrigation equipment. The USA holds the Secretariat of 3 subcommittees and participates in 11 others.

Of the questions you asked, we will only answer those most relevant to our TAG:

1. Is there broad and adequate representation and participation by the public and private sectors?

   We believe that private sector participation is adequate and that public sector participation is marginal.

   The U.S. TAG for ISO/TC 23 actually is composed of several "sub-TAG's" for each of the TC 23 Subcommittees. Each of the sub-TAG's is networked with the industry groups, standards organizations, agricultural universities, etc. While it is true that some of the smaller companies and the universities do not send representatives to meetings, they do vote on the various documents by letter.

   The U.S Government's participation and cooperation would be helpful in the following example. Procedures to test and approve rollover protective structures (ROPS) for agricultural tractors exist within ISO, OECD and the EC, but they are not technically equivalent to the OSHA ROPS requirements.

   The OSHA rule for tractor ROPS was adopted in 1975 and has never been reviewed or updated. The E.C., ISO and OECD standards provide a level of safety equivalent to the 1975 OSHA rule. The OSHA rule is viewed by our trading partners in E. C. and OECD nations as a technical barrier to trade since the technical differences require a separate test to demonstrate conformance with OSHA. U.S. exporters of agricultural tractors must also perform two tests -- one to satisfy OSHA and another for the rest of the world.

   Had OSHA participated in development of the worldwide standards, they would have gained the necessary expertise to update its 1975 rule.

   On the positive side, the Consumer Product Safety Commission has participated in TAG activities, which has enhanced the U.S. position considerably in the eyes of other ISO nations' delegations.

   There is no need to change the organization or structure of the existing voluntary standards system in order to gain the benefits of federal agency personnel participation. Participation within the current system in accordance with OMB Circular A-119 would be sufficient.

G. W. Jenkins
03 April 1990

2. Does committee organization and procedures facilitate or hinder adequate participation, and are other countries' systems more effective than ours?

We have not seen a system superior to ours. Any differences in effectiveness can be traced to availability of people and funding.

3. Does the TAG provide the needed forum for developing the U.S., position and are U.S. delegates able to gain international acceptance of a U.S. TAG position?

Our experience is that the TAG and the sub-TAG approach when an ISO document is in the early, formative stage, is both effective and efficient.

We are able to gain acceptance when our delegates are capable, knowledgeable, and prepared. There are no known structural or procedural deficiencies in our system that place us at a comparative disadvantage.

4. How can appropriate technical and financial support be assured? Should the U.S. Government help finance participation, especially by small and medium-sized companies?

In the severe downturn of the U.S. agricultural economy in the 1980's, sales of major product lines decreased by as much as 70% from the 1979 levels, and yet industry maintained at near-full-strength its participation both in ISO and in domestic standards organizations such as SAE and ASAE. This was true for a wide spectrum of industry sectors, some comprising rather small companies.

ISO work is partially funded by the Equipment Manufacturers Institute and ASAE. Both pay about one-half of delegate expenses for overseas meetings.

Experience in TC 23 shows that satisfactory funding already exists to assure a minimum level of technical support for U.S. participation in ISO. However, it is recognized that additional incentives are needed to achieve more active participation by small and medium-sized companies.

A government incentive scheme to make funds available to U.S. technical experts for participation in international meetings would be helpful. This should be complementary to existing private sector funding. Governmental funding incentives should be available to all companies, large and small, as well as to public sector people who gainfully contribute their expertise.

It is especially important to ensure continuity of programs and any government funding incentives must be made available with consistency over the long term. Administration of a government incentive program should be done through the existing system of U.S. TAG secretariats and administrators.

5. Identify any weaknesses that require strengthening. Should the U.S. Government play a more active role?

ISO is recognizably slow to develop standards. This problem has been accentuated by the EC-92 effort, particularly for those TC 23 subcommittees with European secretariats, because the Europeans clearly are putting their emphasis into CEN standards rather than ISO.

G. W. Jenkins
03 April 1990

> Moreover, with the emphasis being placed on CEN, unless an ISO document is far along the likelihood of CEN picking it up is remote. Because of the priority demands on Europe's resources related to the EC-92 effort, we do not foresee great progress being made toward international standardization until after the current flurry of CEN standards activity has subsided. While slowness is a concern, we do not see how the U.S. Government can help.
>
> As for the second part of the question -- yes, we think the Government should play a more active role, and I have given several examples. We think the key is a joint effort with those who have been involved for many years to further strengthen an already strong effort.

We had seven recommendations in our written comments, but I will only comment on the three that solely focus on specific areas where the U.S. Government can help.

- The Government should continue pursuing openness and transparency of the E.C. standardization process.
- U.S. Government people should be made available to help with Technical Society Standards efforts and U.S. TAG's,.
- A funding incentive scheme should be explored for all organizations who can contribute expertise. This should have continuity and should be done through current structures.

Are there any questions?

G. W. Jenkins
03 April 1990

COMMENTS

on behalf of the USA TAG for ISO TC 127

to the

NATIONAL INSTITUTE OF STANDARDS AND TECHNOLOGY

on

IMPROVING U.S. PARTICIPATION IN INTERNATIONAL STANDARDS ACTIVITIES

Public Hearing, Tuesday, 3 April 1990

Edited by

Gerald H. Ritterbusch

Chairman, USA TAG for ISO TC 127

Oral presentation by

C. Edward Eckert

Chairman, USA TAG for ISO TC 127 SC 3

17 March 1990

Pursuant to the Federal Register notice of November 27, 1989 providing an opportunity for interested parties to comment, on "improving participation in international standards activities", on behalf of the USA TAG for ISO TC 127 the comments provided below are provided.

ISO TC 127 EARTHMOVING MACHINERY was formed in 1968 with the USA providing the secretariat. The USA TAG for TC 127 is administered by the Society of Automotive Engineers (SAE). ISO TC 127 has completed some 70 standards and has another 40 work items in process. The USA has had an active TAG which has taken on many of the work items. The TAG has used the infrastructure provided by the SAE standards development process as the basis of USA input into the TC 127. The result is that a rather high percentage of the ISO TC 127 standards are technically equivalent to the SAE standard. Therefore, it has been concluded that the USA has had very effective input into the international standards activity conducted by ISO TC 127. The following comments will provide additional details on some specific points that will illustrate the work that has been accomplished by the USA TAG for ISO TC 127.

The construction/earthmoving machinery industry has been a multi-national industry for many years. As a result there has been substantial interest in the development of international standards, rather than just national standards. Part of the reason for this is that machines used in these industries are really the same around the world. Thus, there is no need for differing standards. The remaining different standards are solely because of the lack of interest in harmonizing them, or, because they have been codified into law by national governments. Resolution of these conflicts will required substantial effort to have national law changed. This will require aggressive action by private and public sectors including the US Department of Commerce to negotiate removal of both these domestic and international barriers to trade.

The principal participators in ISO TC 127 are: USA, Germany, UK, France, Sweden, Japan, Italy, USSR, Australia, Poland, Czechoslovakia, India, Finland, China and Belgium. Attendees at committee meetings usually range to 13 countries, with some 40 delegates. This has become a very workable group and has been effective in transacting business at its meetings. Documents are circulated in an organized manner and good agendas are prepared for the meetings.

ANSI provides the necessary support as the Secretariat of both the Technical Committee and one of the subcommittees. They have been effective in expediting transmission of documents and in follow-up with the ISO Central Secretariat such that development of standards occurs on the most expeditious schedule.

The hallmark for this ISO TC is that with respect to the EC 92 initiative, it has either completed standards or has work items in process for all of the essential requirements that have been identified for the EC objective for the single market. Attaining this status is really all that can be asked for from the standpoint of an international standards harmonization.

Most of the participating countries in TC 127 have already adopted the completed ISO standards, or, are in a position where their existing national standards are in reasonable technical equivalence with the TC 127 standards. Most of the USA national standards technically equivalent with the TC 127 standards. Therefore, when CEN completes, as part of the EC single market effort, its work and produces standards harmonized with TC 127, this ISO Technical Committee will have attained a very satisfactory goal of establishing substantial international harmonization. This has been done with the existing voting procedure of ISO. The effort of TC 127 has been to build consensus, rather than to make international harmonization through votes.

The USA TAG for TC 127 thus views with no concern the EC 92 objective and the work before CEN to complete European Standards which can be processed as harmonized European Standards for application of the certification scheme of the single market. As all of the major participants in the EC have already adopted the TC 127 standards and CEN has an agreement with ISO to use ISO standards where they exist and are adequate, the work is essentially completed. As new issues arise for standardization, it is felt that the protocols used in the past will serve well to continue the development of appropriate additional standards.

With regard to the various questions posed by NIST, the questions to which appropriate responses can be given from the viewpoint of the TAG will be summarized in the following.

1. *Does the U.S. standards systems, as presently constituted, adequately serve the Nation's trading needs in today's international climate? Identify any weaknesses that require strengthening. Is there adequate participation by representatives of the public and private sectors? In other countries governments play a more formal role in standards. Are their systems more effective than ours? What should be the U.S. Government's role? If more coordination is needed among the many U.S. interests concerned with standards and trade what changes be beneficial? Is the Standards Council of Canada a model which the United States should consider?*

The USA TAG for ISO TC 127 feels that the present system in the USA for developing national standards and the organization of the TAG to promote these national positions in the international arena is adequate. The level of participation is a function of the number of interested parties. As the complexion of the industry has changed with mergers/consolidations and a reduced size market, the number of interested parties has ebbed to a somewhat lower level. Only if this trend reverses and the industry fully recovers, will the likelihood of expanded participation occur.

There is a lack of public participation in the this work. In past years participants from OSHA and DoD did participate. With budget reductions this participation has disappeared. Public agencies are encouraged to renew their participation. A benefit of this participation in addition to added expertise for the TAG, would be a higher likelihood of ISO standards being adopted in national regulations, reducing governmental costs.

In dealing with the delegates from the various other countries that participate in the TC 127 work, we have come to know a great deal about how the other delegations operate. Our conclusions are that there is really little difference between the performance of the various active delegations. Where there is direct government involvement, there is no better contribution than that obtained from the USA. In most instances there is less contribution to the work.

With regard to the issue of the Standards Council of Canada, as they don't participate in the this TC, we don't see where they provide any motivation where there is no apparent industry support. We don't believe it offers any gain in participation from what can be obtained within the present system. Participation has an up front cost. The SCC would have no magic to reduce that cost.

2. *Does your organization send representatives to participate in international*

standards committee meetings? On a regular and continuing basis?

The USA TAG for ISO TC 127 has always maintained active participation and has by far been responsible for the largest number of documents in the various work stages. It has a better record of completing drafts on time and responding to the comments and producing redrafts than the other delegations. This dedication is in the USA TAG because the principal participants are from industry which has a material and direct interest in the development of technically valid, timely international standards.

3. *Is the current U.S. standards infrastructure sufficiently supportive of and adequate for your organization's interests?*

The TAG, has a very supportive infrastructure in SAE that provides indepth expertise to take on the commitment of developing documents and providing valuable comments. As a result the TAG is able to prepare the most thorough and technically valid comments and redrafts in the TC. Through the use of the infrastructure the TAG has been able to call on various experts to help in developing the position to be presented to the TC. As a result we have not encountered any lack of expertise to develop these positions. This also ensures that we have broader support for the positions that are taken and has resulted in completed ISO standards to be acceptable in the USA.

4. *Describe the success or failure of the TAG in providing the needed forum for developing the U.S. position, and the ability of U.S. delegates to gain international acceptance of a U.S. TAG position. What factors contribute to success and/or failure?*

While the TAG has the normal turn over of personnel, there has been sufficient continuity of personnel so that the working relationship has been effective. As new people are brought into the TAG they are counseled by the experience members. This passing on of the methodology to work with the other delegations has been effective in allowing the USA TAG to be instrumental in gaining the necessary acceptance of the USA TAG position in the international deliberations.

5. *How can we best ensure appropriate technical and financial support for international standardization activities? Should the Government help finance participation especially by small and medium-sized companies?*

Financial support has not been a specific problem with this TAG. The major industry supported participants have been able to obtain the necessary funding from their employers. The TAG doesn't believe that funding is a priority issue. Obviously, any scheme that would provide more funding from all benefactors of the work of this TAG would better balance the drain on resources by those bearing the current cost.

In conclusion, the USA TAG for ISO TC 127 has concluded that the present system in the USA has been adequate to accomplish the needed work in ISO TC 127. The result is that a very suitable set of international standards are available to fill the needs of this industry in the USA, Europe and other countries of the world - effective harmonization. The USA has adequate input into these and thus can be assured that their use will meet our needs for standards. The TAG continues to work with the introduction of new technology into the existing standards and proposes new work items where they are justified. The operation of the TAG has been one of building consensus based on the applicable engineering principles and thus has not encountered unrealistic resistance from other member delegations to TC 127.

THE TAG

also promotes the use of ISO standards, it believes that a much more aggressive stand has to be taken by the U.S. Government to directly use ISO standards in its needs for standards.

The TAG for TC 127 feels that its performance can be used as a model for other TAGs so that they can be equally effective in standards development and attain the goal of worldwide standards harmonization.

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March 19, 1990

Jenkins

WRITTEN COMMENTS

of the U.S. Technical Advisory Group for ISO TC/23

to the

National Institute of Standards and Technology

on

Improving U.S. Participation in International Standards Activities

The U.S. Technical Advisory Group ("TAG") for ISO Technical Committee 23 is submitting these comments pursuant to the NIST Notice (54 Federal Register 48795) inviting comments related to improving U.S. participation in international standards-related activities and to possible Government actions.

TC 23 is the ISO committee for "Tractors and Machinery for Agriculture and Forestry." The secretariat of the main committee is held by France (AFNOR). There are eighteen (18) subcommittees covering a wide range of products such as farm tractors, combines, tillage equipment, spraying and dusting equipment, planters, milking machines, livestock feeding equipment, lawn & garden equipment, portable powered equipment, forestry machinery and irrigation equipment. The USA holds the secretariat of three (3) of the eighteen subcommittees and is an active participant in eleven (11) others.

The administrator in the USA for the TAG overall is the Equipment Manufacturers Institute (EMI) of Chicago, Illinois. Administration of the subcommittees in which the USA is an active participant is as follows:

ORGANIZATION	NUMBER OF SUBCOMMITTEES
Equipment Manufacturers Institute (EMI)	8
American Society of Agricultural Engineers (ASAE)	3
Outdoor Power Equipment Institute (OPEI)	1
Portable Powered Equipment Manufacturers Association (PPEMA)	1
The Irrigation Association (TIA)	1

A list of the eighteen (18) ISO TC 23 subcommittees, their scope of coverage and the status of U.S. participation for each is attached as Exhibit A.

The USA has participated in ISO/TC 23 since 1954. Administration of the TAG and participation are conducted in accordance with ISO/ANSI guidelines, and ANSI provides the necessary staff services as well as the communication link with other national secretariats and the ISO Central Secretariat in Geneva.

The U.S. TAG for ISO/TC23 wishes to address five questions pertaining to U.S. participation in international standardization:

1) Is there broad and adequate representation and participation by representatives of the public and private sectors?

2) Do committee organizations and procedures facilitate or hinder adequate participation, and are other countries' systems more effective than ours?

3) Does the TAG provide the needed forum for developing the U.S. position, and are U.S. delegates able to gain international acceptance of a U.S. TAG position?

4) How can appropriate technical and financial support be assured; should the Government help finance participation, especially by small and medium-sized companies?

5) Identify any weaknesses that require strengthening; should the U.S. Government play a more active role?

1. Is there broad and adequate representation and participation by the public and private sectors?

   Information available to us indicates that private sector participation is adequate, public sector participation is marginal. Efforts are made regularly to encourage participation by potentially affected parties and to ensure a meaningful consensus.

   The U.S. TAG for ISO/TC 23 actually is composed of several separate "sub-TAG's," one for each of the TC 23 subcommittees in which the USA is active. Each of the U.S. sub-TAG's is connected in network fashion with the industry groups, standards organizations, agricultural land grant universities, etc., related to its scope of work. Representatives of such interest groups hold membership on the sub-TAG's and have full voting rights. While it is true that some of the smaller companies and the universities do not send representatives to meetings, they do vote on the various documents by letter ballot according to established procedures. In over 19 years as administrator of the U.S. TAG for ISO/TC 23 the Equipment Manufacturers Institute has never been called upon to employ its appeals mechanism to resolve a dispute. Any disputes concerning the U.S. position on an ISO matter have been resolved according to established procedures at the sub-TAG level.

Improved participation, particularly on the part of U.S. Government agencies, is needed. OSHA, the USDA, NIST and the CPSC should be participating in appropriate sub-TAG's and related voluntary standards organizations such as the American Society of Agricultural Engineers (ASAE) and the Society of Automotive Engineers (SAE).

Lack of U.S. Government agency participation in the voluntary standards system has in some instances been harmful to U.S. interests. Consider the following case in point. The international standards for the testing and acceptance of rollover protective structures (ROPS) for agricultural tractors are ISO 3463 and ISO 5700. The USA holds the secretariat of the ISO subcommittee which originated these ROPS standards (Subcommittee 2 of ISO TC 23), participated in their development and voted to approve them. The ISO ROPS standards are technically equivalent to the corresponding E.C. ROPS Directives and OECD tractor ROPS codes, but are not technically equivalent to the OSHA ROPS requirements contained in 29 CFR Part 1928.

The OSHA rule for tractor ROPS was promulgated in 1975 and has never been reviewed or updated. The E.C., ISO and OECD standards are widely recognized as providing an at-least-equivalent level of safety as the 1975 OSHA rule. The SAE has published a standard (SAE J2194) which is technically equivalent to the ISO, E.C. and OECD codes, and has urged OSHA to align its rule with testing procedures accepted worldwide by adopting the SAE J2194 standard. The OSHA rule is viewed by our trading partners in E.C. and OECD nations as a technical barrier to trade. This is because technical differences between OSHA and the other standards necessitate a separate, destructive test in order to demonstrate conformance with OSHA. U.S. exporters of agricultural tractors must also perform two expensive and time-consuming destructive ROPS tests -- one to satisfy OSHA and another for the rest of the world.

Had OSHA participated on the TC 23/Subcommittee 2 U.S. sub-TAG when the ISO standard was being developed, or on the SAE committee which prepared SAE Standard J2194, OSHA would have gained the necessary information and technical expertise to re-evaluate its 1975 outdated rule.

On the positive side, there has been meaningful participation by the Consumer Product Safety Commission staff in some of the subcommittee 13 and 17 activities, which has enhanced the U.S. position considerably in the eyes of other ISO nations' delegations.

There is no need to change the organization or structure of the existing voluntary standards system in order to gain the benefits of federal agency personnel participation. Participation within the current system in accordance with OMB Circular A-119 would be sufficient.

2. Does committee organization and procedures facilitate or hinder adequate participation, and are other countries' systems more effective than ours?

   In the nineteen (19) years in which EMI has served as administrator of the TAG there has been no evidence that committee organization or the procedures which govern its activities in any way hinder participation. The two major constraints on participation in the TAG have been availability of personnel and funding -- issues which will be addressed later in these comments.

   We have also seen no evidence in the course of our experience in ISO work that any other country's participation has been more effective due to fundamental, systemic differences. If there has been a difference in effectiveness it has been due to superior or inferior availability of personnel and/or funding. With all due respect to our neighbors to the north, Canadian participation in ISO TC 23 activities has been quite irregular over the years.

3. Does the TAG provide the needed forum for developing the U.S. position, and are U.S. delegates able to gain international acceptance of a U.S. TAG position?

   Our foregoing comments have indicated that the TAG -- in our case the sub-TAG's -- do indeed provide the needed forum for developing the U.S. position. Our experience is that the sub-TAG approach to developing consensus positions, when an ISO document is in the early, formative stage, is both effective and efficient.

   Regarding the ability of U.S. delegates to gain international acceptance of a U.S. TAG position, it has been our experience that the principal determinant in this regard is the knowledge, ability, adequacy of preparation and stature of the U.S. delegates. The same is true, of course, for the delegates of other nations. There are no known structural or procedural deficiencies in the present U.S. system that place this country's delegates at a comparative disadvantage in their ability to gain international acceptance of a position.

4. How can appropriate technical and financial support be assured? Should the U.S. Government help finance participation, especially by small and medium-sized companies?

   This industry's experience bears out the conclusion of Leonard G. Kruger of the Science Policy Research Division of the Congressional Research Service in his report of April 14, 1989 entitled International Standardization: The Federal Role (the "CRS Report"):

   > "Standardization poses a considerable expense for private industry... Companies are willing to bear this expense because it is in their interest to do so. In some respects, a company's investment in standardization can be compared to investment in research and development. It is a serious commitment that is essential to the long term health of the company." (CRS Report, Section III, p. CRS-11)

In the severe and protracted downturn of the U.S. agricultural economy in the 1980's, during which new equipment sales in major product lines (tractors and combines) decreased by as much as 70% from 1979 levels, the industry maintained at near-full-strength its participation both in ISO and in domestic standards organizations such as SAE and ASAE. This was true for a wide spectrum of industry sectors, some comprising rather small companies.

Contributing to this achievement in the international area was the partial funding of ISO-related work provided by the Equipment Manufacturers Institute and ASAE. EMI ordinarily reimburses member company delegates for one-half of their expenses to attend ISO meetings abroad. ASAE provides the same level of support for delegates from sub-TAG's which they administer.

Experience in TC 23 has shown that a satisfactory funding mechanism already exists to assure a minimum level of technical support for U.S. participation in ISO. However, it is recognized that additional incentives are needed to achieve more active participation by small and medium-sized companies.

We believe that some type of a government incentive scheme should be considered whereby funds would be available to U.S. technical experts for participation in international meetings. Any such scheme should be complementary of, and subordinate to, existing private sector funding mechanisms. The benefits of governmental funding incentives should be available to all companies, large and small, as well as to public sector entities such as universities and state and federal agency personnel who can gainfully contribute their expertise. It is important to ensure continuity of programs that if government funding incentives are provided, they be made available with consistency over the long term. Administration of a government-instigated complementary funding incentive program should be done through the existing system of U.S. TAG secretariats and administrators.

5. Identify any weaknesses that require strengthening. Should the U.S. Government play a more active role?

There are some weaknesses inherent in the ISO system which no unilateral action by the USA -- private and/or public sector -- can remedy.

ISO is recognizably slow to develop standards. This problem has been exacerbated by the CEN/EC-92 effort, particularly for those TC 23 subcommittees with European secretariats, because the Europeans clearly are putting their emphasis and resources into CEN standards development and allowing ISO to languish at a reduced level of activity. Even where the USA has the ISO subcommittee secretariat the Europeans do not receive with enthusiasm our suggestions to step up the pace of ISO work in the near term to provide a more international basis for EC-92.

Moreover, with the emphasis being placed on working in CEN, unless an ISO document is far along the likelihood of CEN picking it up is remote. Because of the priority demands on Europe's resources related to the EC-92 effort, we do not foresee great progress being made toward international standardization until after the current flurry of CEN standards activity has subsided.

There are two related points to be made here:

a) The E.C. has made it clear to the U.S. Government and the U.S. private sector how it intends to have its standards developed (i.e., by CEN), and the extent to which ex-European input will be accepted, whether it be from ISO, the U.S. Government or ANSI. Except as discussed in the recommendations which follow, there is little that any U.S. entity -- including government -- can or should do to change this situation. The E.C. clearly does not want meddling in its internal affairs, and this must be respected.

b) The EC-92 program, insofar as standards development is concerned, should not be viewed as a crisis for ISO or the USA voluntary standards system. CEN by no means will have put in place by December 31, 1992 all of the standards envisioned under the E.C. "New Approach." There is still opportunity to work with Europe in ISO and this opportunity will continue beyond 1992.

The concern has been voiced that CEN standards which are incongruous with the U.S. point of view will be developed and will eventually become ISO standards. So far, there is no evidence that CEN technical committees/working groups for agricultural and forestry equipment are disregarding ISO standards, or that serious, intractable problems for ISO will be created because of CEN. Where there are problems they are related to E.C. directives, not to CEN. (It must be kept in mind that harmonized technical requirements in the E.C. take the form of CEN/CENELEC standards and E.C. directives.)

Recommendations of the U.S. TAG for ISO TC 23

There are some actions which the USA can take to improve its ISO standards participation, and thereby strengthen this country's voice in ISO, the ISO process itself, and the acceptance of ISO standards as the basis for world trade. Our specific recommendations are as follows:

(1) U.S. TAG's should redouble their efforts to identify areas where international standardization is needed but work has not yet begun, and initiate proposals for new work items in ISO.

(2) ANSI should continue its dialogue with CEN regarding CEN/ISO cooperation, particularly CEN's commitment to use ISO standards whenever possible, and provide encouragement to CEN to adhere to its agreements in this regard.

(3) ANSI is further encouraged to press forward with its evaluation of current ISO voting procedures, and its development of a proposal for a different voting scheme which will give recognition to the relative economic contribution of the various ISO member bodies.

(4) ANSI and the U.S. Government, acting in cooperation with each other, should aggressively promote within the private and public sectors in the U.S. a policy whereby U.S. standards bodies and governmental entities are urged to adopt as their own any ISO standard which, when developed, was supported and voted affirmatively by the U.S..

(5) The U.S. Government is encouraged to build upon the Mosbacher-Bangemann understanding reached in May, 1989 concerning "openness," "transparency," etc. of the E.C. standardization processes.

(6) The U.S. Government, in accordance with OMB Circular A-119, should make available qualified technical personnel to participate in the work of U.S. voluntary standards developers such as ASAE and SAE. Government agency personnel should also become active on U.S. TAG's.

(7) Some type of a government incentive scheme whereby funds would be available to U.S. technical experts for participation in international meetings should be explored. Any such scheme should be complementary of, and subordinate to, existing private sector funding mechanisms.

The benefits of governmental funding incentives should be available to all companies, large and small, as well as to public sector entities such as universities and state and federal agency personnel who can gainfully contribute their expertise. Administration of a government-instigated complementary funding incentive program should be done through the existing system of TAG secretariats and administrators.

The U.S. Government can also contribute by placing emphasis on the importance of participation in standardization activities in the information and services it provides to small businesses.

EXHIBIT A

US Subcommittees of ISO TC 23 and Their Administrators

	Subcommittee	Administrator*
1	Terminology	EMI
2	Common Tests **	EMI
3	Safety and Comfort of the Operator	EMI
4	Tractors	EMI
5	Equipment for Working the Soil	ASAE
6	Equipment for Crop Production	EMI
7	Equipment for Harvesting & Conservation	ASAE
8	Equipment for Vine Growing & Wine Making	(USA Inactive)
9	Equipment for Sowing, Planting & Distribution Fertilizers	ASAE
10	Equipment for Transportation & Handling	(USA Inactive)
11	Equipment for Internal Farm Work & Husbandry	(USA Inactive)
12	Wheels	EMI
13	Powered Lawn & Garden Equipment **	OPEI
14	Operator Controls, Operator Symbols & Other Displays, Operator Manuals **	EMI
15	Machinery for Forestry	EMI
16	Equipment for Olive Cultivation & Olive Oil Making	(USA Inactive)
17	Manually Portable Forest Machinery	PPEMA
18	Irrigation & Drainage Equipment & Systems	TIA

* Administrators for US participation:

EMI: Equipment Manufacturers Institute
ASAE: American Society of Agricultural Engineers
OPEI: Outdoor Power Equipment Institute
PPEMA: Portable Power Equipment Manufacturers Association
TIA: The Irrigation Association

** USA has the secretariat

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11. ABSTRACT (A 200-WORD OR LESS FACTUAL SUMMARY OF MOST SIGNIFICANT INFORMATION. IF DOCUMENT INCLUDES A SIGNIFICANT BIBLIOGRAPHY OR LITERATURE SURVEY, MENTION IT HERE.)

The National Institute of Standards and Technology (NIST) held a hearing in the Department of Commerce Auditorium on April 3, 1990, through April 5, 1990, to gather information, insights, and comments related to U.S. participation in international standards-related activities and to possible Government actions.

The written comments received regarding the April 3-5, 1990, hearing on U.S. Participation in International Standards activities will be on file after April 5, 1990, in the U.S. Department of Commerce Central Reference and Records Inspection Facility, Room 6628, Hoover Building, Washington, DC 20230, (202/377-3271), for the individual's perusal or copying. Copies of the test of the hearing can be obtained from the National Technical information Service, 5285 Port Royal Road, Springfield, VA 22161, (703/487-4650); a copy of this text will also be made available in the same DOC Reference and Records Inspection facility after April 25, 1990.

12. KEY WORDS (6 TO 12 ENTRIES; ALPHABETICAL ORDER; CAPITALIZE ONLY PROPER NAMES; AND SEPARATE KEY WORDS BY SEMICOLONS)

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