NISTIR 4304

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

FIRST DAY: APRIL 3, 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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Robert A. Mosbacher, Secretary
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TRANSCRIPT OF PROCEEDINGS

NATIONAL INSTITUTE OF STANDARDS AND TECHNOLOGY

DEPARTMENT OF COMMERCE

HEARING PANEL MEMBERS' MEETING

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NATIONAL INSTITUTE OF STANDARDS AND TECHNOLOGY

DEPARTMENT OF COMMERCE

HEARING PANEL MEMBERS' MEETING

Tuesday
April 3, 1990

9:30 a.m.

Department of Commerce Auditorium

Present on Panel:

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International Trade Administration
Department of Commerce
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Washington, D.C. 20230

Presenters Present:

JOSEPH O'GRADY
American Society for Testing and Materials

JAMES PEARSE
MANUEL PERALTA
American National Standards Institute

OSCAR FISHER
MELVIN GREEN
American Society of Mechanical Engineers

MARCO MIGLIARO
ANDREW SALEM
Institute of Electrical and Electronics Engineers

WILLIAM CALDER
Instrument Society of America

BEN JOHNSON
Industry Applications Society

JAMES DECKER
American Society of Civil Engineers

RICHARD ALLEY
American Welding Society

RUSSELL HAHN
ROBERT LANPHIER
American Society of Agricultural Engineers

ANTHONY O'NEILL
ARTHUR COTE
DANIEL PILIERO
National Fire Protection Association

MICHAEL MILLER
DENNIS STUPAK
ROBERT FLINK
MORT LEVIN
Association for the Advancement of Medical Instrumentation

JAMES BIHR
RICHARD KUCHNICKI
WILLIAM TANGYE
PAUL K. HELSTEDT
Council of American Building Officials

Presenters Present: (continued)

THOMAS FLINT
American Plywood Association

DAVID GRUMMAN
FRANK CODA
JIM HELDENBRAND
American Society of Heating, Regrigerating and Air Conditioning Engineers

JIM FRENCH
American Institute of Aeronautics and Astronautics

MAX ROMBAUGH
LAMONT ELTINGE
Society of Automotive Engineers

RONALD REIMER
United States National Committee of the IEC

TOM CASTINO
JOE BHATIA
Underwriters Laboratories

HERBERT WILGIS
MILTON BUSH
American Council of Independent Laboratories

RICHARD SCHULTE
American Gas Association

WALTER POGGI
Retlif Testing Laboratories

RICHARD FEIGEL
Hartford Steam Boiler Inspection and Insurance Company

P R O C E E D I N G S

MR. LYONS: Good morning and welcome to these proceedings. I am John W. Lyons, the Director of NIST. We are about some very important business this week. The question is how we do standards development, testing, accreditation and certification in the rapidly changing global marketplace.

Our concern in the Department of Commerce is the health and prospects of the United States economy and industry's ability to compete on an equal footing in this marketplace.

We have a pluralistic, decentralized approach to many aspects of our lives -- included are consensus standards development, product testing and certification, laboratory accreditation, building regulations and the like.

We have however a new challenge created by the globalization of markets and compounded by the competitive difficulties facing many of our industries. These difficulties are reflected in the balance of trade statistics.

If it were not for the strongly-felt pressures from overseas competition, we would not be holding these proceedings this week.

Pressure is building from developments such as the ever-more centralized European community as typified by EC

92 and by increasingly active governments around the world that have centrally-run standards-related activities.

Can we continue to use the tools and mechanisms of the past in dealing with these new phenomena? If the answer is yes, then what fine-tuning is needed? If the answer is no, then what new mechanisms are desired?

The purpose of this hearing is to build a formal record of views from interested parties and then to use that record in considering the next steps each of us should consider.

We know by the responses to the hearing announcement that there are many parties sufficiently concerned to ask to speak. There will likely be others who will submit written material.

We expect to receive a broad spectrum of opinion and we look forward to examining the resultant record and being guided by it.

Again, welcome. Please accept our thanks for your concern and dedication to the common cause of helping U.S. industry.

And now to Stanley for some administration announcements.

CHAIRMAN WARSHAW: Thank you, John. I will speak from here and just give some administration information.

First, let me introduce you to the panel members

joining me here today.

Can we raise the level of the microphone?

(Pause.)

My name is Stanley I. Warshaw and I will be chairing this discussion. I am the Director of the Office of Standards Services from the National Institute of Standards and Technology.

On my far left is John McCutcheon from the Department of Agriculture. Next to him is Ms. Wendy Moore, from the Department of State and on my immediate left is Charles Ludolph from the Department of Commerce, Director of the Office of the European Community Affairs within the International Trade Administration.

On my far right is Phil White from FDA, Food and Drug Administration. Next to him is John Donaldson from the National Institute of Standards and Technology, also in the standards area, and to my immediate right is Walter Leight who is also part of the same standards function in the National Institute of Standards and Technology.

Let me point out that the panel members here today are here, particularly those from the other agencies, in an advisory role, to assist the National Institute of Standards and Technology on matters that require some clarification because they can bring a perspective from their specific technical expertise that will really be, we are confident,

of assistance to us at the National Institute of Standards and Technology in terms of getting all the information we can in order to put forth recommendations for possible government actions as the Federal Register announcement of November said with respect to assistance to the Industrial Community in the United States.

The questioning during this hearing will only be conducted from the panel that has just been introduced to you. Each speaker has been granted ten minutes to make his presentation. In order to get the 70-some presentations accomplished within these three days, we are going to careful control and monitor that time.

We have, in order to assist presenter, lights with timers that will go red, yellow, green and will go yellow one minute before the ten minutes are up, and then red when it is time to stop.

This will assist them in order that they can respect others who may be appearing subsequently and allow sufficient time for everybody to get their remarks in within these three days.

The program has been arranged in groupings and the groups are well-defined. If you look at the last page of your agenda, there is detailed information on how you can obtain either transcripts of this hearing or other written material and it will also be available in the Department of

Commerce Reading Room after these hearings.

In addition to that, I want to point out that we have extended the comment period for receiving written comments until June 5th -- another 60 days following this hearing -- because of the numerous responses that we are receiving. We want to be sure to get in everybody's thoughts.

If you want to receive information relative to this hearing, or any subsequent actions that are related, you should fill out one of the cards at either entry or leave your business card in order to be certain that you are on the mailing list.

The breaks and luncheon times are scheduled in the agenda. There will be a 15-minute break both in the morning and in the afternoon and then there is one hour for lunch.

There are restroom facilities at the extreme ends of the corridors of the Department of Commerce. The Commerce building is like a capital H. We are on a cross-leg and you can go out either that way or that way [indicating] and at the extreme ends there are men's rooms and ladies' rooms. The staff here would be happy to assist you.

The cafeteria is located immediately below this auditorium and you can gain access to the cafeteria by going out the rear here, turning left and either taking the

elevators down one level, or the stairwell next to the elevators down one level. It is adjacent to the National Aquarium.

So, if I could have the first two presenters take the podium.

Let me point out, while they are coming up here, that the first two presentations will be made by representatives of the American National Standards Institute and ASTM, the American Society for Testing and Materials, so if you would.

What we have done, where people perceived there was a conflict in terms of the agenda or any other purposes, we have said that we will swap slots on the agenda for those requesting such a change, providing we receive in advance, written acknowledge of that from all the parties concerned.

The American National Standards Institute has requested the first slot and the American Society for Testing and Materials -- ASTM -- will then take the second slot and then the Society for Automotive Engineering will then come on at 3:00 for the slot that had been originally allocated ANSI.

So, to repeat, first we have representatives of the American National Standards Institute, following by a representative of ASTM and then we follow the normal agenda, if you will, until 3:00 when ASE will then make their

presentation at that time.

This is the only change in terms of the swapping slots that we have received as of this date. There are two or three cancellations of presentations for the following days.

Tomorrow, April 4th, the presentation scheduled for 9:30 by Dash and others has been cancelled by that party. The presentation at 4:15 p.m. by Bussmann has also been cancelled. Only two presentations for April 4th, then, are cancelled.

On April 5th, at 10:15, AT&T Bell Labs has cancelled and at 2:15 p.m., the presentation by NKA is cancelled. Again, two cancellations for the 5th.

There are no cancellations for today, just this three-way swap, if you will, with respect to time.

I will now ask the representative of ANSI, Mr. Jim Pearse, Chairman of the Board of ANSI if he would present ANSI's views and introduce his associates.

MR. PEARSE: Thank you, Mr. Warshaw, and good morning, Mr. Director and members of the panel. My name is James N. Pearse and I am Chairman of the Board of the American National Standards Institute.

I am accompanied by the President of the Institute, Manuel Peralta.

The Institute's membership currently includes more

than 1100 companies of all sizes and shapes, close to 250 organizations who collectively account for more than 95 percent of the active standards developers in this country, government agencies, educational institutions, consumers and individuals.

Employees of four federal agencies sit on the Institute's large and diverse Board of Directors, including Dr. Lyons of NIST.

As identified by our strategic planning process, a major priority of the Institute is to realize a positive, cooperative relationship with the government so as to best serve the American public.

The Institute strongly supports the existing U.S. voluntary system of standards, testing and certification. Our pluralistic, de-centralized system mirrors this country's culture and commitment to free enterprise by allowing the market to determine the optimum allocation of resources devoted to national and international standards efforts.

Within that system, divergent points of view are both permitted and encouraged.

Individuals employed by the government should and do participate in the process on an equal footing with parties from the private sector. The controls that exist within our voluntary system are designed to assure due

process and efficiency.

More relevant to this hearing, our country has obtained leadership positions internationally for many important technologies, achieved significant success in enhancing U.S. access to European standards, testing and certification.

Despite these and other accomplishments, the Institute recognizes that there is a continuing need for the U.S. to strengthen, adapt and enhance its international activities. Given the significant role standards, testing and certification have come to play in global competition, the Institute believes that our most important goal must be to achieve much better government-private sector cooperation.

A failure to do so will inure only to the benefit of those with whom the U.S. competes. This can be accomplished by the federal government playing an active and supportive role within the existing voluntary system through an alliance with the private sector so that, to the maximum extent possible, we speak with one voice.

This does not mean that the government should create new institutions to regulate the system, thereby undermining our existing private sector structure. Rather, we believe that the federal government should render constructive assistance to the voluntary standards community

within the current system.

The Institute strongly believes that the proposal for the creation of a Standards Council of the United States of American, SCUSA, would be redundant, counterproductive and a step backward at a time when it is imperative that we move ahead.

In our view, the present system does not need more regulation and more bureaucracy -- it needs meaningful cooperation and participation.

The Institute has long served, and continues to serve, as the U.S. member body to the International Standards Organization, ISO, and through the U.S. National Committee, the International Electrotechnical Commission, IEC -- the two leading non-treaty standards organizations at the international level.

In advancing U.S. interests, the Institute is a voting member of virtually all of the most important ISO and IEC technical committees, and subcommittees.

In many sectors where U.S. interests are most affected by the promulgation of standards, such as information technology petroleum products, etc., the Institute and its members hold Secretariats in the relevant TC's and SC's.

It is through this process of obtaining important ISO and IEC Secretariats that U.S. industry has achieved a

leadership position in many sectors relevant to our international trade objectives.

In those sectors where Secretariats are held by other countries, the U.S. actively participates in TC and SC work in order to advance U.S. interests.

In response to the important role played by standards in international trade and, more specifically, in response to EC 1992, the Institute has actively and aggressively used its role as the member of ISO/IEC and liaison with CEN/CENELEC to further U.S. interests.

This is well-evidenced by the Institute's recent and highly successful interaction with ISO/IEC and CEN/CENELEC. A highly productive meeting was held last week which concentrated on testing, certification, laboratory accreditation and the formation of the European organization for testing and certification.

Officials of CEN/CENELEC have unequivocally indicated their determination to dialogue with non-EC countries through the ISO/IEC mechanism. In order to further U.S. interests, the Institute opened a Brussels office in August of 1989.

Through its Brussels office, the Institute has made significant progress in obtaining meaningful transparency and greater access to information concerning EC standards, testing and certification.

Extensive efforts have been made to communicate these successes to the Institute's membership and the public at large. One step in that process was the re-opening of the Institute's office in Washington, which also permits better interaction with the government.

The Institute understands that the purpose of this hearing is to determine what improvements, if any, should be made in the existing U.S. international standards, testing and certification.

The SCUSA proposal, described earlier, contemplates that the new entity would function as a component organization within the Department of Commerce. The responsibilities which would fall within the jurisdiction of the proposed SCUSA include the authority for accrediting standards developers, as well as testing and certification bodies.

By giving SCUSA responsibility for accreditation, the proposal is tantamount to government regulation of the U.S. international standards, testing and certification system.

The Institute believes that a standards, testing and certification system regulated and led by the government would present enormous difficulties to us and strongly militate against the adopt of this proposal, or any variant thereof, including increased bureaucracy and reduced

efficiency, increased litigation, the need to obtain and allocate funds, potential for political manipulation, time and effort required to create and make operational new government systems, and questions about the competence and capacity.

There is more comment about these specific issues in our written testimony.

CHAIRMAN WARSHAW: We will appreciate your submission of the written comments in the record, if you would.

MR. PEARSE: Yes, we will.

Although the Standards Council of Canada was presumably created to help solve that country's problems a decade ago, the Institute believes that it is not a desirable model for U.S. standards and certification.

The significant difference between the Standards Council of Canada and the Institute is that the SCC is controlled and funded by the government of Canada, while the Institute is neither controlled nor subsidized by the U.S. Government.

It is interesting to note that SCC's operations have recently been seriously affected by a reduction in financial support due to government budget austerity.

Given the vital role that standards, testing and certification play in U.S. trade policy, the Institute

recognizes that the government must be an important and active participant in the process.

In addition to establishing a constructive alliance with the private sector, the Institute believes that there are certain specific actions which could and should be taken by the government such as government to government activities, intra-government coordination -- we note here that the interagency committee on standards policy has been somewhat of a disappointment to us -- support for private sector activities, greater educational efforts, greater participation in the existing voluntary standards process, equitable government payment for the voluntary system, creation of tax and other incentives for greater industry participation.

Again, these are explained more fully in the written testimony.

The most constructive way to achieve helpful improvements in the system is not to fundamentally alter the existing process but instead to provide new means for increased cooperation between the government and the private sector.

Because the most immediate international concern facing the U.S. standards, testing and certification community is ED 1992, the Institute has proposed, and will continue to push for, a special private sector/government

alliance in this area.

The private sector would like to be continued to be held responsible for the principal commitment of resources to the international standards, testing area, however the government's funding role could be enhanced and combined with private sector investments through participation in the process.

In March of 1989, Mr. Peralta and I met with Secretary Mosbacher in order to explore methods of increasing government/private sector coordination of EC standards issues.

We hope that what we have started through that process can continue in a responsible partnership with the government to advance the interests of the United States.

I thank you and I request that a copy of our more comprehensive written statement, along with the exhibits, be included in the hearing record.

Thank you for your time and attention.

CHAIRMAN WARSHAW: Thank you, Mr. Pearse. We appreciate it and we certainly will be sure that that is included in the record.

MR. PEARSE: May I leave this here for you then?

CHAIRMAN WARSHAW: Please do. Are there any questions from the panel members?

Okay, well, thank you very much, Mr. Pearse.

Next we have Mr. O'Grady, President of ASTM to present the views of ASTM.

MR. O'GRADY: Thank you, Dr. Warshaw. Before we begin, I would like to make a request. I would like to include in the record the 69 volumes of the ASTM Books of Standards.

CHAIRMAN WARSHAW: I'm sorry, sir, but they are copyrighted.

(Laughter.)

MR. O'GRADY: Well, good morning, ladies and gentlemen. Can you all hear up there?

ASTM is pleased to have the opportunity to convey our comments and recommendations on issues critical to the future success of U.S. industry, to the U.S. economy and to the advancement of U.S. technology throughout the world.

Said another way, the success of U.S. industry depends on the advancement of U.S. technology throughout the world.

I had a long thing here, ladies and gentlemen, to tell you about ASTM but in the interests of time, it is in the record and I will pass on it, other than to say we do have 32,000 members. We have 135 technical committees and our committee structure is the most important asset we own.

We do not certify or accredit. We do no testing. ASTM has no conformity mark, but in all we do, we must be,

and it is imperative to me, that we be responsive to our ASTM constituency.

ASTM is autonomous. We are not subsidized either by government or industry. Well over half our total sales is attributed to non-members, and a significant portion of our sales continue to prevail in Europe and in other areas outside the U.S.

ASTM applauds the stated policy of the U.S. Government to improve the acceptance of U.S. technology and manufacturing processes in the international standards arena.

For many years, our members have been actively involved in the advancement of U.S. positions in international standards organizations such as ISO and IEC. We currently administer 68 U.S. technical advisory groups to ISO and IEC that are part of the technical committee system of ASTM.

This consists of 1800 members who serve as TAG participants with the objective of developing and promoting U.S. technical positions internationally, a policy which is consistent with what the Board of Directors of ASTM wants to have happen.

The issue of effective participation by U.S. interests in international standards activities has been debated for many years within ASTM and I am aware of debates

going on in other organizations as well.

The issue often comes down to one major subject -- finances. Within our heterogeneous society, there are U.S. industries that effectively support a U.S. position in international standards. I am talking now ASTM.

However, there are many others that have difficulty maintaining the level of financial commitment necessary to offer consistent and credible U.S. representations, and the reason, of course, are many, but in some instances, the subject matter is perceived by some of our constituents to be more phenomenal logical than product or material oriented.

In other cases, the interests involved perceive that there is no direct benefit to the economies of the industries involved.

Another variable that may be factored in for some is that the international standards to date may not have been as an important an element in the issue of trade, but we believe all that is changing.

To go on, the notice of this hearing addresses the subjects of standards, standards participation, standards usage, testing and certification.

The system for developing standards in the U.S. has been for many years demonstrated how an effective partnership, an effective partnership between the private

and the public sectors can work.

Is any of this documented in law? No, it is not. Included in this effective government participation along with ASTM in the process of standards development, I would like to stress to this group and to the panel how important it is that we do thing in an appropriate manner, and much of it has been already described in OMB Circular A-119 and by the presence of government agencies and government employees in the standards process of ASTM.

We believe that the system as it is currently constituted works very well.

To us, the issue is not that of a greater presence or a greater role for the federal government in the process of standards development. In fact, we believe in our system that the government is quite pleased with the way it works with us.

I would like now to address some remarks -- moving away from the process of standards development -- but to work on the ultimate objective, and that is the promotion of the final result of the process, the voluntary standard.

For many years we have discussed ways in which we could better promote U.S. industry and the economy through the dissemination of ASTM standards. Standards are one of the most effective means of transferring technology to trade, and I doubt if there is one person in this room that

does not believe that.

On the other hand, we are convinced that there is a role for the Federal Government working cooperatively with industry and standards developers to further promote the utilization of private sector standards both domestically and internationally.

The key word here is promote the use of the standards.

An element of this promotion may be efforts between specific industries and the Federal Government to promote in the global marketplace existing U.S. standards which are viewed as critical to the advancement of U.S. industry and U.S. objectives.

Moreover, it is not beyond the realm of possibility that the U.S. Government could more fully promote, more fully sanction, and endorse the quality of U.S. standards documents. For example, the Federal Government could negotiate, such as with the European community for the acceptance of specifications and test methods developed by ASTM because they are globally recognized technical quality and they are globally used in world trade.

Another cooperative arrangement could include, but not be limited to, programs to provide adequate financial resources for the attendance of U.S. experts at

international meetings.

In all of these arrangements, we should work at defining the problem that exists, and in turn, developing the specific strategies that will assist us.

On the other hand, we should not rush to establish new structures or move in a direction that is responsive only to the attainment of perceived, perceived short-term solutions which in themselves could contribute to long-term problems.

For ASTM, the justification to form a U.S. organization similar to the Standards Council of Canada is not clear. We have therefore concluded that we are not in a position to support the concept, we are not in a position to support the concept of a Standards Council of the United States at this time.

We simply don't know enough about the organization that could be constituted. We are not in a position to comment on the formation of such an organization until adequate documentation is made available.

What ASTM does recognize and support is the need for a central coordinating body that neither develops standards nor interferes with the program initiatives of standards developers.

We supported the initial implementation in 1980 of a National Policy on Standards which describes the substance

of what we think is still very important today.

Within that position, ASTM recognized the need for a central organization and it offered two fundamental functions: The first, to safeguard the integrity of the process by which voluntary standards are developed and approved by non-government institutions; and secondly, to work closely and cooperatively on standards-related matters with government agencies at all levels -- federal, state and local -- and with the Department of Commerce in its capacity as the government standards coordinating center.

In addition, it needs to be demonstrated that the private sector working in cooperation with existing federal organizations is unwilling or unable to find the resources to fill the current needs of the standards, testing and certification systems of the United States, as well as to provide an adequate interface role with the international standards community.

ASTM strongly recommends that the role of the Federal Government is to work in cooperation with the private sector to support the voluntary consensus standards system and the accreditation and certification systems of the United States.

I see from my signal over there that I am a little bit short on time, so I think then, with your approval, ladies and gentlemen, I will move to the summary.

ASTM strongly recommends that the role of the Federal Government is to work in cooperation with the private sector. We believe that the Federal Governments needs to take a pro-active role in promoting -- a pro-active role in promoting the worldwide acceptance and use of private sector standards.

By so doing, it will also be promoting the future success of U.S. industry, the U.S. economy and the advancement of U.S. technology throughout the world.

We recommend that the U.S. Government support should be as follows: To work cooperatively with standards developers to ensure that the U.S. has an effective central coordinating body to advance U.S. international standards objectives.

The Government should represent us in negotiations to support U.S. voluntary standards as documents of trade, and to work cooperatively with industry sectors to support an effective U.S. participation in international standards activities.

I will conclude now by saying I once again congratulate our Federal colleagues in convening this meeting and I will look forward to hearing the positions of the rest of the individuals who will be making statements before this group.

I apologize, Dr. Warshaw, for running a tad over

-- oh, there it goes. I thank you for your kind attention

CHAIRMAN WARSHAW: Thank you, Mr. O'Grady. You were ten seconds short of the beep.

Questions from the panel? Mr. Donaldson.

MR. DONALDSON: Joe, do you have anything that you would care to amplify with respect to the statement of endorsing the private sector standards. You mentioned that one role for the government would be to endorse private sector standards with respect to international applications.

MR. O'GRADY: Yes. The thought occurred to us as a result of conversations that we had between some of our people here in Washington with some of the people in government that it is not beyond the realm of possibility for the United States Government to take a pro-active role and to negotiate with the European community, or any other community, any other community, at least the possibility of negotiating situation to have as a result of a declaration by the United States Government as to the quality of the ASTM standards which are used in so many government agencies.

If it is good for the U.S. Government, why should it not be good for other countries of the world, including the European community?

Does that answer your question, John?

MR. DONALDSON: Yes. Thank you.

CHAIRMAN WARSHAW: Mr. Ludolph.

MR. LUDOLPH: Mr. O'Grady, I was struck with your comments about the need for financing.

MR. O'GRADY: Pardon?

MR. LUDOLPH: The need for financing in the standards system in the United States, and the issue before us is whether financing comes to an activity that is seen as relevant by the U.S. business community.

In the past, if, for example, the CEN process is closed to U.S. standards makers, it is not useful to attempt to develop a standard or to participate in something that is irrelevant to their decision-making, and there has been some discussion about how relevant ISO and IEC activity is for the standardization processes which international activities -- either multi-national activity or trade -- is not heavy in that sector.

With that being said, the U.S. standard system produced some of the best standards in the world ---

MR. O'GRADY: The best standards in the world, Charles.

MR. LUDOLPH: And therefore across the board they produced the best standards in the world ---

(Laughter.)

MR. LUDOLPH: The question I want to put before you is if there is two or three systems outside the United

States that are bent on developing standards independent of global standards or international standards, will the best standards in the world be able to withstand the competitive and government pressure coming from CEN and from other standards organizations such as the Japanese Institute of Standards, here, in this economy?

MR. O'GRADY: Does that end the question, by the way?

MR. LUDOLPH: Yes.

MR. O'GRADY: Would you repeat the question?

(Laughter.)

MR. LUDOLPH: Can you compete?

MR. O'GRADY: Yes.

MR. LUDOLPH: Can the U.S. business compete?

MR. O'GRADY: I was only joshing you a little bit there.

The essence of what I said involved that a cooperative program could include but not be limited to programs to provide adequate financial resources for the attendance of U.S. experts at international meetings.

That, as far as ASTM is concerned, is an open-ended statement because we know that there are organizations and we know there are certain classes of people in the ASTM constituency who have no resources because they don't have the backing of a large or profitable corporation.

We need to have those people at the standards council and the standards meetings of ISO and IEC so that the one avenue left open to American industry to access the European community is through ISO.

There are those who think that ISO or IEC is not effective or it's too slow or any of those other things that we have all heard over the years, it is up to someone else to say that.

From the ASTM perspective, we are having in some of our members a serious difficulty in getting the funding to go to ISO meetings. That was the essence, Charles, of what I was saying without trying to reflect on any other organization or to be critical of them.

MR. LUDOLPH: Thank you.

CHAIRMAN WARSHAW: If there are no other questions from the panel, I thank you both for your presentations and I would ask both the ASME and IEEE representatives if they would come to the podium.

(Pause.)

CHAIRMAN WARSHAW: Thank you, gentlemen. We very much appreciate everybody's effort to confine themselves to the time frame and we appreciate your willingness to participate today.

First we have Mr. Oscar Fisher of the ASME who is Chairman of that Standards Council, and if you would

introduce those accompanying you, Mr. Fisher.

MR. FISHER: Here is Mel Green, Associate Director of ASME, and Director of Codes and Standards of ASME.

CHAIRMAN WARSHAW: Which one will make the presentation?

MR. GREEN: I will make the presentation.

CHAIRMAN WARSHAW: Please, go ahead.

MR. GREEN: We certainly appreciate this opportunity to present the views of the Council on Codes and Standards of ASME.

As many of you know, ASME is a non-0profit education and technical society that was founded in 1880 and now has over 119,000 individual members including nearly 19,000 student members.

A Board of Governors, elected by the membership, manages the society. The Board of Governors has assigned the duties associated with the operations of codes, standards and related accreditation and certification programs to the Council on Codes and Standards. This statement reflects the views of that Council.

Since 1884, ASME has served the public through its technical standards program. As early as 1898, ASME was involved in international standards for testing materials. When ASME began developing performance test codes and criteria for testing materials, businessmen and engineers

had no recognized baselines against which to write a purchase order nor an institute through which to participate in international standards.

From this early involvement in domestic and international standards, ASME participated in the formation of such organizations as the American Society for Testing and Materials, ASTM, and the predecessor organization of the American National Standards Institute, ANSI.

ASME codes, standards, and related accreditation and certification programs involve 122 projects with approximately 600 codes and standards and 10 accreditation and certification activities.

Approximately 4,000 volunteers develop the codes and standards and serve on the committees addressing accreditation and certification. An inherent part of ASME's codes, standards, accreditation and certification programs is due process.

Although ASME has been involved in developing international standards for over 100 years, the United States Government showed little interest in codes, standards and related accreditation activities within the last few years. In fact, it was not until the Kennedy rounds to remove tariff barriers that the U.S. Government seemed to have an interest.

After some study, the United States Government

brought an anti-trust suit against ASME so that we would expand our accreditation activities from the United States and Canada, to the rest of the world, and we did that. Since October 1 of 1972, we have been operating on accreditation programs and making our codes and standards available throughout the world.

Today we are operating in 35 countries. Our accreditation is recognized in 80 countries, so we have had a great deal of experience with the government overview because through the agreement that we have with the United States Government, we have a host government who provides us great services and some of the countries that we are involved in today.

Just picture yourself going to some of the places where our consultants and where the inspectors who work in these plants must live and the U.S. Government has assisted us in these areas for nearly 20 years.

Now, ASME is administrative secretariat of both IEC and ISO related committees, both the administrative secretariat and TAG's where ASME has the interfacing domestic committee, we have the technical advisory group also.

Recently, ASME acted to return two administrative secretariats to ANSI and we previously referred others to ANSI for administration of secretariats.

From our recent experience, this would suggest little likelihood that industry will provide the necessary financial support for the administrator or for the qualified people necessary to represent the United States.

Therefore the United States Government must assure that Americans are properly represented. The standards negotiations involve government interface. It is essential that the United States Government provide leadership.

There are parts of this written statement that I am omitting because of some restraints we have this morning, but this, as Dr. Warshaw has said, will be made available.

An ASME bylaw provides for a Board on Accreditation and Certification. Part of the role of that Board is to provide internal audit of ASME. ASME has implemented that bylaw provision by having four agencies of the Federal Government who use our accreditation as a means of satisfying their regulatory requirements, to audit us on a regular basis on an unannounced basis.

Now, this program has worked very well. When we first asked the federal agencies to participate in the program, they questioned our motives as to whether we were trying to get a leg up in the courts or whatever.

No, we are trying to make sure that we are living up to our own quality programs. We may go all over the world and review of peoples' quality assurance programs and

we felt that we should have an outside body or an outside agency monitoring us to make certain that we are meeting our own programs.

The need for a level of due process is particularly critical where there is a dominance occasioned by a few in an essential industry.

In those situations, the American National Standards Institute cannot provide the forum for objectivity and fairness in decisions because of the dominance by a few players. During the past two decades, there has been situations where a dominance of power has prevented the United States from having American national standards in some areas that are vital to health, safety and resources and probably just as important, this lack of a forum for consensus has prevented the United States from having a voice in developing international standards.

Now, the Council on Codes and Standards recommends a United States of America standards, accreditation, certification, oversight and investigative institute. This institute will develop through consensus the criteria for standards and accreditation bodies and audit accredited organizations to assure compliance.

Such an institute would provide for a level of due process to assure lack of bias and competitive opportunity. It would also provide the necessary forum to develop United

States positions on standards and accreditation issues and represent the United States in negotiations with other governments.

This institute may mean the difference between disorganized private sector standards developers and accreditation program administrators and a healthy worldwide system for standards, accreditation and certification programs.

As part of the creation of such an institute, it would be required that any standards developer or accreditation sponsor that desires to be referenced in federal procurement contracts or regulations be accredited by this institute and be willing to participate with government, industry and the public in its management.

I thank you.

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

Well, we thank you.

Let us then move on to IEEE. Marc Migliaro is Chairman of the Standards Board of IEEE. If you would introduce your associate.

MR. MIGLIARO: Thank you. I have with me Andy Salem who is the staff directors of standards for the institute, and we also have with us who is in the audience, today, Don Fleckenstein, past directors of standards for the

institute.

I would like to thank you very much for the opportunity to be here this morning.

IEEE is a scientific and educational institution whose purpose is to advance the theory and practice of electrical and electronic engineering and computer science.

It also strives to enhance the quality of life for all people. IEEE is a trans-national organization with 315,000 members through the world. The fastest growing segment of its membership is the non-U.S. group.

One of the technical activities of IEEE, aimed at carrying out its trans-national mission, is the development and dissemination of standards. Historically, IEEE has been closely associated with the U.S. voluntary standards activities.

More recently, because of the trans-national composition of its membership, the IEEE standards program has addressed the need for standards that can serve all nations. Indeed, some standards have been recognized and used by other countries of the world and adopted by international bodies.

From a trans-national perspective, therefore the IEEE views EC 92 as a significant event in the evolution of the expanding need for and interest in global standards. However, the event should not cause us to lose sight of the

larger goal of global standardization.

It should be noted that IEEE is not at present in certification or testing. Our discussion, therefore, is limited to the international standardization aspect of this hearing.

Whether the U.S. is adequately represented and prepared to participate in the evolutionary process leading to global standards is the thrust of this discussion. If this were a simple issue, the simple answer would be yes.

But the subject and issues are not simple. In order to maintain an affirmative view, a number of these issues have to be explored with the goal of assuring positive action for the continuation and growth of necessary participation.

The output of a standards process are criteria that serve in determining the acceptability of products, processes, and information. To be used for such purposes, the criteria have to be found acceptable by those that would implement them.

A decision to accept the criteria has to take into account national laws, consumer interests, environmental matters, security issues when applicable, and perhaps a myriad of other concerns.

Only when such factors are satisfied will a standard be found acceptable for use. The process by which

all these factors are considered is, by nature, time-consuming but is essential to assuring the acceptance of standards.

Fundamental to involvement in the global standardization effort is adherence to the basic tenet: the right of participation. Commitment to this principle is critical, and any deviation from it weakens a position and jeopardizes the acceptability of the result.

Therefore, it is essential that any standardization be founded on this principle. Any move to mitigate this right by requirements of organizational affiliation, financial contributions, or other participation constraints threatens acceptance at the international level.

In the U.S., the voluntary standards system is dependent on financial support from membership fees, contributions, and the sale of documents. These financial underpinnings for international work have been threatened recently by membership reduction due to corporate down-sizing, mergers, and other steps taken to ready commercial enterprises for competition in the world market.

In addition, fluctuations in currency values, increased costs of foreign travel, and so forth, further erode the already decreasing financial support. These events strain the ability of the U.S. standards developers to participate internationally, even assuming the domestic

process was in order.

A major issue, therefore, is the funding required to maintain membership in international standards organizations and the support for delegates to attend off-shore meetings.

At this point, let us consider the relationship between the government and the private sector in global standardization. The need for standards to serve a worldwide market includes, for example, the European Economic Community and the U.S./Canada Free Trade Agreement.

These government-to-government relationships are exclusively in the province of the Federal Government. Relationships with other governments and treaty organizations include standards policy matters and may include standards development programs.

These activities of the Federal Government and comparable activities in the private sector have a common goal of serving the nation's trading needs. It is timely that the government and the private sector approaches to the goal be aligned.

World conditions have changed with the advent of the European Community and the U.S./Canada Free Trade Agreement. The changes, however, do not require the assignment of international standards responsibility to the Federal Government. Such a move through the Standards

Council of the United States of America is seen as diminishing the role of the private sector without regard to its past involvement and successes.

What is needed at this juncture is a statement of the respective roles of, and interfaces between, the private and public sectors. Outlining the roles and interfaces should be a first step in the development of appropriate relations. This would strengthen the U.S. position in international discussions.

It must be emphasized the IEEE does not promote nor encourage the development of national standards as a basis of negotiations internationally. Global standardization and the pace of the worldwide market growth requires rapid and proper development of positions for the purpose of preparing internationally acceptable documents.

By definition, such documents should be applicable within all nations. There is no time to lose in moving toward this goal.

It is appropriate to repeat our earlier affirmative position regarding the adequacy of U.S. participation in the international arena, and that there are other areas in need of attention, some of which have been outlined above.

Therefore, it is proposed that these areas as well as the others presented during this hearing serve as an

agenda for a committee of experts on the subject. Such a committee should be convened in the near future by the Director, Office of Standards Services, NIST, to prepare recommendations to the private and public sector on a National Policy for International Standards.

In summary, the committee should address such issues as assuring the right of participation of all parties of interest; assuring the continuation of the present participation level in international standardization and take into account the expected growth in this area; establishing viable, long-term funding for international involvement; defining the respective roles of and interfaces between the private and public sector.

Encouraging the development of international standards is the first step in preparing national standards, and finally, developing a national policy on international standards. The policy should not be limited to EC 92, but should speak to the need of global standardization in light of the development of a world market.

This concludes IEEE's statement. Thank you very much.

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

Are there any questions from the panel? And let me say while we have both here, it could be to either ASME

or IEEE.

Mr. Donaldson?

MR. DONALDSON: When you mentioned, I believe, that the IEEE membership is 315,000, would you be able to comment on what percentage of what the number is that are non-U.S., please?

MR. MIGLIARO: I guess, if we look at non-U.S. and that would then include Canada, Mexico, about a third are non-U.S.

MR. DONALDSON: Thank you.

CHAIRMAN WARSHAW: Are there any other questions from the panel?

Mr. Ludolph.

MR. LUDOLPH: I would like to put this question to both ASME and also IEEE, in that both organizations are international-recognized programs -- one that has an accreditation program and one that purely develops international standards.

I wanted to ask, first of all, the degree that you find that your standards development activities here in the United States are influenced, recently influenced by the development of standards overseas and how relevant the ISO activities are to your standardization activities here, and second, the degree, particularly in Mr. Green's and ASME's case, to use international standards for the international

accreditation of programs -- whether your accreditation program has a need to adopt more foreign or international standards?

Obviously the last question is what affect would that have on U.S., on your clients which are U.S. manufacturers, and in some cases, state inspectors?

MR. GREEN: Well, you have a number of questions there, so let me start from the back.

Insofar as our accreditation program is concerned, well, we receive feedback from all of the countries where we are operating. I think I mentioned before that we received some 30,000 inquiries from users about the world to which we respond.

Of course, these inquiries served as input to propose changes in our codes and standards.

Now, insofar as using standards of other countries, other standards developers insofar as accreditation, there will be an accreditation program that ASME will begin on May 16th of 1990 where we will accept specifications developed by standards developers outside the United States and Canada.

We will insist upon our own quality assurance criteria for this accreditation, but the specification to which the product is manufactured can be from recognized standards developers located in other parts of the world.

CHAIRMAN WARSHAW: Mr. Salem, do you have something you would like to say?

MR. SALEM: Well, IEEE considers its international involvement very important to the program. The standard board really has taken the position that new programs should be addressed at global standardization. Regional standards, national standards, at this time really don't seem to be the way to go.

The trans-national program that we have underway does recognize standards of other countries and there is a mechanism to adopt such standards into the IEEE system.

I should mention that one of the criticisms that we find as we travel around from the Europeans and other places in the world is the lack of adoption of ISO standards in the U.S. We intend to address that subject in IEEE to the degree that we can.

CHAIRMAN WARSHAW: Thank you, Mr. Salem. Is there any other questions from the panel?

Well, we thank you both very much for your presentations.

MR. MIGLIARO: Thank you for the opportunity.

CHAIRMAN WARSHAW: Since it is early, I would like to move to the next two presentations, the Instrument Society of America and the Industry Application Society.

(Pause.)

We have Mr. William Calder, the Instrument Society of America, if you would begin.

MR. CALDER: Thank you, Mr. Warshaw, and good morning everyone. It is nice to know that I am at the right spot at the right time, because I can confirm that my name is William Calder and I am the President of the Instrument Society of America.

I am here today to present ISA's position and recommendations on improving United States participation in international standards activities.

The Instrument Society of America is a non-profit, educational organization and was founded in 1945 to advance the application of instrumentation, measurement and control in manufacturing and continuous process industries.

With more than 42,000 members, ISA is internationally recognized as the leading organization for instrumentation and control professionals. Our members represent vendor, user, distributor, and general interest groups and include engineers, scientists, managers, and technicians.

Since its inception, ISA has operated an active program for the development of consensus standards. Currently, more than 3200 individuals participate in the development of ISA standards and international standards in the area of measurement and control technology.

ISA is an organizational member of the American National Standards Institute and has been an ANSI-accredited standards organization since 1976. Prior to 1976, ISA standards were developed under the canvas method for ANSI approval.

Responsibility for the development ISA standards and participation in the development of international standards rests with the standards and practices department of the society.

The standards and practices department is managed by the standards and practice board, which oversees the activity of more than 125 domestic committees and subcommittees as well as eight United States technical advisory groups.

ISA also holds the secretariat of two international electrotechnical commission subcommittees and provides technical and administrative support for numerous IEC and international organization for standardization working groups.

A full-time professional staff located in Research Triangle Park, North Carolina, provides support to this extensive volunteer effort. ISA budgets more than $650,000 per year in direct support of its standards program and has published over 80 standards.

Approximately one-third of this budget, or nearly

a quarter of a million dollars per year is allocated for international standards activities.

In addition, the Society, with the support of industry, regularly sends representatives to participate in the international standards committee meetings.

These experts receive technical support and advice from the corresponding ISA domestic standards committees. Because of these close ties and as a result of our long-term commitment to the international effort, United States participation has been very effective in the area of industrial process measurement and control.

As the importance of international standardization escalates, more involvement and coordination with domestic efforts will be necessary. ISA intends, as part of its long-range strategic plan, to actively participate in international standards and practices activities for the measurement, control and automation industries.

ISA International, a subsidiary of the society, serves ISA members outside North America. Its European region is supported by a professional staff located in Brussels, Belgium.

Because ISA is an international organization, the society benefits from the worldwide input to its standards program. Although overseas members cannot participate in any of the technical advisory group activities, they do

contribute to the other aspects of ISA's standardization program.

We believe this open exchange of information and early review of ISA proposals has lead to increased acceptance of U.S. ideas in the international arena.

Based on our experience in both the international and national standards arena, ISA strongly believes the current standards system, managed by the private sector, should continue.

Our voluntary system is sound and is supported by industry. We have developed authoritative, widely-used standards at the national level and continue to make significant contributions internationally.

Despite the success we have enjoyed, we do, however, believe significant improvements could be achieved through government action in the following areas: First, by increased participation by government employees; second, by funding of standards developers; and third, by encouragement for increased industry support.

ISA has an excellent support from the National Institute for Science and Technology and its predecessor, the National Bureau of Standards. This support has been in the form of NIST scientists who serve as managing directors on ISA's standards and practices board, committee chairmen and committee members.

ISA encourages participation by NIST and other government agencies such as the Department of Defense, the Nuclear Regulatory Commission and others. ISA welcomes this support and is open to expansion of it.

This support has, however, been severely limited by the funds available for government personnel to attend standards meetings in the United States and especially in Europe. ISA believes very strongly that greater participation by NIST personnel or other technical government representatives in international standards meetings would significantly strengthen the image and effectiveness of the United States in the international standards arena.

This increased level of participation could be effected by two actions by the U.S. Department of Commerce. First, authorization of funds to enable federal employees to take a more active role in existing standards-developing organizations; and second, encouragement by the heads of federal agencies for the technical experts within the agencies to seek out and accept more active roles in the development of standards.

Further, ISA feels very strongly that the consensus standards-developing system in the United States would be greatly improved if additional funding were made available to support existing channels of participation in

the international arena.

ISA recommends that the United States Government establish a fund that would enable consensus standards-developing organizations such as the Instrument Society of America to send a larger number of representatives of U.S. industry to international standards meetings.

This type of funding would greatly increase participation by qualified technical experts from U.S. industry. And, in particular, additional funding could increase the extent of participation by employees of small and medium-sized companies who presently cannot afford to send their technical experts to international standards meetings.

The amount of funding would be small relative to other government expenditures, funds on the order of a few million dollars combined with the substantial financial investment already committed by the private sector could have a tremendous impact on U.S. participation in international standards.

Administration of the funds could be on a grant basis, using mechanisms similar to those already in place by the National Science Foundation, the Army Research Office, and other federal funding agencies.

Finally, the government could encourage increased participation by the private sector by instituting a program

of tax credits for industry standards participation similar to the existing tax credits for research and development.

This action would provide a direct incentive for increased support from industry. The resulting participation would be market-driven and, as such, reflect our free-enterprise system.

These three actions -- encouraging government participation in voluntary standards development, making funds available to standards developers, and extending tax credits to industry -- could significantly strengthen U.S. participation in the development of international standards and improve the domestic standards system as well.

Now, the Office of Standards Services -- NIST -- has distributed the description of a proposed standards council of the United States of America as a general model to be considered as the way to solve the United States' problems with international standards.

The proposed purpose of this model is to enhance U.S. international commercial interests by creating an infrastructure to sustain a cohesive national standards system with oversight by a Board of Governors composed of the representative public and private interests.

ISA is strongly opposed to the creation of a super standards coordinating agency to displace the private sector systems that are presently in place for the following

reasons:

Present mechanisms such as the American National Standards Institute and the U.S. National Committee of the IEC are effectively coordinating U.S. participation in international standards development at the present time.

The current system is sound and is serving industry and the American public well. Speaking on behalf of the industrial process measurement and control community, we have been successful in having U.S. concepts and standards adopted by international standards organizations. U.S. Industry recognizes that international standardization is a key factor in the competitiveness of U.S. firms.

Improvements in the present U.S. mechanism could be made by greater participation from both the private and public sectors, but that participation would be possible only if increased funding were available.

It would be a much more efficient use of federal funds to strengthen these existing mechanisms rather than create a bureaucracy to replace them.

I see the red light is on so I will wind down here and bring you to the summary.

The Instrument Society of America would welcome the opportunity to expand on any of the points that we have made by preparing more detailed information reports, by working with NIST, or by working with ANSI, USNC/IEC, and

other bodies presently involved with coordinating and representing ISA participation in the development of international standards.

In conclusion, ISA supports the current standards development system and recommends that the government work with industry and the private sector to strengthen and improve our international standards participation. Specifically we recommend increased participation by government employees; second, government funding for standards development; and third, incentives for increased industry participation and support.

ISA does not support the SCUSA model, nor do we endorse government control over the voluntary, private sector effort.

The Instrument Society of America welcomes this opportunity to present our views on these important issues facing the United States. We look forward to continued cooperation and support among industry, government and the standards developing community.

Thank you. I would also like to enter a copy of this for the record.

CHAIRMAN WARSHAW: We appreciate it. Yes, we will be happy to include your full text for the record.

Questions from the panel? Mr. Leight

MR. LEIGHT: Yes, when you talk about government

funding and tax credits, may we presume you are talking about legislation?

MR. CALDER: I presume that sort of mechanism would be required.

CHAIRMAN WARSHAW: Does the panel have any other question of Mr. Calder?

Thank you, Mr. Calder.

MR. CALDER: You're welcome.

CHAIRMAN WARSHAW: Mr. Johnson now from the Industry Applications Society. Mr. Johnson.

MR. JOHNSON: Thank you, Dr. Warshaw. It is indeed a pleasure to be here today. The Industry Applications Society is a society of the IEEE and our position, or the position of IEEE was presented by Mr. Migliaro and we certainly support that position.

It is my point to bring to this hearing the opinions of the Industry Applications Society and my views as 14 years experience as an IEC delegate and as a U.S. manufacturer to those delegations.

I would like to say that the standards process inside the United States is in good hands. It works. We produce excellent standards and I believe it has already been stated as the best in the world and I certainly support that.

The carrying of those standards outside the United

States is maybe not as in good hands. We definitely need a more coordinated position on our technical issues outside the United States.

All of the various standard agencies in the United States have not had a coordinated effort to carry the U.S. position to the international marketplace. In today's experience, the U.S. manufacturer who takes the initiative, may represent the United States on a given technical committee without the obligation to represent a specific U.S. position. The only obligation he has is to represent his own commercial interests.

The process of carrying the U.S. standards to the international arena is further impeded as delegates from other countries, particularly in Europe, are funded to participate in their activities, and the U.S. manufacturer is not always in a position to do so.

Standards coming into the United States, the U.S. manufacturer should have a voice in acceptance and the coordination of standards produced in other countries which are being considered for acceptance in the United States.

In general terms, the U.S. manufacturers have relied on technical groups such as the IEEE, the ASTM and others, as a forum for producing standards. In addition, special industry groups such as NEMA and others have produced and coordinated with the above technical groups

such as IEEE and Underwriters Laboratories, Factory Mutual, and others.

The U.S. manufacturer believes that his technical base is protected because U.S. and other manufacturers are required to produce to these standards. Coordination of any standards coming into the United States involving products to be marketed here with other standards definitely has a Federal Government role.

As a starting point in better coordination of U.S. international standards activities, it may be appropriate to keep in place the current domestic standards process through the various technical groups and third party certification agencies and the national standards groups coordinating the same.

On the international scene, it appears that there is a definite need for a coordinating body to ensure that the U.S. has accurate and complete representation on the broad base of activities in the international standards arena.

Additional points I would like to consider for a government role is that the U.S. manufacturer should be able to comment on standards in the draft stage which are being put together outside of the United States in other countries.

The U.S. manufacturer needs the same access to

test laboratories and information, particularly in Europe, as the Europeans have here.

There is definitely a role for the Federal Government to ensure the U.S. has a balanced voting position in the IEC activities. The European community with the 12 voting countries can very often sway the ballot on a particular technical issue.

And finally, the European community has and is developing a strong infrastructure for quality certification along with product certification. We are yet in the United States in a position to do the same.

That concludes my remarks and I will answer questions from the pane.

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

Does the panel have any questions of either presenter? Charles?

MR. LUDOLPH: Mr. Johnson, there are some aspects of your testimony that would help with a little clarification from my standpoint.

I believe you said at about midpoint in your statement that there was, you saw a need or there was concern on your part about a need to coordinate standards that are coming into the United States.

Is that a representations of what you said?

MR. JOHNSON: Well, there is a very broad base of activities in that regard, as you heard earlier here today. Also, in our certification agencies, there are agreements between -- existing today -- between certain U.S. certification agencies and those outside the United States for accepting products.

However, there is not a coordinated effort that goes to the U.S. manufacturer base for seeing that the standards from which we might accept products into the United States agree with the products that are manufactured by U.S. based companies.

MR. LUDOLPH: As you see it, does that impose or has that imposed a burden on the U.S. manufacturer's competitiveness to get products accepted or to compete on a level playing field in the U.S. market?

MR. JOHNSON: I believe it is a chip in the card game of the international standards activities. As we negotiate our standards position outside the United States, one of those cards that must be played is how we accept standards inside the United States.

MR. LUDOLPH: So is the issue, as we have already established from previous statements, that the world, the United States has developed world class standards that are the best in the world and are able to compete against anything certainly in the U.S. market, and in that case

then, products that are developed that way, where is the disadvantage in having an acceptance body accept a lower-grade product or something manufactured to a standard that isn't of the same level?

MR. JOHNSON: From my experience, it is very subtle and it sometimes is because the products that are manufactured outside the United States may be manufactured to a same standard but through a different practice, a different code of practice.

MR. LUDOLPH: If I could just switch gears one minute, earlier in your statement, you indicated that you felt there was a need or that there was a concern over more closely coordinating the position of U.S. participants in international standardization, that the idea of speaking with one voice not only was a difficulty perhaps between government and the private sector in the United States, as has been stated in earlier testimony here this morning, but also that companies were representing views that may be proprietary or at least represented one single position rather than a coordinated position.

That is something new to me and I was always under the impression that coordination in certain international standards bodies was handled through a coordinating mechanism that ensured one voice. I wonder if you could elaborate on that.

MR. JOHNSON: On the broad base, I can only give you the benefit of my particular experience in that arena, and the views that have been carried through certain international technical commission meetings, IEC meetings, have been those on occasion which were definitely representing specific commercial interests.

MR. LUDOLPH: As it stands now, with the kind of -- you elaborated at the end of your statement about some of the concerns you had with your ability to participate in international standardization and that tracks very well with statements that were earlier made, that the key to good competition and good standards is to have open and direct participation in all standards development.

Do you see, in your opinion, a growing threat to your competitiveness or your society's memberships' competitiveness because of the generation of standards in areas other than the United States on a closed basis?

MR. JOHNSON: I don't think the basis is closed, but I think it is certainly slanted in favor of our competitive countries outside the United States, from my participation.

MR. LUDOLPH: Does that burden your manufacturers or your participants?

MR. JOHNSON: Yes, it has.

MR. LUDOLPH: Thank you very much.

CHAIRMAN WARSHAW: Thank you. Are there any other questions from any panel member?

Well, we thank both you gentlemen for presenting us with your views. Thank you for your time.

We will now have a break and reconvene at 11:15.

(Whereupon, a brief recess was taken from 10:55 a.m. until 11:15 a.m.)

CHAIRMAN WARSHAW: If we could have the representatives of the American Society of Civil Engineers and the American Welding Society join us at the podium, we would appreciate it.

(Pause.)

Gentlemen, it is a pleasure for us to have you here. We would like to start with Mr. Decker of the American Society of Civil Engineers.

Mr. Decker.

MR. DECKER: Thank you very much.

Good morning, I am James Decker. I'm vice president of the engineering firm of Wilbur Smith Associates and I currently manage international engineering design and construction projects for that firm in Columbia, South Carolina.

However, I am here today on behalf of the American Society of Civil Engineers where I serve on the National Board of Direction and I am the Board's contact member on

the management group dealing with codes and standards.

ASCE is a non-profit educational, technical and professional society, founded in 1852 with the objective of the advancement of science and profession of engineering to enhance the welfare of mankind. ASCE currently has over 100,000 members of whom 10,000 are in foreign countries.

ASCE has been involved with standards development since 1875 and from 1976 has been an accredited standards development organization.

It is appropriate to note, for today's hearing record, the importance of engineering and construction standards to public health, safety and welfare. If building and structural codes are the whole body of technical guidelines for design and construction, then standards are the essential bone and marrow of that body.

What begins as a private sector voluntary standards effort ultimately becomes part of building and construction codes and manuals in the hands of thousands of federal, state and local government officials.

The architectural and engineering community then designs public and private buildings and structures to conform to these codes. By recognizing that each of us is touched by the far-reaching effects of codes, we realize that it can make a difference whether those code-referenced standards are domestic or international; U.S. or German.

Although there are continuing efforts in the United States to harmonize the existing three major building codes, we understand that the EEC has already drafted a European community-wide compendium of model provisions for building regulations.

The stated purpose of the unprecedented compendium is international harmonization of building requirements. We are not aware of any involvement of the U.S. private sector in the development of this compendium.

It is conceivable that the European Compendium could exert a great deal of influence on building regulations and codes worldwide.

As the United States endeavors to maintain a strong competitive position in the global marketplace, the importance of compatibility among national and multi-national codes and standards becomes very apparent.

In our opinion, ANSI has not been able to adequately fulfill its role. Generally, ASCE -- that is, the society -- believes that the public and private sectors should develop a joint standards policy with no reduction of the private sector's time-honored role in standards development.

After 115 years of involvement in the U.S. domestic standard development system, ASCE believes that our voluntary decentralized standards system is among the most

effective and fair systems in the world.

The Society opposes the accreditation function of the proposed standards council of the United States of America which would have that organization accrediting U.S. standards developers. On the domestic side, ASCE supports maintaining and strengthening the existing standards development system.

On the other hand, we are confronted with two major obstacles in our drive to improve international standards participation. One is the lack of committed resources. The other is lack of coordination among those concerned with international standards.

ASCE believes some government action is necessary to overcome these obstacles and recommends a private sector/government partnership in standards activities. It is unlikely that the many segments of the domestic standards development system will be able to agree on a unified focus and a common voice in international standards without the government playing a collaborative role.

Current U.S. participation in international construction-related standards is weak and inadequate. It must be improved to broaden the acceptance of U.S. technology, professional services and construction products in the global marketplace.

Goods and services of the design and construction

industry are exported, imported, marketed and regulated through the common language of standards.

Of particular interest to the engineering profession are the nine Eurocodes for structural design developed by the European community. ASCE does have counterpart standards in most of these areas, but these need to be harmonized for international trade.

In some areas, there are major differences to iron out before we can attain truly international standards.

Despite these obvious reasons for involvement in international standards activities, the engineering professions have not been adequately involved. Nor have the construction contractors nor the construction products manufacturers been involved.

The reason for this void is lack of adequate financial resources. We need to find the mechanisms that will permit greater cooperation between the public and private sectors, in supporting U.S. participation in international standards.

Perhaps there should be contributions from the Federal Government, but industry contributions must also increase in order to ensure a stable source of funding.

Therefore, what is the ASCE blueprint for improving U.S. participation?

The need for improving that participation in

international standards activities has been identified. The next step is to develop a national consensus on the means for that improvement.

ASCE recommends that a national study commission be quickly established through an act of Congress and appointment by the President. The commission should be charged with recommending a structure or procedure for enhancing the effectiveness of the United States in international standards activities.

The study commission must have a balanced membership, broadly representing all affected interests, including but not limited to standards developers, technical and engineering societies, code authorities, government procurement and regulatory agencies, international trade interests and industrial groups.

The study commission should be adequately budgeted and staffed and should have no more than 12 months from its establishment to report its recommendations to the President and the Congress.

If such a commission existed today, ASCE would offer the following six principles as a framework for its deliberations: One, the existing domestic standards development system should be maintained and strengthened. Two, a unified focus on standards activities should be developed.

Three, a private sector/government partnership on international standards activities including financial responsibility on the part of both sectors, should be established and nurtured.

Four, a private sector voice in international standards should be preserved.

Five, increased private sector understanding and support for participation in international standards development is deemed essential, and six, the deliberations of the commission should result in a consensus of thought and a recommended process for enhanced U.S. participation in international codes and standards activities.

ASCE does not believe it has all the answers, obviously, on this complex question of international standards, but ASCE believes strongly that these six guidelines enunciate the correct initial approach for the United States to take in improving the effectiveness of participation in the international standards arena.

In closing, the American Society of Civil Engineers offers its assistance to the federal government and any interested party in working actively to resolve the thorny issues of this dialogue.

We commend the National Institute of Standards and Technology for demonstrating leadership and concern for the long-term health of American science and technology by

convening this hearing.

Thank you, Mr. Chairman.

CHAIRMAN WARSHAW: Thank you, Mr. Decker. We will be happy to include the full text of you and everyone else in this hearing in the record.

Are there questions from the panel? Mr. White.

MR. WHITE: Mr. Decker, you gave a very good example of differences in standards both within the United States as well as the fact that Europe has proposed some standards in structural design area and I assume you are using that synonymous with the building bode reference you made earlier, correct?

MR. DECKER: Yes, correct.

MR. WHITE: I was just wondering in terms of the focus of this hearing if you could comment specifically on what the different parties in the United States need to do specifically about dealing with the fact that number one, we don't have coordination in the United States with respect to the building codes -- I think you said there are three different building codes.

And second of all, the European community has already proposed some building codes so I was wondering if you could expand upon your testimony and speak specifically on these differences as to what you think needs to be done about it, both by the government as well as by standards

developers here in the private sector.

MR. DECKER: It is a subject that the society has talked about at some length. Unfortunately, ASCE does not have a unanimity of opinion even within the various committees.

I don't think that I personally can address your question, Mr. White, of exactly what role the society is going to be playing in this coordination. We identify it as a problem. We identify it particularly that when we look at international competition, we feel as a society that the European community is doing a lot more towards this coordination, a lot more than we are in this country.

But specifically, the society doesn't have a program addressing this so I can't be any more specific than that, I'm sorry.

CHAIRMAN WARSHAW: Mr. Donaldson.

MR. DONALDSON: Mr. Decker, you've confined your remarks to the standards development side and yet in the United States, the majority of the testing and certification activity does relate to the building community and building products industries.

I wondered if there is anything you might care to comment or offer as an observation with respect to testing and certification as it might bear on the issues we're looking at here.

MR. DECKER: The reason for the focus of our remarks is the fact that we are a standards development organization. That's where we put our energies. We realize that the other organizations do exist and we realize that there are issues in the testing and the certification area. I think I would leave that to others to comment on because our remarks are really from the perspective of ASCE as a standards development group.

MR. DONALDSON: So there was no intention.

MR. DECKER: No intention to eliminate it or no intention to -- it is really to focus in on what we do best.

MR. DONALDSON: Thank you.

CHAIRMAN WARSHAW: Ms. Moore.

MS. MOORE: You have mentioned the need, as have other participants, for increased private sector participation and support for international standards activities.

I wonder, could you tell us, in your vision, does that include increased acceptance of existing international standards where those are not well-disseminated in American manufacturing?

MR. DECKER: I'm afraid I don't quite follow your question.

MS. MOORE: I guess the question is, is increased participation in international standardization a two-way

street in your opinion?

In other words, when you go out to develop new standards, does that also involve an increased commitment to existing international standards which are not now being used in the United States?

MR. DECKER: Well, I think the increased support from the private sector that we are talking about is mandatory. I guess I would generally agree that it is a two-way street, as you have described.

I don't really have any further comment on that.

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

MR. DECKER: Thank you.

CHAIRMAN WARSHAW: We now have Mr. Richard Alley of the American Welding Society.

MR. ALLEY: Thank you, Dr. Warshaw.

The American Welding Society wishes to express its appreciation to the National Institute of Standards and Technology for the opportunity to express its views on the subject of international standards participation.

AWS is a professional technical society with over 36,000 individual members throughout the world. A fact sheet on AWS is attached to the statement.

To establish our credibility in the field of standards, the following information is relevant. AWS first

issued its welding standard in 1922. Today it has over 100 current standards on welding and related subjects.

Most of these are American National Standards, having been approved by the American National Standards Institute, ANSI. AWS has been an accredited standards developing organization in the ANSI system since 1979.

Twenty-five technical committees with over 1000 volunteer experts comprise the workforce that develop and maintain our standards.

Internationally, AWS has been delegated the administration of two committees: ISO TC 44, for Welding and Allied Processes, and IEC TC 26, for Electric Welding. In addition, it is the secretariat for the American Council of the International Institute of Welding, an ISO approved international standards developing organization.

As a result of the Single European Act of 1992 and other global market initiatives, it is only natural for the United States to examine the mechanics in place to deal with these issues.

AWS has participated in discussions with other peer organizations and concludes that no significant problems have been identified to warrant a change to different systems of operation.

As an organizational member of ANSI we have also concluded that, while the structure is sound, there is

certainly a larger role for the government to play in the system.

In addition to the areas where only government can operate such as treaties and regulatory areas, the government could accelerate its program of adoption of non-government standards, and the acceptance of these standards in lieu of what is generally referred to as military specifications.

This will pay dividends in at least two ways. First, it will eliminate an inordinate amount of unnecessary duplication of effort in maintaining military specifications for civilian items.

Second, it will allow government experts to participate on the standards developing committees of voluntary standards organizations. This second point will enhance the position of the United States in international standards activities since it is these committees that provide the experts for those activities.

In response to questions relating to government financial support for international standardization activities, it would appear that no direct support is warranted.

Indirect support in the form of tax credits to companies that participate in international standards activities would be a more prudent, consistent, and long-

term solution.

There is concern that direct government financial support could lead to government control. This would undermine the fundamental philosophy of the voluntary consensus system that has operated well for decades.

In conclusion, AWS wishes to suggest that the current system of handling international standards activities administered by the American National Standards Institute is adequate and that no significant changes are warranted.

Indirect government support in the form of tax credits to companies that participate in international standards activities is one way to assist in providing greater participation in those activities.

Thank you for the opportunity to present these views.

CHAIRMAN WARSHAW: Thank you, sir. Does any panel member have a question?

Well, I thank you both very much for your fine presentations and the time you spent.

I would now like to ask Mr. Hahn of the American Society of Agricultural Engineers if he could come forward.

(Pause.)

We are running about a half hour ahead of schedule so this will allow people to have a somewhat lengthier lunch

hour. We will reconvene at 1:30. At the conclusion of this morning's session, we will break for lunch.

We have both Mr. Russell Hahn and Mr. Robert Lanphier, the American Society of Agricultural Engineers. Welcome and please comment.

MR. LANPHIER: Good morning. Thank you, Dr. Warshaw and members of the panel.

I believe that we ought to recommend, Dr. Warshaw, that you be named protocol officer for hearings in Washington for the way you run these hearings, which is extremely well.

CHAIRMAN WARSHAW: We have sandbags above.

(Laughter.)

MR. LANPHIER: I am Robert Lanphier, President and Chairman of AGMED, Inc. in Springfield, Illinois and President-Elect of the American Society of Agricultural Engineers.

With me today is Russell Hahn, Director of Standards and Technical Services for ASAE, the society we represent.

ASAE welcomes the opportunity to provide comments to the National Institute of Standards and Technology in their evaluation of the role of the Federal Government in international standards activities.

The American Society of Agricultural Engineers is

a professional and technical organization of 11,000 members, active worldwide in the application of engineering knowledge and technology for agriculture.

Standardization has been a principal mission of the society for 80 years, and standardization continues to grow in importance to the agricultural industry.

The ASAE holds an important niche in the federation of technical societies, trade associations and agencies that develop and maintain consensus standards for the U.S. economy.

The ASAE Cooperative Standards Program is the only voluntary standards program in the world devoted exclusively to the development of a system of standards and engineering practices for agricultural equipment and processes.

ASAE is accredited by ANSI as a developer of consensus standards. Under the auspices of ANSI, the U.S. member body if ISO, ASAE administers U.S. Technical Advisory Groups for several ISO subcommittees. The society works cooperatively with the Equipment Manufacturers Institute and the Irrigation Association in this area.

The notice for this hearing and the subsequent materials distributed by the Office of Standards Services of NIST implied an interest in assuming some level of government control over the voluntary consensus standards system that presently serves the interests of the United

States.

I refer especially to the outline for a Standards Council of the United States of America.

ASAE strongly cautions against government imposition of any fundamental change in the present voluntary consensus standards system. The present, self-regulating amalgam of organizations and agencies is consistent with the principle of free enterprise and the concept of volunteerism fundamental to the United States.

This is not to say that the system is perfect or without problems and difficulties. However, there is nothing to indicate that any present problem and difficulty can be ameliorated or solved easily or more effectively through imposition of government control or management.

The present system is self-regulating. ANSI accreditation requirements assure that developers of consensus standards follow a policy of openness and due process. These elements are essential to the development of standards to meet the needs of industry and commerce without violation of antitrust law.

International standardization is beginning to receive the level of attention from corporate America that has been needed for the last 20 years. Activities in Western Europe toward a single unified market are stimulating the standards-writing community in the United

States to greater involvement with ISO and IEC and to the harmonization of the U.S. and international standards.

Continuation of a strong partnership between the Department of Commerce and the voluntary standards developers is essential. ASAE deplores a divisiveness implied by some correspondence and materials distributed in relation to this hearing.

ASAE endorses principles set forth in the August 22, 1989 letter from Manuel Peralta, President of the American National Standards Institute, to the Honorable Doug Walgren, Chairman of the Subcommittee on Science Research and Technology of the House Committee on Science Space and Technology.

This letter concerns Mr. Pealta's testimony before the subcommittee's hearing on July 25, 1989 concerning international voluntary standards activities and the role of the Federal Government.

These principles are stated: One, the formulation of international trade policy for the United States is the responsibility of the Federal Government. That policy has been and should continue to be the realization of the global marketplace free from artificial barriers to trade in any form.

Two, voluntary consensus standards that are developed and approved by private, non-treaty international

organizations such as ISO and IEC, are consistent with a free trade policy and should be encouraged.

And three, in accordance with our free enterprise system and considerations of efficiency and the proper allocation of resources, the United States should be represented in private, non-treaty international organizations by a private sector coordinator of voluntary standards development activity.

These principles make the respective roles of the Federal Government and the federation of standards organizations in the private sector quite clear.

The standards community in the United States has made great strides in recent months to address the concerns and to provide information relating to EC 92 as evidenced by the ANSI Global Standardization News, Volume 2 and the results of continuing meetings between ANSI-coordinated private sector delegations and CEN, and CENELEC representatives.

The exchange of correspondence between Assistant Secretary for International Economic Policy, Thomas J. Duesterberg and Mr. Peralta in letters dated September 18th and November 15th, 1989, plus Mr. Duesterberg's address last week at the ANSI conference confirm that the framework is already in place for a strong partnership and coordination between the private sector and the Department of Commerce

regarding international standardization.

ASAE applauds and encourages these efforts. ANSI and its federation of U.S. standards-writing organizations must maintain a lead role in relationship with international private sector standards bodies such as CEN and CENELEC, ISO and IEC.

The Department of Commerce of course must play the key role in government interactions and trade policy. These areas, however, must be carefully coordinated to best serve the long-term interests of the United States.

There are areas where NIST and other offices of the Department of Commerce can help strengthen U.S. participation in international standardization. ASAE encourages Federal Government assistance in educating corporate America to the importance of standards.

Too few industry leaders recognize the full benefit of standards to their companies and customers. The Industry too often has taken the voluntary standards setting process for granted. This deficiency makes it difficult for engineers and others with technical expertise employed by these companies to participate fully in the standards development process both domestically and internationally.

Further, standards writing organizations such as the ASAE Cooperative Standards Program need to be more fully funded through direct company support on a consistent and

equitable basis.

Employee participation and financial support are generally forthcoming when company management realizes the impact of consensus standards.

We need your voice, the voice of the Department of Commerce, to help educate corporate America to the benefits of both domestic and international standardization. Also the Department of Commerce can lead the way in educating the general public to the importance of standards in daily life.

ASAE encourages the Department of Commerce through the Interagency Committee on Standards Policy to continue the use of private sector standards by the government whenever practical, and to encourage broader participation of government employees in the private sector standards development process both domestically and internationally.

ASAE is fortunate to have the participation of engineers from the USDA ARS, USDA SCS, EPA and other government agencies. However government employees are frequently unable to full lend their expertise to international standardization because time and travel support for that purpose are not available.

Funding of international standards participation is difficult for technically qualified people employed in industry, particularly for smaller companies to participate and to be heard. The government should consider additional

tax or other incentives for direct industry support of standards organizations such as the ASAE Cooperative Standards Program and for direct expenses associated with participation of employees in standards work.

In summary, ASAE sees no need for a fundamental change in the U.S. voluntary consensus standards system. As was pointed out earlier this morning, the system works very well, and if it isn't broken, don't fix it, and certainly don't screw it up.

(Laughter.)

I'm supposed to smile when I say that.

Further, ASAE urges a close and cooperative effort between the standards development community and the Department of Commerce in regard to EC 92 and the relationships between standardization and international trade.

ASAE encourages the Department of Commerce to further support standardization by supporting educational programs for corporate America, by encouraging and supporting greater government employee participation in the private sector standards process, and by promoting additional incentives for industry support of private sector standardization both domestically and internationally.

If the U.S. Government correctly wishes to support the standards system through funding and other resources,

then let them do so in coordination with and through the existing private sector standards infrastructure.

Thank you for this opportunity to be with you and express the views of the American Society of Agricultural Engineers.

CHAIRMAN WARSHAW: Thank you, Mr. Lanphier. We appreciate your comments.

Any panel questions? Mr. Donaldson.

MR. DONALDSON: I am afraid this sounds a little bit like the repetition of the question I asked the gentleman from ASCE, but in the case of ASAE, do you have any relationship with EMI, the Equipment Manufacturers Institute, or other trade associations that are concerned more in the testing side where it has been brought to our attention that there had been questions in the past?

If you do have any involvement there, do you wish to comment?

MR. LANPHIER: ASAE is concerned, as was expressed earlier, with the standards setting and that is what we do primarily as contract certification and accreditation.

CHAIRMAN WARSHAW: Any other questions? Ms. Moore.

MS. MOORE: I would just like to round off by asking you a little information about your organization. You have 11,000 members. Are they all within the United

States or do you have overseas membership as well?

MR. LANPHIER: No, we have overseas members.

MS. MOORE: And to what extent are the standards you developed used overseas, to your knowledge?

MR. LANPHIER: Pardon?

MS. MOORE: To what extent are the standards you developed used in other countries, to your knowledge?

MR. LANPHIER: We have contributed to a number of the ISO standards. Russ, do you want to comment?

MR. HAHN: This is a short leash. ASAE standards frequently provide the technical basis for the U.S. position in the development of international standards so to that extent, at least, they are very supportive of the ISO process.

Additionally, I am aware that many ASAE standards are purchased not only by our members but others in overseas countries.

I might respond a little further to your question. We have members in over 100 countries, representing probably roughly ten to fifteen percent of our membership.

MR. LANPHIER: If I might comment, it is a policy also of ASAE to look at any existing ISO standards before we start the domestic standards process.

MR. DONALDSON: I must say that your last statement anticipated my question, but having thus said it,

I would like to follow up. Having looked at those standards, is that a point of departure? Do you, in fact, incorporate them? What do you do when you look at them?

MR. LANPHIER: Russ deals on these on an operational basis.

MR. HAHN: Mr. Donaldson, we are really only at the beginning stages of this entire process. We see the great need for increasing efforts towards harmonization of U.S. and international standards.

The intent would be, whenever possible, to adopt the international standard. There may be circumstances because of cultural practices or other safety reasons, for example, that may not be practical for the United States to follow the international standard.

In those cases, we should work towards changing the international standard.

CHAIRMAN WARSHAW: I want to thank you both, Mr. Lanphier, Mr. Hahn, for your fine contribution.

We will now adjourn for lunch. I would ask everybody to be back here at 1:25 so that the first two presenters can appear at 1:30 sharply. The first two will be the National Fire Protection Association and the american Association for Medical Instrumentation.

We are adjourned.

(Whereupon, at 12:15 p.m., the hearing was adjourned, to reconvene the same day at 1:25 p.m.)

AFTERNOON SESSION

CHAIRMAN WARSHAW: Welcome back. We'll open the afternoon session. Again, for some of you that may have missed the announcement earlier this morning, there is a Federal Register notice out and we have extended the comment period -- that is, for the receipt of written comments -- until June 5th, until the close of business June 5th, another 60 days following this hearing in view of the number of comments that we have received to date, as well as the fact that some may be inspired as a consequence of these oral presentations to submit additional comments.

So the comment period has been extended until June 5th.

This afternoon we are starting with two organizations, the National Fire Protection Association and the Association for the Advancement of Medical Instrumentation.

So I will ask Mr. Tony O'Neill, Vice President of the NFPA to introduce those with him and to offer his comments.

MR. O'NEILL: Thank you very much, Mr, Chairman, and thank you behalf of the NFPA and its 53,000 members for this opportunity to present NFPA's views on the U.S. standards system here today.

I am accompanied by Art Cote to my left who is

chief engineer of NFPA and runs our standards-making system, and also Dan Piliero, NFPA's general counsel.

NFPA is an organizational member of the American Standards Institute and in this connection, I also currently serve as Vice Chairman of the Board of the American National Standards Institute.

I am here today to tell you that we support the American National Standards Institute and its coordinating role here in the United States and its efforts overseas and in fact, its renewed leadership overseas of the last couple of years with respect to the EC 92 initiative.

I will be talking here today however about NFPA in the time allotted.

NFPA has a very deep commitment in improving the United States participation in international standards. As was stated in the Federal Register notice which Stan has just mentioned, the intent of this hearing is "the gathering of information, insights, and comments related to improving U.S. participation in international standards-related activities and to possible government actions," and I emphasize that last part.

We soon found out what this latter comment meant, namely the Department of Commerce is exploring the possibility of establishing a Standards Council of the United States whose role would be to oversee and accredit

American private sector standards writers.

We are opposed to any additional government regulation in this area, and I will elaborate on that, but first let me tell you a little bit about NFPA.

I have mentioned we have 53,000 members. We have 4500 volunteers who work on our standards-making committees. We have a staff of 350 who 90 percent of their activity is in support of that operation.

And following my colleague, Joe O'Grady, this morning, we would be more than happy to submit for the record the 12 volumes of National Fire Code, some 8,000 pages of standards that are available from the NFPA for the record.

In addition, internationally, NFPA has launched a project with the Canadian Standards Association, CSA, to harmonize the National Electrical Code and the Canadian electrical code as a result of the Canadian/U.S. free trade agreement.

The NEC, National Electrical Code, is one of the most widely used safety standards in the world. We distributed about a million copies of these over a three year period.

It is sponsored by NFPA, along with the some 270 other codes and standards.

I should mention that NFPA has members in over 90

countries throughout the world. Our standards are quite widely distributed and used in that fashion.

Now I would like to move on to why NFPA opposes further government oversight by accreditation of private sector standards-making organizations.

Simply stated, it is not necessary and it would be counterproductive. Why? First and foremost, the U.S. voluntary standards system is efficient, cost-effective, highly productive and results in the promulgation of thousands of quality standards each year.

No other nation produces as many quality standards in as short a period of time at such a relatively small cost.

Secondly, as the single largest users of private sector developed standards, the Federal Government which is represented here today, benefits most from the private sector standard system and the volunteer structures that are in place.

Thirdly, U.S. standards systems mirrors the unique United States cultural commitment to free enterprise. The market dictates the extent of participation by companies, small and large, in standards work. This results, we believe, in an optimum utilization and allocation of resources.

It would be a serious mistake in our view to alter

the basic character and nature of the system used so successfully for so many years in the United States, especially at a time when the Federal Government is trying to reduce its budget by encouraging private initiatives.

Government control involves more time, more cost and often produces a less effective and less responsive product. I would remind the participants here today of the mobile home standard, the Mobile Home Construction Safety Standard which was formerly the ANSI NFPA Standard 501(b) which was taken over by HUD, Housing and Urban Development, nearly 15 years ago.

It has been virtually frozen in the state-of-the-art of 15 years ago without any real change allowed.

Pursuant to OMB Circular A-119, agencies of the executive branch are required to defer to the private sector for the development of consensus standards as much as possible. Numerous government agencies use these standards.

The proposed Standards Council of the United States or SCUSA would impose government regulation of the voluntary standards system in the United States. While SCUSA would presumably not have authority to make substantive changes in standards, it would accredit standards developers.

The impact would be major. As Professor Robert Dixon points out in his classic treatise, Standards

Development in the Private Sector, Thoughts on Interest Representative, and I quote him and I would submit this for the record, Mr. Chairman, "the line between procedure and substance is not nearly so bright and perhaps not as different in influence on outcomes as many assume. Former Senator Wayne Morris is said to have proclaimed in his law teaching days that with authority over procedure, he could arrange substance."

In our written testimony, and we have extra copies of that through our Washington representative, Jack Gerard who is here today, we have provided your panel with an extensive discussion of legal considerations of private sector standards development which has been put forth and prepared by NFPA's general counsel, Dan Piliero.

We would like to supplement our written testimony previously submitted with an NFPA position paper which this position paper specifically addresses the legal issues as they relate to Section 413 of the Trade Act of 1979. We will leave that with the panel and submit it for the record.

Now, our position, as you can see, is the current NIST proposal would add an additional layer of regulation that would go much further by adding the requirement of accreditation. That proposal would fundamentally change the role of the U.S. Government in the standards development area.

What is now voluntary and private would be co-opted into the governmental, or with accreditation, necessarily comes government standards by which that accreditation is to occur.

In short, those who regulate through accreditation have the power to control.

There have been numerous prior proposals from the Department of Commerce, the Office of Management Budget and the Federal Trade Commission which are highlighted in these documents for the record.

Each of these concluded that the private sector standards-making organizations should be strengthened but should not be taken over and supervised by the Federal Government.

It is obvious that the U.S. system of international standards, and I would like to talk about international for just a moment, that system of international standards representation is different from the system used by many other nations.

To the extent that international standards are perceived to have an important and meaningful impact on a particular industry or interest group, participation in international standards development will receive active support financially and otherwise.

This has certainly been our experience at NFPA.

Those interested parties who participate in international standards development process bear the expense associated with that activity. This is what is known as the free enterprise system at its best.

We would look at any direct funding by the Federal Government of international standards activity with great caution because with direct funding comes strings attached and the vagaries of federal budget cycles.

It should be clear by now that the historic and current view is that the U.S. Government does not and should not be the sole representative of the standards-making system in this country.

Our government has a clear, active role to play in U.S. participation in European developments. That role is as a partner with the private sector standards-making system, not its overseer.

As to government funding, it is our view that the users of standards should bear the cost of their development. To that extent, the government should pay its fair share of the cost of developing those standards which it uses.

This, we believe, is the sole funding issue. As one of the greatest users, the government is probably the single largest beneficiary of the voluntary consensus standards system and therefore should be one of the systems

largest supporters, not with grants, gifts or contracts, but with appropriate recompense for benefit received.

In conclusion, and I would like to conclude by saying the private sector standards-making system in the United States is functioning in parallel with our nation's free market system. As long as the standards promulgated by the various standards-making organizations are state-of-the-art, provide a forum for differing views, are open to all affected interests and provide due process through consensus and balance, then private sector interest will be motivated to participate even when their individuals views are not necessarily carried forth as consensus in the standards.

Thank you, Mr. Chairman and the panelists for the opportunity to express our views today and we would be pleased to answer any questions or submit additional documents for the record.

CHAIRMAN WARSHAW: Thank you, Mr. O'Neill. If you would leave those with us, we will put them in the record as you wish.

Are there any questions from the panel? Mr. Donaldson.

MR. DONALDSON: Mr. O'Neill, in your reference to the agreement or the arrangement between NFPA and CSA, working on making the standards compatible, is there any government involvement on either side in that? Or is that

strictly through private sector organizations involved in that process?

MR. O'NEILL: It is strictly two private sector organizations. Our Board of Directors directed that we establish a liaison with the Canadian Standards Association which we did. We have set up a steering group on both sides of the border. They will be meeting for the first time in April and they have identified some six or eight areas which we believe and they believe can be harmonized between those two standards. That process is going forward.

MR. DONALDSON: And there is no government involvement on the CSA site other. Do you have to report to the SEC?

MR. O'NEILL: Other than those officials who might participate on that standards review group, they have -- and I am not certain but I will check that on the records to see if there are any Canadian government officials on that review group -- but in terms of and as far as my recollection is, the answer would be no. I do not believe that there is any Canadian government officials on that steering group.

MR. DONALDSON: Okay, thank you.

CHAIRMAN WARSHAW: Mr. Ludolph.

MR. LUDOLPH: Mr. O'Neill, I am familiar with your program. I had the good fortune to share in one of your

long-range planning meetings. I know that you were at a very early instance beginning to look at the 1992 program, and certainly I know that you have world interests in the same way.

I was wondering, in that light in the past two years, have you had interest on the part of your membership or on the part of your Board in developing compatible codes, electrical codes with the European codes that are being developed in the electrical area.

MR. O'NEILL: First of all, let me address the earlier question or point. Yes, our Board of Directors long-range planning committee has established this as a priority, the EC 92 and world events. You were good enough to come down and brief us on your program at the Department of Commerce and that was much appreciated.

It remains a high visibility item within the long-range planning committee.

As to the specific question in terms of electrical correlation across the Atlantic Ocean, no, that has not started yet. There has been no real push within NFPA to do that.

I think one has to recognize that there is some major, major changes in the infrastructure of electric power distribution within Europe as compared to the United States, but I would foresee and I would guess that there will be an

opportunity to proceed on that line of cooperation in the future.

I can't predict when, but to answer your question, there has been no real pressure at this end to do that.

MR. LUDOLPH: Is the lack of pressure so far from a perception that the contacts in developing codes or standards in the international standardization area sufficient?

MR. O'NEILL: Yes, I think we are very comfortable with the IEC and the U.S. National Committee representation and what is being achieved there under the chairmanship or presidency of Ron Reimer who will be talking to you this afternoon, and many of the same folks who participate in the development of the National Electric Code and there are what, some 250 that participate in this and also, Mr. Ludolph, are heavily involved in that IEC process.

MR. LUDOLPH: Just to switch gears slightly, on another matter, do you see among your manufacturers or participants and certainly the fire code inspectors, a movement within the United States driven by the marketplace or private sector forces to more uniformity among inspection entities across the United States in the electrical or fire code area?

MR. O'NEILL: In terms of electrical inspection, there is a high level of uniformity throughout the United

States because you have a National Electrical Code which is adopted in over 40 states within the United States.

With the infrastructure of our staff, the electrical inspector staff, the National Electrical Manufacturers' support, the IBEW, all of the NECA, National Electrical Contractors Association, ABC, I could go on and on and on, who gather together around the code to make sure that it is properly and adequately interpreted and enforced. Does that hit the question?

Here in the United States, anyway, that's the way it's done. Same way by the way in Canada with the Canadian electrical code as we understand it.

MR. LUDOLPH: And I also understand there is a fire code in building construction, is that true?

MR. O'NEILL: Okay, let's talk about that. The NFPA produces what is known as a set of National Fire Codes which are both code required for installation of various types of equipment such as electrical or flammable liquids, gases, that type of thing.

But we also have a whole cadre of what I would call installation standards that tell you how to protect our built environment. An example would be the automatic sprinkler standard which is the most widely used sprinkler standard in the world. There are fire extinguisher standards, that type of thing.

The model building codes which are represented here today and which will be testifying later on, adopt these NFPA standards and some up to 90 or 100 standards as the requirements for that model code.

So then when the model code is adopted by a state or a local government, the reference standards go along with that. That is true of ASTM standards and numerous other standards that go towards building an infrastructure to make the environment and the places where we live safer.

CHAIRMAN WARSHAW: Okay, thank you very much, Mr. O'Neill, we appreciate it.

MR. O'NEILL: As you can see, I would be more than happy to go on and on.

(Laughter.)

CHAIRMAN WARSHAW: Well, we know you have voluminous material and we would be happy from now to June 5th to receive any additional information or thoughts you have as well.

MR. O'NEILL: Thank you, Mr. Chairman, again.

CHAIRMAN WARSHAW: Mr. Miller, would you care to introduce the members of the Association for Advancement of Medical Instrumentation that you have with you.

MR. MILLER: Yes. My name is Michael J. Miller and I am Executive Director of the Association for the Advancement of Medical Instrumentation, or AAMI, as it is

called.

Accompanying me today are AAMI President Dennis R. Stupak, president of The Stupak Network; Robert Flink, co-chairman of the AAMI Standards Board and Director of International Regulatory Affairs at Medtronic, Inc.; and Mort Levin, chairman of the AAMI International Standards Committee and Quality and Regulatory Affairs consultant at Hewlett-Packard.

As I sit here and see the people to my left, I see including myself, about 60 years of standards experience, and as I look to my right, I see another 60. That adds up to about 120 years of standards experience and I think we finally achieved parity with the impression array of experts sitting across the room today.

(Laughter.)

I hope that we can achieve the same parity as a result of these hearings today.

AAMI is a membership association of 5,000 health care professionals employed by manufacturers, health care facilities, academic and research institutions and government agencies that develop, manage, or use medical technology.

AAMI develops standards for complex medical devices such as programmable, implantable pacemakers, heart valves, drug infusion devices, and patient monitoring

equipment.

AAMI's standards are used by U.S. Government agencies, industry and health care facilities for design, procurement, technology assessment and management. Our standards are used or adopted by foreign governments, the United Nations, and such international organizations as IEC and ISO. These standards, as you know, are essential to national and international commerce and trade.

We will respond to the issues you have raised in the context of our experience with how government agencies have contributed to AAMI's national and international standards programs.

According to recent Department of Commerce estimates, medical devices represent a U.S. trade surplus of $1.7 billion and this surplus is growing.

To ensure that the United States industry maintains its competitive position internationally, the U.S. must, through government and private sector agreement and coordination, communicate its positions on international standards, testing, and certification issues with one voice.

The unified voice of the government and private sector has been fundamental to the success of AAMI's national and international standards programs -- a success that benefits industry and the public.

AAMI believes that important roles exist for both

the public and private sectors in international standards and that the strength of the U.S. system must continue to be based upon a defined and shared responsibility.

The private sector will assume responsibility for its role and will bear its portion of the cost. While we feel that government is an essential participant, it should not direct international standards development.

The issues related to certification and testing are complex and require further cooperative study and resolution by government and the private sector.

Underlying our testimony is the fundamental belief that the management and technical knowledge necessary for effectively directing and coordinating international standards exists inherently within the private sector.

Private sector experts who must use standards are in the best position to determine priorities and to select and fund experts.

Representation of national interests by knowledgeable U.S. technical experts -- from government and the private sector -- at the working level is essential to the acceptance of U.S. positions in international standards forums.

One of the most important shared responsibilities of the government and the American National Standards Institute is helping the private sector gain access to

international standards forums and fair opportunities for the expression of U.S. positions on important technical issues.

U.S. experts speaking to foreign experts, who have a practical, working knowledge of specific medical devices, is the most effective way to ensure harmonization of U.S. technical positions with those of other countries.

In our experience, this kind of interaction has cut through bureaucratic red tape to resolve important technical issues that could have affected U.S. companies adversely if not resolved.

Quite frankly, the red tape that the experts have had to cut through has often been created by SCUSA-type organizations that accredit representatives who do not have a practical knowledge of medical devices. We feel that the government and the private sector must coordinate and cooperate in the selection of these types of experts.

The American National Standards Institute, of which AAMI is a member, has proved to be an important link between the many industries and voluntary organizations that are involved in national and international standards.

ANSI plays an important coordination role and has assisted our efforts to gain U.S. representation in international standards activities. I might mention that AAMI's standards program is accredited by ANSI.

To date, we have no evidence that the existing system presents an obstacle to our gaining adequate representation in international standards activities.

Certainly, funding from the government or other sources would assist AAMI's efforts, but we see other areas where government assistance would be more useful.

To ensure U.S. success, it is important that the federal government lend its considerable influence and political support to private sector efforts such as AAMI's.

A role that only government can fulfill is to integrate support of voluntary international standards efforts into its formal trade policies. The government should help ANSI protect U.S. interests by ensuring that international standards and the process for their development are not used as trade barriers.

Additionally, we encourage the administration to facilitate the support and participation we have received from the FDA's Center for Devices and Radiological Health and other agencies such as the National Institutes of Health. FDA and NIH's participation and influence has been fundamental to our international standards work.

We are convinced that the proposal for a Standards Council is an unnecessary and inappropriate response to complex issues. Strong government intervention would ultimately create an additional and unnecessary level of

administration and control that would only produce restrictions, delay, and additional expense to the public and the American industry.

We seriously question whether SCUSA or any government agency can direct U.S. participation in international standards as effectively as the private sector can.

As an alternative to the SCUSA proposal, ANSI and the government should develop a working relationship that will ensure an effective and coordinated role for the U.S. in international standards setting, testing and certification.

It is essential that this relationship continue to provide the means for government agencies to endorse, support and provide experts to assist our efforts. FDA and NIH committee chairmen, for example, lend valuable credibility to AAMI's international standards efforts.

The comprehensive inventory of medical device standards developed by AAMI in the 70's and 80's is the essential foundation upon which the AAMI international standards program was built. The government was a catalyst and an essential partner to the effort that produced these standards.

As we outline in more detail in our submitted statement, these precedent-setting experiences convince us

that government and the private sector can coordinate their roles in international standards activities without additional government controls.

We emphasize that although the FDA had the authority, under the Medical Device Amendments of 1976, to become, in effect a powerful SCUSA, the FDA chose instead to rely on the private sector -- although it was, at all times an active, essential and contributing participant.

The FDA has contributed leadership, experts, and financial resources to expedite high priority standards work as a response to its 1976 mandate. Most important, FDA communicated to the industry the importance of good voluntary standards and the need for rapid deployment of resources to meet a congressional mandate.

Similarly, government can provide is leadership, experts, financial resources, and credibility to educate industry about the strategic importance of international standards and to help secure industry support and participation.

The kind of teamwork that AAMI is advocating between government and the private sector has already produced an effective program for advancing the U.S. industry's position on EC and international standards.

Working closely with ANSI, government, and HIMA, AAMI has assumed leadership positions in strategic areas of

standards development in ISO and IEC.

These leadership positions will expedite the development of standards needed by the EC, which will help persuade CEN and CENELEC to defer to IEC and ISO standards. CEN and CENELEC have confirmed that their policy is to defer to ISO and IEC standards when possible.

In short, AAMI proposes to help expedite ISO and IEC work to help ensure that important EC standards will be developed in ISO and IEC where the U.S. has defined rights of participation. To date, this strategy has been successful.

As anticipated, ANSI and AAMI have assumed responsibility for national and international standards secretariats for ISO and IEC committees, subcommittees, working groups and U.S. advisory bodies in strategic areas.

I will provide examples of the practical results of our cooperative efforts.

AAMI/ANSI will soon be designated secretariat of a new and highly influential ISO Technical Committee on medical device sterilization, a technology fundamental to medical device development and use.

It is our objective that this technical committee develop international standards that will be used by all countries of the world. We are holding meetings with CEN leaders to discuss coordination of this work in April. An

FDA sterilization expert, Virginia Chamberlain, will chair this important technical committee.

AAMI has also begun commenting directly to CEN on its standards for medical device sterilizers. We were alerted to the CEN sterilization standards through the ANSI Reporter. ANSI provides direct access to CEN and CENELEC.

It is worth noting that the U.S. working group on biological testing and evaluation -- administered by AAMI -- developed an important draft standard in less than two months -- an impressive feat to anyone who is familiar with standards setting.

The recently formed CEN committee that corresponds to the ISO biocompatibility effort has decided that it will defer to this and other work if expedited. CEN sees this document as a model document and is holding it up to other working groups and committees in this area.

The private sector and government have developed and implemented a program that provides industry access to important decision-making processes that will enhance the medical device industry's competitive position in Western Europe and the rest of the world. This program has not required government intervention of the type envisioned by the SCUSA proposal.

Out ability to serve the U.S. industry can, however, be bolstered by additional support from the

government and an effective and cooperative relationship between ANSI and government.

The relationship between private sector organizations and government agencies will determine how effectively the United States industry is represented in international standards and world trade. Because this relationship will have significant impact on the public interest and welfare, it requires careful thought and definition.

Our experience in working with government agencies on domestic and international standards convinces us that government and the private sector can forge a partnership that will greatly enhance the efforts of voluntary standards bodies such as AAMI and advance the competitive position of United States industry.

In conclusion, we offer our experts and experience in defining this relationship. We would welcome the opportunity to be part of the process of resolving these important issues.

Thank you for the opportunity to present our views.

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

MR. WHITE: Mr. Miller, I have questions in two different areas.

The first has to do with your statement which alluded to obstacles at times to the development of international standards. I got the impression that there are certain kinds of obstacles that exist that makes it difficult at times to get involved and actually participate in international standards.

Did I hear you right, or could you elaborate a little on that?

MR. MILLER: Well, I think the reference that you heard was in the context of times we find that monolithic standards organizations around the world appoint experts that aren't practically knowledgeable about medical devices.

We find this an impediment to moving standards forward in ISO and IEC. I should have made it clear, if I didn't, that the types of obstacles that I was talking about are more in the international arenas than certainly in the United States.

MR. WHITE: In terms of the government, and I guess I want to follow through a little on that, in terms of the role of ANSI and AAMI and the government and the private sector, could you give us some suggestions to what we in the United States should do besides funding, obviously, to improve our participation in international standards?

You mentioned a cooperative approach, but I was wondering if you could amplify that a little because there

are a lot of issues involved, not only standards development but testing and certification issues.

MR. MILLER: I am not sure that AAMI's experience is really in the testing and certification area so I would defer to other people on that, but I think in our experience, what we have gained from government has been very useful, and that is in effect an endorsement of our activities in the international arena.

At all times, at international meetings, there are at least one and sometimes as many as four FDA experts participating in activities where AAMI is a U.S. secretariat. That not only provides experts to help with the work, that also lends credibility to the effort that is invaluable. That's also true of people from NIH.

With that type of support and credibility and experts, we have found that we have been able to do the job we need to do for the industry in our international efforts. If somehow the government can develop a policy to a similar effect in other areas, we would hope that other industries would share the benefits and reap the benefits of government involvement that we have.

MR. WHITE: Do you think the medical device industry is adequately supporting the development of international standards?

MR. MILLER: I think that that transition is

occurring very well. I think that this is an area where both the government and the private sector can work together. I know in your role as chairman of the medical device standards board of ANSI this is one of our missions, to get the word out that there are important priorities here.

I think that that educational message is being, the word is being sent out, but I think that we need to work harder to get it out. We've received more than we expected in some respects from the industry in terms of experts and participation and financial support.

We contemplate that during the next two years, as we continue to get the word out about these activities and their importance, that we will gain additional support, but once again, I think that efforts such as yours as chairman of the MDSB and the MDSB and ANSI's effort to get the word out is very important.

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

MR. MILLER: Thank you.

CHAIRMAN WARSHAW: We very much appreciate the contributions of both NFPA and AAMI today and please, if you have anything additional that you would like to submit, we would appreciate receiving it.

Thank you.

MR. O'NEILL: Thank you, Mr. Chairman.

CHAIRMAN WARSHAW: Now I would like to ask the Council of American Building Officials and the American Plywood Association if they would join us here.

(Pause.)

Good afternoon, gentlemen. Thank you. James Bihr is leading off for CABO. If you could introduce ---

MR. BIHR: Mr. Kuchnicki will.

CHAIRMAN WARSHAW: Okay, Mr. Kuchnicki.

MR. KUCHNICKI: Good afternoon. My name is Dick Kuchnicki. I am the president of the Council of American Building Officials. We appreciate the opportunity to testify at this public hearing and first of all, I would like to start out by saying that CABO is the umbrella organization for the three model code organizations that were alluded to this morning -- Building Officials and Code Administrators International, the publishers of the National Building Code, the International Conference of Building Officials which is the publisher of the Uniform Building Code, and the Southern Building Code Congress International which is the publisher of the Standard Building Code.

It was alluded to this morning that the fact that there are three model codes rather than one leads to a disjointed effort. I think it is not totally true because since 1972 when CABO was formed, one of the major objectives

was to work towards a uniform code requirements and that is one of the basic philosophies behind CABO, however, in view of the fact that these are three independent organizations that have their own membership, own bylaws, we felt rather than testifying as CABO at this hearing, that it is important to hear from each of the three individual organizations.

We have present here today Mr. James Bihr who is the President of the International Conference of Building Officials; Mr. Paul Heilstedt who is the Executive Director of BOCA and Mr. Bill Tangye who is the chief executive officer of the Southern Building Code Congress International.

So we are going to do this a little different than the other groups. We are going to go through each individual, starting down at the end with Mr. Bihr.

MR. BIHR: If I may, Mr. Chairman. Thank you for the opportunity to speak to you today. We would certainly like to made our codes and standards available as a matter of the record also, and probably extend those at membership rates if you are interested.

(Laughter.)

MR. BIHR: ICBO was founded in 1922 for the express purpose of developing a uniform building code, and in 1927 such a code was introduced and has been re-

introduced every three years since that time.

It has been adopted widely throughout the United States. It is a code produced largely by donated efforts and the codes are adopted by a voluntary act by local, regional, state, and federal agencies, both throughout the United States as well as in foreign countries.

Recent studies indicate that over 95 percent of the local communities in the United States use a model code, generally by adoption by reference and with minimal amendments.

Our organization provides a wide variety of ancillary services in connection with the code development. This involves education and training, certification of inspectors, and evaluation of building products and systems.

With respect to product evaluation, we accomplish this through a subsidiary corporation, ICBO Evaluation Services, Incorporated. The reason for the subsidiary is the liability issues that attend the approval of products and systems. That is something you could very well help us in.

We adopt through our model codes and implement the standards produced by many other volunteer associations in the United States, all of whom have talked here -- well, I don't know if all of them have talked yet, but ASTM, ANSI, NFPA and I think to speak later, UL, and many others.

Thus, when a model code is adopted into law as a regulatory document, these national standards become part of the law. It is a system which is a unique one when compared to other countries, but it is highly successful and relatively free of the layered bureaucracies that you find in these other countries.

We do support a U.S. policy designed to improve the acceptance of U.S. technology on an international scale. Our codes presently serve such purpose by adoption or use in other countries, and particularly in more recent years, as guidelines in developing nations.

We support the policy statement that is embodied in OMB circular A-119 with respect to the Federal Government role and we particularly applaud the recent efforts of the federal agencies such as the Department of Defense and their commitment to utilize model codes and the national voluntary standards.

Our organization members are not in a position financially to participate actively in the international standards organization. There are substantial costs involved that we simply are unable to finance ourselves.

This is unfortunate because standards very often have a regulatory basis and the objective sometimes becomes obscure by the activities of those that are unfamiliar with the regulatory intent, but we do support and monitor the

efforts of organizations such as ANSI, ASTM and UL and the various members of the U.S. industry.

We assume that U.S. industrial firms that are multi-national in scope have been active in the formulation of ISO standards and we presume they are active in recent formulation of CEN/CENELEC standards.

At the recent ANSI public conference on standardization of the 90's, we were advised by a European spokesman that U.S. industry can submit products for use in European economic community by showing conformance to CEN/CENELEC standards and procedures.

In our evaluation practice, European products can be judged on the basis of the standards adopted in the country of origin, if these standards and their quality control system are comparable in performance to the standards that we have adopted.

In our view, the current posture of CEN/CENELEC does not result in a level playing field. We believe a broader European perspective is needed to be consistent with the objectives of GATT.

We do not favor the establishment of a Standards Council of the United States along the lines outlined in the December 20, 1989 communication from Dr. Warshaw, however we agree with some of the objectives in terms of national orientation and commitment.

In our view, the U.S. voluntary system works very well. The approach that we would favor would be the emergence of a truly level playing field with product and systems produced to U.S. standards judged on the integrity of our entire system and processes as opposed to procedure where they would have to be re-appraised.

This approach may be augmented by providing adequate financial resources so that U.S. voluntary codes and standards groups could meet and confer with their international counterparts to develop the confidence needed for the credibility of our respective efforts.

The Federal Government strategy should be to support the current voluntary system extant in the United States in their dialogue with other countries.

I appreciate this opportunity to address you.

CHAIRMAN WARSHAW: Excuse me. I might point out that you have used about seven of your ten minutes.

MR. TANGYE: I'll be very quick. My name is Bill Tangye and I am the Chief Executive Officer of the Southern Building Code Congress.

Let me open by clearly and emphatically stating that the Southern Building Code Congress International supports the existing American voluntary standards system and ANSI in its role as coordinator.

The most visible measures of our support are

membership in ANSI, active participation on ANSI committees, and the unamended adopting by reference of more than 150 ANSI standards in our standard code.

In view of the fact that the standard codes are adopted and enforced by more than 2500 local jurisdictions in 17 Southwestern, Southern, Southeastern and Atlantic Seaboard states, our use of these ANSI standards has had and is having a very positive impact on the construction industry and companies that participate in it.

This is even more important when you consider that our geographical area of influence has been and continues to be the most rapidly expanding area in both population growth and industrial dollar development in this country.

While we are a regional code and standards setting organization, we recognize the importance of international standards and their impact on U.S. industry. This country has benefited from the ANSI process for some 70-plus years.

Our system of private sector development of codes and standards has placed American companies in international leadership roles in virtually every industry.

While we agree with many of the issues raised by the Department of Commerce, we believe the existing ANSI system can be revised to effectively respond to these issues.

In our view, there has been no evidence submitted

that justifies the creation of another body be it a Standards Council of the United States of America or other body to oversee the development of codes and standards in this country.

In our view, the most important statement the Federal Government can make to our international friends and competitors is one, to actively participate in the ANSI and other private sector voluntary standards processes, number two to adopt the resulting standards.

Such a straightforward implementation of OMB policy 119 will provide the very basis of the important and necessary public/private sector partnership mentioned by many of today's speakers.

The solution is perhaps best stated in Mr. Peraltas' November 15, 1989 letter to Dr. Duesterberg wherein he said "if the system has warts, we should of course address these."

It seems to us in the Southern Building Code Congress that removing the warts rather than amputating the finger is the more appropriate remedy.

We appreciate the opportunity to speak to this body today.

CHAIRMAN WARSHAW: Thank you.

MR. HEILSTEDT: My guess is there is about a minute left.

CHAIRMAN WARSHAW: Just about.

MR. HEILSTEDT: Just a couple of points that I would like to agree with the two previous speakers. BOCA promulgates a complete package of model codes and regulates a complete built environment -- building, mechanical, plumbing, fire prevention and the like.

BOCA makes wide use of national standards. We reference 600 standards promulgated by 62 organizations throughout the United States. You can see a healthy, strong standards environment is what we need in the code enforcement arena.

The local governments, the state and local governments who form our largest membership -- 11,000 members -- are those who are the active, on-the-firing line as far as code enforcement is concerned.

I will close with that. Thank you.

CHAIRMAN WARSHAW: Well, thank you. Again, I want to emphasize that the record is open until June 5th.

MR. KUCHNICKI: Also, just for the record, we will also submit copies of all of the model codes series of each of the member organizations, as CABO and previous speakers stated they would submit their documentation.

CHAIRMAN WARSHAW: We can't have copyrighted material, obviously.

But we would like copies of your statement. That

would be useful for the record.

MR. KUCHNICKI: You will get a written statement.

CHAIRMAN WARSHAW: And we would like to put the statements in the record, and any additional thoughts you come up with in the interim too.

Are there any questions of the panel? Mr. Ludolph.

MR. LUDOLPH: Mr. Bihr, I was interested in your comments that as it stands now, you have provisions to accept standards in the United States of manufactured products, standards prepared overseas that are deemed comparable or acceptable under some system.

Could you give me a little bit of an idea of how that decision is made as to how a standard is deemed comparable and equivalent and acceptable into a code? How it would work its way into the local mandatory building code, and what kind of marks or accreditation that accompany that?

MR. BIHR: Well, as you might expect, products that are manufactured in other countries that meet a code objective are generally under a standard which is very similar to the standards that we customarily use.

So it has been our practice to evaluate the test standard of the country of origin and to see if it has the same objectives and similar results as the standards that we

require.

If it does, we do not require a re-test of the product specifically under our test standards. We are able to evaluate the standard on its own.

Also we utilize the quality assurance programs that are active in the country of origin, if they meet our objectives.

CHAIRMAN WARSHAW: Okay, thank you, Mr. Bihr. Mr. Donaldson.

MR. DONALDSON: Mr. Bihr, you mentioned I believe Evaluation Services, Inc., if I caught the name correctly.

MR. BIHR: That's correct.

MR. DONALDSON: Could you elaborate on what services are performed?

MR. BIHR: The evaluation of building products and systems, the listing of testing agencies and the listing of quality control agencies, and the approval of fabricating plants.

MR. DONALDSON: And for whom are these evaluations, to whom are they provided?

MR. BIHR: They are directed to our members for their utilization.

CHAIRMAN WARSHAW: Well, we thank you again and encourage you, in view of the short time, to submit any additional comments beyond those presented today.

The American Plywood Association, Mr. Flint.

MR. FLINT: My name is Tom Flint. I am vice president and director of Technical Services Division of the American Plywood Association. The APA is a national trade association representing more than 50 domestic companies that annually account for approximately 80 percent of the softwood plywood and non-veneer structural panels produced in the United States.

Collectively, those member companies operate 199 manufacturing plants located in the west, south, northeast and the north central states.

Voluntary standards and product certification together have played a major role in the growth and development of the U.S. structural panel industry. The APA and its predecessor organization, the Douglas Fir Plywood Association, has been an active participant in the voluntary standards system for nearly 60 years.

Over the last 50 years, the industry has experienced an annual compounded growth rate of nearly seven percent. Standards and certification have been the cornerstone of that growth.

Our initial involvement with standards began in 1933 with the fledgling Voluntary Commercial Standards Program of the Department of Commerce. The first plywood commercial standard was promulgated in 1933 and we have

maintained that standard to this day and the relationship it created with the National Institute of Standards and Technology.

Needless to say, we have found that the Department of Commerce/NIST standards activity has been helpful to our industry, free of government domination and consistent with our notion of voluntary standards and the free enterprise system.

Throughout those years we have also been active in various ASTM committees and have been intimately involved in the development of several ASTM test method standards. APA is an organizational member of ANSI and participates in their committees that impact structural use panel uses.

As part of our activity, APA operates a testing laboratory for structural research as well as laboratories for product quality testing. We can be characterized as a certification agency as well as a standards development organization.

In the early 1970's we became concerned by a proposed OSHA rule for the accreditation of testing laboratories involved in safety testing for OSHA standards. Structural panel products are used in many applications where worker safety is involved.

Our concern with the OSHA proposal was that it discriminated against companies and association testing

laboratories that might be involved in safety testing. They did this by a prescriptive definition in their rule that excluded a relationship between the laboratory and the product manufacturer.

No national vehicle existed at that time to assess and accredit laboratories that could demonstrate their competence and integrity to do safety testing. OSHA was hanging its hat on a separate in organizational ties between the product manufacturer and the testing laboratory. They were insisting on complete organizational independence.

We felt strongly the emphasis should be on demonstrated competence and ability to perform regardless of organizational ties. Consequently, we became a vocal advocate of the National Voluntary Laboratory Accreditation Program, NVLAP, that was in the early stages of development by the then Bureau of standards with the input of ASTM and others in the laboratory community.

NVLAP is now well-established and well-recognized as a vehicle through which a competent and qualified laboratory can be identified, both nationally and internationally.

Certainly NVLAP can be considered a viable part of the U.S. voluntary standards system, inspite of arguments some might wish to advocate or attribute to government.

APA has also been active in international market

development for more than 25 years. During that time, we have come face to face with numerous non-tariff standards and product certification barriers. We have also been involved in ISO activities related to structural panel products during that period of time, and are currently the ANSI TAG administrator of ISO Committee TC 89 and we fund ANSI participation status on the TC 89 committee.

At times that we have participated in the ISO committees, we have funded those on our own.

Most recently we have been deeply involved in many of the negotiations the Department of Commerce and the U.S. Trade Representatives Office have had with Canada on the Canadian Free Trade Agreement, and with Japan in connection with the Structural Impediments Initiative and Super 301 activity of the 1989 Trade Act.

Our involvement with government in these most recent instances has given us an appreciation for how important it is to have an industry/government working relation in dealing with trade issues and other governments.

Plywood is the only commodity not scheduled for tariff reduction to zero with Canada until after the non-tariff standards issues have been resolved. There is no question in my mind that the partnership and support of government in these instances was a key to what was accomplished.

Particularly in dealing with the Japanese bureaucrats, it is vitally important to have a strong industry/government working relationship.

Currently we are involved, along with three other organizations, in efforts to secure recognition as an accredited certification organization in Canada. This has been handicapped and certainly delayed by the fact that the United States has no national counterpart certification accreditation system to that administered by the Standards Council of Canada.

While we have not yet faced problems in Europe, we anticipate they will be encountered as EC 92 unfolds. If so, it could be extremely helpful in our view if a U.S. national system for accrediting certification systems were created that functioned in a manner similar to the NIST NVLAP program.

Such an effort by all means should make full use of the voluntary standards systems now in place and not supplant existing organizations. Coupled with accreditation certification, of course, should be activities of government to secure reciprocal recognition of accredited U.S. organizations by other countries, as you have done in the laboratory field.

These are not activities currently being filled by any U.S. organization, at least in a generic sense, yet we

see them as critical in the years ahead.

In dealing with foreign countries in trade matters, it has been our experience that the support of government can be critically important and effective if done cooperatively with industry and consumer interests.

To that end, government's involvement in standards and certification activities needs to be done in a forum of equal participation by all affected interests so that true national consensus can be achieved.

CHAIRMAN WARSHAW: Thank you, Mr. Flint. Is there any question for Mr. Flint?

Well, we thank you very much for your constructive statements and I now would like to call the next two panelists, the American Society of Heating, Refrigerating and Air Conditioning, ASHRAE, and the American Institute of Aeronautics and Astronautics.

(Pause.)

CHAIRMAN WARSHAW: Good afternoon, gentlemen. I appreciate your being here. We have Mr. Grumman.

MR. GRUMMAN: Yes.

CHAIRMAN WARSHAW: Of ASHRAE.

MR. GRUMMAN: Yes.

CHAIRMAN WARSHAW: If you would introduce your associates and continue from there.

MR. GRUMMAN: Yes. I am David L. Grumman. With

me here today are on my left, Frank Coda who is the executive director of ASHRAE and on my right, Jim Heldenbrand, the manager of standards.

My name is David L. Grumman. I am a registered professional engineer and I practice as an engineering consultant in Illinois. I am current chairman of the standards committee of the American Society of Heating, Refrigerating and Air-Conditioning Engineers, or ASHRAE, on whose behalf I appear today.

ASHRAE welcomes the opportunity to submit comments to the NIST on international standards-related activities. Since ASHRAE is not engaged in testing and certification, our comments will not cover those topics.

ASHRAE is a technical society comprised of 50,000 members from 120 nations. It is recognized worldwide for its voluntary consensus standards which help industry and serve the public by offering uniform methods of testing and recommended engineering practice.

Since 1978, ASHRAE's procedures for standards has been recognized by ANSI under its accredited organization method.

ASHRAE's international standards responsibilities include secretariat for three subcommittees of ISO/TC 86 on refrigeration, and administrator of the U.S. TAG, along with that TAG's seven panels.

We will make our presentation in the following format. First, issues of concern to ASHRAE; second, examples of successful public sector/private sector cooperation; and third, comments on the Canadian model of government involvement; and lastly, our key recommendations.

The issues of particular concern to ASHRAE are accreditation of standards developers, roles of private and public sectors, and coordination between sectors.

The essence of ASHRAE's position on these issues is this: Accreditation, Accreditation of developers of private sector standards should remain a private sector function.

Roles, the private sector should continue to write and process standards under private sector coordination. Public sector experts and standards users -- whether federal, state or local government employees -- should be encouraged to participate directly in the committee work of writing and processing consensus standards for which the public sector has an abiding interest.

The results of government research should be offered when appropriate as a basis for critically-needed standards where the technology is new or rapidly evolving.

Coordination, the interests of public sector standards need to be coordinated in a way that one, identifies and prioritizes proposed standards projects that

are critical from the public sector viewpoint.

Two, communicates these needs to the private sector coordinator.

Three, summons the resources of the public sector such as government researchers to actively work on domestic and international standards development and revision projects and on technical advisory groups, or TAG's.

Four, organizes and promotes tax incentives and other methods of public financial support of the private sector standards coordinator.

Examples of such needed support include sharing costs of ISO/IEC fees, broadening the membership interest categories on TAG's, and defraying costs of hosting or traveling to TAG and international standards meetings.

Now some examples. We think excellent models for private/public sector cooperation are the ASHRAE series of standards in the field of energy efficient design in new buildings, where research carried out principally by the then NBS and ASHRAE over a period of four decades, and by NIST and DOE's national labs over the last 16 years, have resulted in the ASHRAE/IES 90 and 100 series of standards on energy efficient design of new and existing buildings.

Further, ASHRAE solar collector test standards and the DOE appliance efficiency test methods and standards have similarly resulted from public/private cooperation.

Preparation of ASHRAE Standard 90-75, energy conservation in new building design, was initiated by a private sector association of state officials, NCS/BCS, an organization whose founding in 1967 was assisted by NBS.

Reacting to disparate legislative initiatives by states in response to the energy crisis of the early 70's, NCS/BCS asked NBS in 1973 to prepare a building energy conservation standard that could be offered as a model code to the states.

NBS produced a research report in the form of a draft standard and recommended that it be turned over to an appropriate standard developer to be processed as a voluntary consensus standard.

ASHRAE accepted the task from NCS/BCS in February of 1974 and the standard was prepared and published in record time by July 1975.

ASHRAE standards now serve as the basis of energy codes in all 50 states. Since buildings consume approximately 35 percent of the nation's energy expenditure, the role of ASHRAE's voluntary consensus standards is very important in promoting efficient U.S. energy use.

ASHRAE participated in the rulemaking process for the government's energy conservation standards for new building, and of late has provided the underlying document, namely ASHRAE/IES Standard 90.1, for the new energy standard

for the commercial and multi-family highrise-types of federal buildings.

Further, issuance of the Model Energy Code in the 70's under CABO provided an important delivery mechanism for adopting a code language version of ASHRAE's energy standard by building regulatory officials.

Now some comments on the Canadian model of government involvement in standards.

While we may admire potential efficiencies in countries that have mandatory national building codes or standards, we do not wish to trade the freedom of the U.S. national voluntary consensus system for a more rigid one controlled by the public sector.

We think that the public sector could and should take better advantage of the opportunities to participate in the national voluntary consensus standards system -- and that this system would be stronger as a result.

Domestically, the Departments of Defense and Energy seem more committed to taking advantage of and working to improve the present system than are some other standards-using federal agencies.

NIST traditionally has had a large percentage of its research staff constructively participating in standards development activities, and this work should once again receive institutional priority and recognition.

The Standards Council of Canada works in a different code environment than prevails in the U.S. The powers there include accreditation of standards-writing and testing and/or certification organizations and determination of which standards are to be mandatory.

While such powers here would make discrete federal legislation dealing with fragmented or overlapping state activities unnecessary, we continue to hope with our present system that the states will voluntarily cooperate.

We fear that creating such a standards council organization in the U.S. -- and making it subject to the annual federal appropriations process -- would create uncertainty and a perceived, perhaps an actual, loss of control by the private sector.

We urge that advocates of change in the present system show evidence that its shortcomings would be improved by such a change.

Our key recommendations: ASHRAE suggests that public discussion be focused on the two-center approach. By that we mean that separate but coordinated centers in the private and public sectors, as suggested by the National Standards Policy Advisory Committee in 1979.

Plan B, as advocated by the ANSI Blue Ribbon Committee, appears to be based on this approach.

ANSI's plans A and B are described as market-

driven systems. However, the secretariat's report at the TC 86 meeting in Moscow in September 1989, indicated that new thrusts will affect the way ISO standards are prepared -- in that each standard will be expected to address its impact on health and safety of the product, system or practice.

We think something more than the term market-driven is needed to describe the needs and motivations concerning impacts of standards on safety, on health, on energy efficiency and on environmental protection.

While economics must be included when considering practical solutions, a solely market-driven system will not always solve problems created the need to address the above concerns.

In a cooperative mode, the public sector should lead by setting policy and pointing out problems and potential solutions; the private sector should advise how problems can be solved most efficiently.

Thank you for the opportunity to participate in this review of the state of health of U.S. activities related to domestic and international consensus standards activities.

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

MR. DONALDSON: Does ASHRAE have a policy or a procedure whereby it considers the prevailing international

standards before it begins standards development? And if so, how is that implemented?

MR. GRUMMAN: Well, in my experience with ASHRAE, it has never adopted an international standard. It considered it once about five or six years ago when I was on the Standards Committee. Perhaps if, with your permission, if the manager of standards might want to comment on his experience with that.

MR. HELDENBRAND: We do consider them in the sense that we, as a matter of policy, look at existing ISO standards. A case in point would be a project committee we have now on a computer protocol for energy management control systems.

This standard project committee 135-P has studied over 50 ISO standards thoroughly and is working to try to make sure that what the committee comes up with is compatible.

MR. DONALDSON: To what extent do the ISO or IEC standards reflect prevailing ASHRAE wisdom? To what extent have you been able to be influential in having your positions adopted?

MR. GRUMMAN: As I mentioned, ASHRAE has a secretariat, one of the ISO TC's. So I think his experience might be appropriate for comment here.

MR. HELDENBRAND: Within the ISO realm, our

experience or effectiveness has been principally in the TC 86 realm which is titled Refrigeration, however it covers refrigeration and air-conditioning and is a broader committee than the title indicates.

There are other ISO committees and IEC committees that we could and should be participating in.

CHAIRMAN WARSHAW: Thank you very much, Mr. Grumman, and your associates, from ASHRAE.

We now have Mr. French of the American Institute of Aeronautics and Astronautics. Mr. French.

MR. FRENCH: Thank you. Good afternoon. My name is James French. I manage the Standards Program for the American Institute of Aeronautics and Astronautics, known throughout the aerospace community as AIAA.

This Institute is a non-profit professional society dedicated to advancing the arts, sciences, and technology of aeronautics and astronautics and to promoting the professionalism to those engaged in these pursuits.

We have a membership of over 43,000 drawn from all levels of American industry, academia, private research organizations, and government, as well as from numerous nations abroad.

The cornerstones of AIAA programs have always been technical meetings and publications. The AIAA Standards Program was begun just ten years ago. This timing was

indicative of the recognition of the importance of modular designs and reusable spacecraft.

The program has received close attention by our Board of Directors from the outset. Once AIAA standards publications complete our procedures, they are submitted to ANSI for recognition as American National Standards.

Increasingly, related organizations in other space-faring nations are examining the projects underway in AIAA and are participating with us toward a goal of common international package related to design and deployment of spacecraft.

Just last year, the ISO Technical Committee responsible for space vehicles, TC 20, formed its first subcommittee dealing specifically with astronautics.

In response to the questions put before this public hearing, AIAA has found that the U.S. standards system, as presently constituted, serves the needs of the aerospace community. In fact, there is an increasing trend for the several trade and professional organizations in this field to collaborate on technical questions of mutual interest.

This condition extends to such organizations in other countries. Standardization has benefited both the aircraft and the air transportation industries dramatically; it is hoped that engineering harmonization in space can

achieve comparable results.

AIAA believes that government agencies should participate in standardization to the full extent of their own mission interests or those of their constituencies.

In aerospace standards work, some federal agencies participate more fully than others, but none are unaware of or are left out of the planning or conduct of new activities. At this time, the means for coordinating this work is adequate because the total number of players is small.

On the international scene, AIAA staff and committee representatives attend international standards meetings regularly. To date, the expenses for committee representatives have been borne by their employers.

We are looking into common funding techniques such as those used by other professional societies for many years in order to send the most qualified representatives irrespective of their employers' resources.

The international and domestic aspects of aerospace standards are assigned to the same committee under AIAA practices. At this time, it appears that we, in the United States, are better equipped to lead aerospace standardization because there are society and association mechanisms in place.

In Europe, technical issues regarding aircraft are

being addressed in a similar manner, but little attention has been given to standardization for spacecraft through the customary techniques.

AIAA would like to take this opportunity to propose that the hearing consider the establishment of a standards foundation, directed by a public board and funded by appropriation.

The Secretariat for such a foundation could reside in the Department of Commerce, if desired. The principal role for the standards foundation would be to make financial grants to accelerate the development of standards and guides used in the development, production and testing of U.S. products and services.

Grant approval could be made for any of the following reasons: For standards development -- that is the development of consensus standards for products identified as particularly trade-sensitive. Funds would be subject to competition among U.S. entities affected by the relevant projects.

For travel, lack of funds for this purpose has been a deterrent in promoting U.S. technology in many spheres of influence and for obtaining the most qualified representatives. Secretariats, TAG administrators, and other concerned parties could be potential grant recipients for funds to send participants to domestic or international

meetings, conferences, and workshops to establish or present U.S. positions.

For fees, the cost of participating in national and international standards development organizations is substantial. Some of the funds could be allocated for assuring participation in tarde-sensitive areas that might be otherwise neglected.

For publication and reproduction, the initial cost of publishing and reproducing standards documents for international use is substantial. Grant recipients might receive such funds on a matching basis.

For translation, leadership in standards requires translation into other languages which is a feat that is more expensive in the United States than in Europe because of our principal reliance on English in this country.

At the same time, mere utilization of standard practices, as encouraged under the GATT Code, can be difficult when the source documents are in an unfamiliar language. Perhaps the foundation could sponsor translations in major cases and match grant recipients' funding in others.

Astronautics standardization is a young discipline because so many projects have been characterized by single-use equipment. With the current space shuttle and plans underway in several areas for modular satellites,

serviceable spacecraft, and space robotics, the utility of standards will increase exponentially.

It is predicted that internationally harmonized standards for space activities will be necessary in the near future to prevent serious space accidents, loss of major missions, and the mitigation of debris.

The issue of testing and certification for space flight equipment is just beginning to be addressed. There is essentially no background experience on the reciprocal acceptance of test data in this field.

As qualification test methods suitable for use in scaled-up production of space flight equipment are developed, it is likely that they will be harmonized among interested nations from the beginning.

When certification methods are determined, it also seems likely that techniques will be drawn from the ISO Guides. Hopefully trade barriers can be avoided as commercial space activity grows in greater service to mankind.

We are providing additional explanatory material about the AAIA Standards Program with our presentation.

CHAIRMAN WARSHAW: Thank you, Mr. French. Mr. Donaldson.

MR. DONALDSON: Jim, I was interested in your reference to techniques used by other societies that are

proven techniques for sharing the wealth, so-to-speak, among the less affluent members.

Would you be able to share with us either some society names as examples, and/or a technique or two that are currently in use, if you have that at your fingertips?

MR. FRENCH: Well, I believe the Instrument Society of America, one of the earlier testifiers, maintains a common funding pool. When I worked for the Trade Association of Process Control Manufacturers and we held a Secretariat, we did that technique -- that is, a standards travel budget for each year was established.

The contributions of participating firms was pooled together so that delegates could be people from other than the immediate membership, according to needed expertise.

MR. DONALDSON: Sorry, you put that in the past tense. Do you know if that is still the practice?

MR. FRENCH: I do not know whether that is still the practice.

MR. DONALDSON: Thank you.

CHAIRMAN WARSHAW: Any other questions? Well, thank you very much. We appreciate you presenting us with your comments today.

Next we have the Society of Automotive Engineers. As you recall, they were switching slots at ANSI's request

so that the Society of Automotive Engineers and the U.S. National Committee for the IEC represented by its chairman, Ron Reimer will step forward.

(Pause.)

CHAIRMAN WARSHAW: We will start out with the Society of Automotive Engineers and I will ask Max Rumbaugh, the President of that society to introduce his associate and please offer his comments.

MR. RUMBAUGH: Thank you. Dr. John Mason who is the 1990 SAE President, sends his regrets for not being able to be here today.

Joining me is Dr. Lamont Entinge, director of research at Eaton Corporation, SAE's president-nominee for 1991 and currently an SAE fellow in the Office of Science and Technology Policy.

I am here on behalf of Dr. Mason, SAE's president. As you indicated, my name is Max Rumbaugh, Jr., and I am SAE's executive vice president.

I am here today to present SAE's response to the central purpose of this hearing described in the Federal Register on improving U.S. participation in international standards activities, opportunity for interested parties to comment.

As background, SAE is a worldwide organization whose membership tops 50,000. The purpose of SAE is to

advance the knowledge of the arts, sciences, standards, and engineering practices connected with the development, design, construction, and use of self-propelled machines.

One of SAE's primary services is the development of over 6,000 voluntary standards total to date and active, 837 in 1989 alone, produced by some 13,000 volunteers from industry and government. SAE is one of the major accredited standards-writing organizations under the American National Standards Institute, ANSI, system.

ANSI effectively serves as the coordinating and accrediting body for the U.S. standards-writing system. ANSI also serves as the official U.S. member to the International Organizations of Standardization, ISO.

SAE likewise plays an important role in the international standards arena by supporting several U.S. Technical Advisory Groups and secretariats for ISO and IEC.

These groups include TC 20, Aircraft and Space Vehicles; TC 22, Road Vehicles; TC 70, Internal Combustion Engines; and TC 127, Earthmoving Machinery.

SAE also administers various quality assessment and accreditation programs which are partially sponsored by the U.S. Government.

SAE has been successful in having its standards accepted worldwide. For example, and only examples, only four of the total, is the RPHE's which is the rollover

protection of highway equipment, Oil Viscosity Rating that are used worldwide, threads for the aerospace fasteners and VIN, the vehicle identification number system used worldwide for vehicles.

Today I will provide you with SAE's concerns of the proposal by NIST to establish SCUSA which is being designed to increase government influence on the standards-writing process and which may impair the effectiveness and efficiency of this system.

My remarks will reflect SAE's position which was developed with input from two of its operating boards, namely the Technical Board which develops standards and the Performance Review Board which administers quality assessment and accreditation programs.

Our position responds primarily to the proposal distributed by Dr. Stanley Warshaw. In our judgment, this proposal is sketchy and leaves a number of unanswered questions.

In considering this proposal, we have surfaced three basic issues: One, how can we most effectively coordinate U.S. standards developers and certification bodies?

Two, what is the optimal degree of government participation in and financial support for U.S. standards-writing and product certification?

Three, how can the U.S. best meet the challenges of EC 92 in the international standards field?

SAE's response to the issues: How can we most effectively coordinate the U.S. standards developers and certification bodies?

The NIST/SCUSA proposal calls for government accreditation of standards developers which is tantamount to the government regulation the standards process. This is a direct challenge to the independence of the voluntary standards community. The current ANSI system is strong because of its fairness and openness to all participants.

SAE believes that the standards system works more effectively with government participation, not government control. Therefore, the government and NIST in particular, should rejuvenate its support of the ANSI system and participate in programs where government, industry and the standards development organizations form a broad-based constituency.

The proposal as stated puts SCUSA, with limited membership, in an oversight and control position which would create an imbalance in the system. This is not necessary, nor is it an effective way to manage the system.

If, in effect, there are any weaknesses in the current system, then we have an obligation to call these to ANSI's attention and work with ANSI to ensure that

corrective action is a high priority.

For example, the ANSI government member council and NIST's membership on the ANSI board can be used for governmental input into the ANSI system.

The second area, what is the optimum degree of government participation in and financial support for U.S. standards-writing and product certification?

Government support for the voluntary standards system means that the government should participate in the system, not control it. The primary role for government should be to support the participation of government employees in the process which SAE encourages.

The proposal suggests that funding could be made available to the voluntary standards organizations to support their standards-writing activities and participation in the international standards development efforts.

The capability of NIST to provide direct funding dollars should be seriously questioned. With the current budget-cutting throughout the government, it is highly improbable that NIST will have sufficient money to give to standards-writing bodies.

Industry and the standards-writing community contribute millions of dollars in manpower and direct expense funds to the process. The Federal Government should be capable of paying its fair share by supporting government

employees' travel and time, and paying a fair share of the direct expenses to the standards developing organization.

Therefore, the government control over the process should come only through its participation and a contribution of a fair share of the expenses for the running of the program, as is the case with industry.

I would be remiss if I failed to mention the very high degree of success SAE has had with the Department of Defense in the standards process. For years, DoD has participated and supported SAE, ANSI and the other standards-writing bodies.

In November 1988, Dr. Robert Costello, then the Under Secretary of Defense, published a report entitled, "Enhancing Defense Standardization" in which he said, "substantial savings could be achieved by even greater reliance on non-government standards rather than overly-restrictive military specifications for commercial products and processes."

Mr. Chairman, it is my understanding that his replacement, Mr. Betty, supports that same position.

This trend is the appropriate theory for government participation.

Further, the involvement of employees of the FAA, NASA, the EPA, DOT, DoD and NIST and SAE standards committees is an excellent model.

Three, how can the U.S. best meet the challenge of EC 92 in the international standards field?

There is no doubt that the impending changes in Europe with regard to EC 92 is forcing the U.S. to alter its view of the standards development process.

Relationships between the U.S. Government and the European Community, EC, will have to be strengthened and the Department of Commerce is the obvious agency to handle this. Standards, however, are a different issue.

The EC has delegated the job of developing standards to CEN/CENELEC. CEN/CENELEC consists of the standards-writing organizations from the member countries of the EC, similar to ANSI and its membership.

The relationship between CEN/CENELEC and the EC should be similar to the relationship between ANSI, its members, and the U.S. Government. With this free enterprise system gaining strength in Europe, it is an inappropriate time for the U.S. to consider a government-controlled system.

SAE believes that a direct relationship between ANSI and CEN/CENELEC will be the key to successful worldwide standards coordination.

In summary, SAE opposes the stated proposal because SAE believes that the current U.S. voluntary standards system is efficient, cost-effective, and highly

productive.

The system produces thousands of high-quality standards each year which are responsive to the needs of American industry and government. The Federal Government should participate and support this system just as industry does.

The voluntary standards system mirrors our culture and commitment to free enterprise. While government has an important role to play, SAE believes it would be a serious mistake to alter the basic character of the free enterprise-based system.

Therefore, SAE offers the following recommendations to upgrade, strengthen, and reaffirm the current system.

One, NIST should endorse ANSI as the U.S. voluntary standards system coordinator and accreditator.

Two, NIST should encourage participation and provide support for the voluntary standards system by all U.S. Government agencies.

Three, NIST should recognize and support ANSI as the direct interface with CEN/CENELEC and ISO.

Four, the Federal Government should provide limited designated funding in support of future standards activities. Primary funding would continue to be provided by free enterprise agents.

Thank you for your attention, Mr. Chairman.

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

MS. MOORE: You mentioned a number of other participants that you think the U.S. Government should pay its fair share of the costs of those standards development activities that it benefits from.

I notice that a number of other participants suggested that increased government control of standards development would leave the system open to the vagaries of the federal budget allocation process.

Could you elaborate a little on how you think you could avoid that problem in a fair share payment system?

MR. RUMBAUGH: I think that it is a responsibility of the government to pay their fair share of the cost when many of the SAE standards are, in fact, adopted by various government agencies and used for various purposes, just as industry does the same thing.

Industry will adopt SAE standards and use them in their process. We expect industry to pay their fair share of that cost, dependent upon how much and what use they make of it. We feel that the government should find a mechanism for being able to do that.

Obviously, there is a concern that through the budgeting process, which is one of the reasons we oppose the

NIST/SCUSA proposal, that through the government budgeting process, that funding might be deleted.

We have the same problem in industry, that during the budgeting process, that funding could be deleted, but it is important that in the budgeting process, that a recognition of the importance of standards and the recognition of the importance of an obligation to pay the fair share should be emphasized and should carry the weight through the budgeting process.

CHAIRMAN WARSHAW: Mr. Leight.

MR. LEIGHT: I'd like to ask two quite different questions. First, what is the relationship of your SAE oil standards with international standards of the same kind?

MR. RUMBAUGH: The relationship is generally one of de facto standards in that our standard is, in fact, used by other organizations for viscosity ratings. But I am not sure and I would have to check it out and find out if it, in fact, is an ISO standard. I do not believe that it is. I believe it is a de facto used standard throughout the world.

Many of our standards in other areas are a basis for ISO standards also, but that particular one, I do not believe it is.

MR. LEIGHT: The second question has to do with the fact that you have talked virtually exclusively about standardization, as most other people have today, and yet

you also are quite involved in certification programs.

I wonder whether you would care to make a few brief comments about your certification programs and how this would affect our relationships with the European community and other parts of the world?

MR. RUMBAUGH: Yes, thank you. I had the pleasure of participating on the standards side with an ANSI group that went to Europe in late July to participate in CEN/CENELEC on both standards and certification processes.

So I am therefore familiar with the European process, the status of their process of developing a mechanism in Europe, and also followed, of course, the results of the group that did go on March the 12th. I was not able to go then, but was very pleased with the results that came out of it.

My understanding is that Europe is far from having a coordinated mechanism and they are still developing their own process. As I understand it, they have encouraged the United States to go very slow in developing any kind of interfacing mechanism with them until they decide what they want to do -- don't, for us, necessarily, get ahead of them in anticipation that they are doing something.

To specifically answer your question, the USSAE does have a certification process. It is primarily aimed at the United States, secondarily at North America. We are

establishing liaisons with those groups who are doing those kinds of things in Europe, following the same lead, however, that the CEN/CENELEC advised ANSI, not getting ahead of them but staying in contact with them in order to monitor what they are doing so we would be a in a position to coordinate.

Our contacts are in the aerospace area and in the ground vehicle area, both, in this regard.

MR. LEIGHT: Thank you.

CHAIRMAN WARSHAW: Thank you, Mr. Rumbaugh. Mr. Donaldson.

MR. DONALDSON: Mr. Rumbaugh, I have two questions. The first question pertains to what I think you may have implied, and I certainly inferred, that you would encourage NIST to rejuvenate its participation in some of the standards activities.

I wonder if I should too infer that other government agencies may have slipped over recent years or not. Are there other government agencies that you have perceived that their participation level may be down for whatever reasons -- the funding vagaries we have heard of or whatever else? That's my first question.

MR. RUMBAUGH: Obviously, in answering your question, let me address the first issue first, and then the second one.

My comments were made primarily at NIST supporting

the ANSI system. I feel that it would be extremely beneficial to the voluntary standards system if, in fact, the Federal Government would officially recognize ANSI as being the official coordinator. So that was the one position or statement that I made.

The second one, then, has to do with participation and support in the various parts of the system throughout. This, again, is a personal observation and that personal one would be that, in fact, we are not at the bottom of government participation. That was probably a few years ago.

I have been very pleased to see an increase in participation over the last few years in the standards development process by various government agencies -- NIST and SAE working closely on the IJES, a process in the certification effort. That is relatively new. That is beneficial.

DoD has, under the strong support of Pete Yurcisin and his organization is encouraging stronger participation and new mechanisms of both funding support and development in this area.

So I say we are coming up, not going down and not at the bottom would be my perception. Certainly, an increase in that regard would be beneficial. I would personally, again, support the comments made earlier this

morning that having funding and support for the government experts in overseas standards-writing activities would be beneficial. That would be the other specific area I was addressing.

MR. DONALDSON: Going back to the comment you made which really goes to the heart of what I think was your first recommendation, that NIST should endorse ANSI's role as coordinator and accreditor. I wondered accreditation of what?

MR. RUMBAUGH: Primarily for coordination, the efforts that are happening in the accrediting. I do not believe that ANSI, themselves, has yet determined precisely the role that they would play in this regard and there are other agencies that are looking at that.

I recognize that, but I think that a coordinating role in this regard and support by NIST of that coordinating role would be beneficial and I do believe that the jury is still out as to the precise role that they and other groups would play, should play.

MR. DONALDSON: Thanks. You did mention accreditor and I didn't know if you meant to restrict that to accreditor of standards-writing bodies or not. Thank you.

MR. RUMBAUGH: That is also the case, yes.

CHAIRMAN WARSHAW: Okay, Mr. Ludolph.

MR. LUDOLPH: I have a couple of points of clarification.

One regards your recent visit to Brussels on this delegation. You indicated that the CEN/CENELEC delegation cautioned the United States private sector not to move too quickly in organizing. I assume that that refers to the non-regulated product sectors involved in the EOTC rather than the EC commission's advise that they want you to slow down the time table on regulated products because they are not going to implement very quickly their regulations before 1992.

Was it the regulated products that you were talking about with CEN/CENELEC, or the unregulated products?

MR. RUMBAUGH: My comments are from only having read the reports that came from the committee that went, so I was not a party to those discussions.

My understanding of having read those reports is -- and again I was directing my comments strictly to the accreditation process, not to the standards-writing process -- and as I understood in both areas, the Europeans do not yet have a mechanism for coordinating their own accreditation process.

They are still in the process of developing some kind of a mechanism for doing that, and their encouragement to us was don't respond too quickly to what you are seeing

in Europe because we haven't got our act together yet.

MR. LUDOLPH: I have one additional question. You sit in a unique position, I think, of many of the people who testified here today, in that you face in the European community a mandatory standard situation for ground vehicles, unlike anything we have faced in most of the other product sectors we've heard about today.

Land vehicles, automobiles, as well as tractors and other off-road vehicles are mandatory standards not developed by CEN/CENELEC but could come from any place and are cooked pretty much within the European community commission.

In that instance, how do you intend to respond here in the United States regarding certifying vehicles or standards that come into the United States for use here in the United States?

MR. RUMBAUGH: I do not anticipate that we will get into the certification of that area from the point of view that there are no discussions in that regard.

Allow me to address the first part of your comment, also, is that you are very correct, we are unique in that as a result of the ANSI interfaces with CEN/CENELEC, we have been able to learn that, in fact, they are not developing voluntary nor regulatory standards through the CEN/CENELEC process for automobiles, nor for aircraft.

Therefore, we have a very unique situation in that they are not centralizing their process in many of the areas which we developed standards at all, so we must continue to follow a number of different groups, not only each of the national bodies but also coordinating bodies outside of CEN/CENELEC for that process.

But the specific answer to your question is that we are primarily looking at our certification processes in the U.S. and interfacing with the bodies that have a regional coordination of certifications in those areas.

Interfacing with them, we are still in the very early stages of discussing how we can interface with them because they aren't very far along and ours is strictly at a U.S./North American process and we are not certifying automobiles.

CHAIRMAN WARSHAW: If there are no further questions, thank you very much, Mr. Rumbaugh, for a very fine presentation.

Mr. Reimer, Chairman of the USNC, U.S. National Committee of the IEC.

MR. REIMER: Thank you, Dr. Warshaw.

Good afternoon panelists and other ladies and gentlemen. My name is Ron Reimer. I am with Allen Bradley of Rockwell International Company where I coordinate my company's participation in standards activities and look

after product regulations affecting my company and our customers worldwide.

Today I am here in my capacity as the President of the United States National Committee of the International Electrotechnical Commission and I present the USNC's statement for these hearings.

The complete USNC's statement was previously sent to Dr. Warshaw's office and I respectfully request that the complete written USNC statement becomes a part of the record of these proceedings.

CHAIRMAN WARSHAW: Yes.

MR. REIMER: Thank you.

The United States National Committee, USNC, of the International Electrotechnical Commission, IEC, is the member body of IEC and the major national focal point for electrical and electrotechnical international standardization, and through the relationships between IEC and CENELEC for certification and tests.

Dr. Warshaw, if I were to introduce all of the individuals in this room who are part of the USNC, I would surely overrun the time allocated to me. This statement is made to emphasize that the USNC is a volunteer managed and staffed organization.

All of the members of the USNC's managing body, the USNC Executive Committee, all of the managerial and

technical expert participation in the International IEC meetings, all of the U.S. individuals who serve as international chairs and international secretariats, and all of the participation in the corresponding U.S. support organizations is by U.S. individuals.

All of the approximately 3,500 individuals whose direct voluntary roles in the USNC I have just identified are financially supported by their employers. These volunteers are supported based on commercial justification -- repeating, based on commercial justification -- by individual user and producer companies, by professional and trade associations, by segments of national and local governmental agencies, by academia and by other concerned interests.

The USNC recommends that NIST give consideration to working with industry groups to develop tax incentive legislation to encourage industry to put more resources to work on standards and certification activities.

It is the considered opinion of the USNC that the present U.S. standards system adequately serves the various trading needs in today's climate.

As a separate submittal to these hearings, the IEC Central Office Geneva provided documentation of the successful management and technical participation of the U.S., through the USNC in the IEC.

I respectfully request that this IEC Central Office submittal also become part of the record of this hearing.

CHAIRMAN WARSHAW: It will be.

MR. REIMER: The USNC feels that increased participation in the existing infrastructure by members from the U.S. Government is desirable and should be strongly encouraged by adherence to the spirit of OMB Circular A-119.

We believe an effectively operating infrastructure, indeed, does exist and to tamper with that infrastructure would invite gross breakdown of U.S. industry's ability to compete internationally.

Notwithstanding a statement made earlier today, the current U.s. system for participation in voluntary international electrotechnical standards activities is a centralized system which works effectively under the umbrella of the USNC.

The USNC has established procedures for U.S. participation in the IEC standardization process. This standards development system is open to all materially affected parties, both public and private, and the operating procedures are based upon due process and the development of consensus U.S. positions.

Through this process, U.S. positions to the IEC are developed and put forth.

With regard to the use of the international standards, the USNC has observed a marked trend toward the U.S. adoption of international standards wherever possible.

At this point, I would add that this is not something that you can perceive simply by looking for IEC numbered standards in other associations. They are adopted either in context included in existing U.S. standards, re-numbered or re-labeled.

The USNC believes that the issues involved in EC 92 certification and testing are extremely sensitive and vary from industry to industry. Because the European community's position on third nation relations is not fully developed, it is premature to provide constructive comments.

However, the USNC supports the position that ANSI should serve as a catalyst to bring together a broad coalition of private sector interests to develop a national consensus on this certification and test issue.

The USNC believes that a positive and cooperative environment for interaction between industry and government should be encouraged. However, the proposal to create a Standards Council of the United States of America is an unacceptable approach towards achieving this goal.

Our written statement offers supporting comments to this position.

The USNC recommends that NIST work with ANSI in a

cooperative partnership to make broadly available a comprehensive, user-friendly data base that contains all world standards and possibly certification and testing information, including new work items.

The USNC believes that this service would enhance this country's competitive position.

Thank you, Mr. Chairman. I would be happy to answer any questions you have.

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

MR. LUDOLPH: Mr. Reimer, I was interested in your comment about midway through your statement. It refers to the recommendation that ANSI serve as a catalyst to bring together a broad coalition of private sector interests to develop a national consensus on certification and testing.

In light of the issue that many certifications derive from public sector interests in safety, health and environmental protection, is there a role for government -- either at the state or local level -- in developing this consensus?

MR. REIMER: If you are referring to certification in the restricted arena, I guess the answer would have to be yes. There are those certification programs in the United States that are government regulated, if you will, government-run, that match IEC certification programs.

Some IEC certification programs are conducted on a voluntary basis in the U.S. and there is a mismatch, so there are -- I think the idea of a coalition is most appropriate because the European community, we would tend to view it as being a unified governmental control kind of thing, and we don't need to match that. There is no need for us to change how the U.S. does business or writes standards or does certification, simply because the Europeans are changing the way they are doing business and writing standards.

MR. LUDOLPH: Do you see this challenge coming from other places other than the European community -- Canada, Japan? Any other areas?

MR. REIMER: The challenge of ---

MR. LUDOLPH: The area of either regulated, restricted or non-restricted certification systems causing a need or a recommendation for a national consensus to be developed.

MR. REIMER: Right now, obviously, the press is all going to the EC 92 effort and that is not to diminish the importance of whatever is happening between the United States and Canada, but I think that's a more natural harmonious evolution than we are looking at the European.

There is an aspect of what is happening in Europe, in particular the development of standards from the point in

time after it is announced as a standards project until the final draft or the first public comment draft where we still have yet to achieve satisfactory exposure in all cases across the line.

There are individual instances where through the IEC participation we can get a look at -- well, I can't say participate -- observe what is happening during that writing process. What is an overall cure, there is nothing so that is more of a concern at this time.

CHAIRMAN WARSHAW: Thank you. Any other questions?

All right, thank you, Mr. Reimer. I want to point out that Mr. Reimer did ask in his presentation to include the submittal of the IEC with respect to our request for written comments, and of course, the information is at the back of your agenda, how that will be obtained, can be obtained after these hearings, along with other written comments.

We do have numerous written comments -- many, many with very constructive suggestions and I suggest those caring to peruse those in the DOC reading room as is illustrated in the back of your agenda.

So again, I want to thank you very much for your contribution today. We will now take a break and reconvene at 3:45 where we will have the Underwriter Laboratories and

the American Council of Independent Laboratories who will then make their presentations.

(Whereupon, a brief recess was taken from 3:25 p.m. until 3:45 p.m.)

CHAIRMAN WARSHAW: Ladies and gentlemen, we will begin the afternoon session with a different category, if you will, of laboratories, certifiers, etc., and we have before us the first two entities, namely Underwriters Laboratories and the American Council of Independent Laboratories.

So I will ask Mr. Castino, the chief operating officer, or about to be the chief operating officer of Underwriters Laboratories if he would introduce his associate and begin.

MR. CASTINO: With me today is Joe Bhatia of Government Affairs and Joe and I will share the presentation that we have for you.

Good afternoon, we are in the home stretch.

UL's involvement and interest in the areas of standards, testing and certification both in the U.S. and internationally, is very extensive. Therefore, we are most pleased to present our views on U.S. participation in international standards-related activities.

It seems clear that an appropriate coordinated strategy between the government and private sectors has the

potential to provide opportunities for improvements in the functioning of the present system.

However, in our attempts to do so and to achieve the optimum solution, all the pertinent aspects of this issue must be understood and carefully analyzed so as not to expend misdirected efforts or unnecessarily disturb the properly functioning aspects of the U.S. standardization system.

The brief statement that Joe and I are planning to deliver today is a synopsis of the key observations and recommendations based on UL's many years of experience in these related areas.

We will focus on four areas: standardization, testing and certification, accreditation, and finally, international developments.

In the U.S., the overall standardization effort, as you have heard today, is shared jointly by the government and the private sectors.

This standardization system is strong, effective, but functionally it is delicately balanced with key roles being played by the government agencies, private sectors entities, jurisdictional authority, and consumer interest.

The nature of the system is affected by state's rights and legal requirements, especially those pertaining to the products liability laws as they exist here in the

U.S.

The private sector structure permits high quality standards to be developed over a wide range of products and associated activities, in a relatively short period of time and at no cost to the Federal Government.

At the same time, this system permits the introduction of new and innovative products into commerce by providing a high degree of flexibility in the development and revision of these standards. U.S. Government adoption of thousands of private sector standards is a testimonial to the quality and effectiveness of the U.S. standardization system.

For all of its complexity, overall, the U.S. standardization system is efficient, flexible, accessible and perhaps, most significantly, it works. It is structured to effectively respond to international developments as they evolve. It should not be disturbed just to create a greater degree of central coordination.

Now Joe Bhatia will cover some key points relating to the issues I identified earlier.

MR. BHATIA: First of all, it is important to note that most of the product testing carried out in this country does not result in certification. Therefore, the number of laboratories that conduct developmental, performance, quality or other types of testing far exceeds those that

carry out testing for certification purposes.

When considering the broad range of purposes for which certification programs are conducted, it seems clear that programs related to safety, health, and well-being of the public are most critical.

In these activities, the role of the third party certifier is vital because these organizations not only determine compliance with a testing and construction requirements of product standard, but also with all the applicable national and local codes.

They also investigate product components, conduct plant inspections on an on-going basis, and use and control their certification marks. These are just some of the elements that are necessary to maintain safety.

I would like to emphasize the point that this process is not simple. The consequences of failing to properly conduct a product safety certification are awesome. People can be killed or injured. Certification agencies can be sued. Mandatory government standards can replace the more flexible voluntary standards. Regulators and consumers can lose confidence in the certification process, and perhaps most importantly, the loss of stability in the marketplace can become a competitive headache for the manufacturers.

Safety certification, ladies and gentlemen, is a

serious business.

Now, let's discuss accreditation.

Our views on laboratory as well as certifier accreditation have been formulated based on our 96 years of experience.

A principal concern in the accreditation programs is this: They can be perceived as assuring that a laboratory is conducting uniform and accurate results, and the certifiers are applying all the essential elements when, in fact, the evaluation criteria used in most accreditation programs do not and cannot provide such assurance.

A one-time examination of a laboratory or a paperwork review of the certification scheme does not mean very much.

To be effective, accreditation filing processes must be comprehensive. Periodic efficiency testing is necessary. Initial and follow-up on-site inspections are essential, and without the accreditation procedures and controls, there really is no program.

This comprehensive approach requires extensive time and monetary commitment both on the part of the accreditator and the organization being accredited. Unfortunately, to this date, we have not seen any accreditation programs that include and apply all of the critical elements that meaningfully demonstrate the

competence of an accredited organization.

For the purpose of our discussions here, it should be noted that even if such a comprehensive national or international accreditation program was developed, its overall need, its value and its benefit, and its economic impact would have to be determined before considering implementation.

In the areas where safety is paramount, there is a great deal of concern in our nation today about products liability in general, and the safety of consumers specifically.

Federal agencies, regulatory officials, inspection authorities, insurance interests, major retailers, manufacturers and consumers often look for third party certification or some other assurance that every effort was made for the products to be both safe and reliable.

All these groups need a system that truly works and an accreditation program which does not contain all the essential elements will, at best, mislead, and at worst, result in non-complying and unsafe products in the marketplace.

Now let's review international developments. Although EC 1992 is not the only international activity that should be considered, it is the key motivation behind the debate on how to improve the U.S. system.

Presently several unanswered questions remain as to how the EC system will work in the areas of testing, certification and accreditation, especially as related to non-EC, non-EFTA countries.

One fact is clear. The acceptance of products into the EC system will be largely dependent on whether these products are regulated or non-regulated.

Obviously, in the areas of products are regulated by EC and U.S. both, the EC will logically want to interact with the corresponding governmental authority in this country, and that's fine.

However, in the non-regulated areas, the EC has indicated a willingness to work with organizations in the private sector. Also the creation of the EOTC further facilitates private sector interaction.

While the international developments clearly indicate a need for coordination of testing and certification mechanisms, it is not mandatory that this coordination take place in the governmental arena, nor is it essential that a U.S.-based accreditation program be a part of this effort.

MR. CASTINO: Let me summarize. First, the present standards development in the U.S. is capable of responding to the international needs, including the EC, to the extent that industry desires and commits to responding

to these needs.

A centralized structure would add little or no benefit to the standards system and may well add an extraneous and conflicting layer.

Secondly, it is not presently known whether accreditation of U.S. testing and certification agencies or programs by a governmental or quasi-governmental agency will be required for EC 1992.

We recommend that developments in the European community be closely watched before launching an expensive and extensive program of accreditation. If accreditation by a U.S. entity is required to support product acceptance in the EC, UL will support an initiative based on the required operational elements discussed earlier.

UL is ready to work with and assist government as well as organizations in the private sector toward achieving the ultimate objectives of fair trade and equal access to all of the markets involved.

We thank you.

CHAIRMAN WARSHAW: Thank you very much, Mr. Castino, Mr. Bhatia.

MR. CASTINO: We didn't get the red light yet.

CHAIRMAN WARSHAW: We can proceed without the red light.

(Laughter.)

CHAIRMAN WARSHAW: Mr. Donaldson.

MR. DONALDSON: I would like to address a question to Mr. Bhatia and his comments about national accreditation programs.

I wondered if the criteria he was including in his evaluation were consistent with the internationally recognized criteria that were supported by ANSI, or if he has his own set of criteria?

MR. BHATIA: I knew you would get a question to me.

What we are telling you is based on our experience primarily as a tester and certifier in areas which are of vital interest and concern. Safety, health and environment obviously need to be looked at slightly differently than the general guidelines would cover which are intended to be used in a broader and a generic sense.

The criteria that perhaps best work and best protect the elements that need to be covered for an effective and comprehensive program may or may not be all parts of the ISO guides that you referred to, but that doesn't make it unacceptable.

MR. DONALDSON: Do you see a need to go further with what is currently the prevailing ISO/IEC approved guides in order to meet what you feel needs to prevail?

MR. BHATIA: Well, the guides are just guides and

as you very well know, the accreditation systems are not using those guides and are not comparing the performance of each of the elements in those guides to carry out the approval and acceptance of organizations.

MR. CASTINO: Don, I might just add, I mentioned it to you during the break, I think the important thing is to look at the guides with respect to the elements that are in the guides.

What we are saying is all elements that are in the guides must be covered, and then the level of criteria will have to be adjusted based on globalization issues.

Globalization will involve a common denominator approach to some extent, and UL knows to the extent that it can within U.S. laws and within the U.S. market, will have to adjust to some extent when reciprocity mechanisms develop.

I urge, however, that we not leave out any element of the guide and that all elements in the guide be covered in criteria be set.

MR. DONALDSON: Of course, the implications of your statement are clear, given that within the European community they have adopted the EN 45000 series which are based on those guides, it will say that you might have difficulty accepting some of the systems that will be advocated within the community.

MR. CASTINO: With respect to both those two elements, Don, ISO 9000 which is the quality registration of factory operations and the quality operation of a laboratory facility under EN 45000, we have begun to integrate those elements into our programs.

I don't think UL will have a problem in being capable of implementing it. The question again will be will the marketplace be able to accept the level of product design changes that might be brought about by the implementation of such programs.

MR. BHATIA: If I might add a comment, even the EN 45000 series criteria which are essentially the only element for a notified body status as stated by EC, I perceive to be as not being sufficient in all areas of application, and that comment and statement has been made by several individuals in the EC entity itself.

They recognize that they need to have a minimum acceptable criteria that will be applicable across-the-board, but if you recognize the differences of various programs that exist within the EC nations, a full 40 percent, perhaps, of their entire effort in the first three years is going to be devoted to elevating some of the certification entities' competence so that they can be all perhaps comparable and acceptable to everyone in the EC system.

The point is are you going to be able to have the rights of refusal? Are you going to be able to make decisions regarding the data packs or information that is going to be used in your safety or health or environment certification programs.

The answer is you have to have some opportunity to determine competence and ability of those whose work you are going to be accepting.

CHAIRMAN WARSHAW: Okay, thank you. Mr. Ludolph, and then we will move on.

MR. LUDOLPH: A great deal of interest has been put on EN 45000 but we know that the system in the European community is based on essential requirements, not EN 45,000.

MR. CASTINO: Right.

MR. LUDOLPH: The essential requirements are very much like the same concerns that U.S. regulators have in their interests in protecting safety and health.

Is there a recommendation that you have on how to achieve comparability or an interface between the two regulated entities in dealing with essential requirements that would bridge this non-compatibility and perhaps take us away from our emphasis on EN 45000 ISO 9000.

MR. CASTINO: Yes, Charlie, we don't really -- it's a separate subject. I talked a little bit about it at the ANSI conference but we feel that the data package

approach is a way that it can be done.

By that, I mean a level of competence has got to be built on the part of the Europeans as well as the U.S. -- all entities, I mean manufacturing, regulatory and users -- that the essential requirements that exist in each country will be met.

The way I think that has to be done is an assurance, based upon the establishment of the system, that will permit the certifying body to attest to compliance to the prevailing standard or standards in that country, the compliance with the quality systems approach that exists in that country -- and we have counterpart systems, believe it or not, to the ISO 9000 and the EN 45000 system -- and that the data packages, when developed and submitted to a designated third party in the other country, whichever way it goes -- would then be able to review that data package and have the right to refuse it if they felt that safety requirements that prevailed in the area, and that area being either a region, a state or the whole country if it is federal in nature, have been met, and would have the right to reject.

That will begin to build confidence that, in fact, unique requirements indigenous to that area that are part of the law of that area are being met.

Once that confidence exists, then I think

acceptance will occur between those two agencies and you will do that on a product sector by product sector basis which would mean the agencies involved in those product sectors would be picked up as you went through.

CHAIRMAN WARSHAW: Okay, thank you again, Mr. Castino and Mr. Bhatia.

We will now move to the American Council of Independent Labs and Herbert Wilgus. Would you please introduce your associate and please comment?

MR. WILGUS: Thank you, Dr. Warshaw.

My name is Herb Wilgus. I am accompanied by Milton Bush who is director of public affairs for the American Council of Independent Laboratories.

I, myself, am president of a small business, Penniman and Browne, Incorporated. Our company is a member of the American Council of Independent Laboratories, also known as ACIL.

I am vice chairman of the government affairs committee of ACIL and also chairman of its laboratory accreditation subcommittee.

I am pleased to have the opportunity to speak on behalf of ACIL today about what we believe may well be a turning point in improving U.S. participation in international standards-related activities.

I will summarize in ten minutes ACIL's prepared

statement, however I would first ask the Chairman that our entire statement be placed in the record.

CHAIRMAN WARSHAW: It will.

MR. WILGUS: ACIL is the trade association that represents independent, commercial laboratories. ACIL's membership is broad-based, representing all laboratory disciplines with the exception of clinical.

ACIL represents an industry of over 4,000 laboratories contributing an estimated $11 billion annually to the nation's economy -- a number that is growing as American consumers demand a safer and better quality of life.

ACIL also has on-going relationships and affiliations with a number of sister societies, including those in the standards community, but there is one thing that I want to make abundantly clear. While we are members of, or affiliated with many of these organizations, ACIL is the only broad-based U.S. trade association representing the interests of the independent testing laboratory industry as a whole.

The standards community is not in a position to speak for the testing community, nor are individual laboratories or trade associations that represent specific product sectors.

We are a unique industry in our own right, and

1 although linked with standards issues, our needs are very
2 different.
3 While many of our members are active in some
4 standards organizations, ACIL members as a whole are, to a
5 much greater extent, users of standards.
6 As users, we have a direct interest in the quality
7 of standards. As testers and certifiers, we will not
8 comment on standards issues today, however because NIST is
9 also reviewing testing, certification and quality assurance
10 activities, we will discuss the needs of the U.S. testing
11 industry in light of evolving international developments.
12 Before I summarize the ACIL's position, I would
13 like to state my own high personal regard for the National
14 Institute of Standards and Technology, formerly the National
15 Bureau of Standards. This respect was gained initially in
16 my career, my former career, as an employee of the U.S.
17 Government.
18 During the 30 years that I served in diplomatic
19 and consular offices abroad and in the Department of State
20 in Washington, I participated in many negotiations, some of
21 which were technical in nature.
22 I am happy to report that foreign officials
23 invariably held NBS and the American standards community in
24 high regard. At the same time, I must report a certain
25 degree of frustration on the part of other nations in

dealing with the fractured structure of our standards system.

The same holds true of our system of dealing with testing, certification and accreditation issues.

Today the government is groping to find its role in international testing and certification activities. ACIL believes that it can assist in this endeavor by first providing a brief historical background on efforts of the U.S. Government to organize and coordinate testing and certification and accreditation activities in the United States, by describing the present state of these activities in the United States and the European community and finally, by proposing a solution today that may offer competitive assistance to the U.S. testing industry in light of worldwide regional consolidation efforts tomorrow.

As you review historical documented efforts of the Federal Government in testing and certification and accreditation, which ACIL has done in its statement for the record, you will see that the present system is not working.

Testing laboratories are faced with the necessity of obtaining multiple certifications, each of which has limited utility because each has limited acceptance. You will also see that many of the same concepts that were discussed over a decade ago, are being discussed today.

So what is different today that is driving a re-

examination of these issues? In one word, international.

The rest of the world is demanding a U.S. system that can interface more easily for the purposes of international trade.

International demands now require a re-examination and reform of the undisciplined U.S. system by the government. Examination of the current state of testing, certification and accreditation at the federal level as described in a March 1989 report by the General Accounting Office, reveals that there is no coordinating mechanism among government agencies. Terms, approaches, requirements, accreditation procedures vary.

Again, this report was driven by national considerations. It is obvious to ACIL that such an uncoordinated and undisciplined approach cannot interface effectively with international systems.

We explore this in great detail in our statement during our discussion of the activities of the European community.

In our written statement, ACIL explains the operation of the European system, discusses policy issues raised in specific EC directives, outlines specific pronouncements to the European community on the European organization of testing and certification known as EOTC, and draws conclusions and proposes questions.

I will summarize these briefly.

At present, U.S. laboratories cannot become notified bodies in the EC testing and certification scheme for regulated areas. One such area is electromagnetic compatibility testing, also known as EMC.

The U.S. also regulates EMC at the federal level through the FCC and NVLAP. The U.S. system however is open to foreign laboratory participation. In fact, 18 foreign laboratories, many of them European, are certified to test for the U.S. market.

But for the FCC's and USTR's willingness to close the U.S. program for foreign laboratories participation, unless the EC is willing to negotiate on the issue of notified body status, we would have no leverage on the EC and many small and medium-sized laboratories would be at a serious competitive disadvantage.

Current EC policy allows U.S. laboratories to receive subcontracts from EC notified bodies, but this concession falls short of what is needed. There is absolutely no competitive advantage for EC notified bodies to subcontract.

In addition, all current bilateral agreements between U.S. and EC laboratories in regulated product areas will be subject to re-negotiation at the commission level after 1992.

Finally, while a U.S. laboratory could set up a U.S. owned subsidiary in an EC member state and seek notified body status, this clearly is an artificial incentive to invest in the EC, and well beyond the means of many small and medium-sized laboratories.

The EOTC is a structure designed to organize the private sector in the areas of testing and certification in the EC. Agreement groups, part of EOTC, composed of test houses and laboratories, will be open to foreign participation.

How will small and medium-sized laboratories currently serving U.S. suppliers to the EC market marshall the resources necessary to participate in such groups.

It is imperative that incentives be provided for such participation. Clearly ACIL believes that the current unregulated U.S. system needs to be re-evaluated in the light of the development of EOTC.

The most difficult part of the EC scheme to understand is the treatment of products that are unregulated in the U.S. but regulated in the EC. The construction products directive is a useful example because all products are covered.

While the EC would be willing to negotiate on a product-by-product basis, the first question that needs to answered is who will negotiate access? Because the product

is regulated by the EC, the federal government to government dialogue will be necessary.

The EC will not recognize the various state, local or private sector entities for the purpose of binding national legal obligations.

The second question is, with such a decentralized and unorganized system, how can the U.S. offer the EC a balanced situation which it will seek for the purposes of mutual recognition agreements.

Finally, in the areas of laboratory services yet to be addressed by the EC -- for example, environmental services -- the present situation is equally bleak.

Considerations of these realities makes ACIL concerned about the competitiveness of the United States and its ability to respond creatively to development worldwide in the testing, certification and accreditation forum.

ACIL believes there is a legitimate role for both the public and private sector in fashioning a coordinated and systematic U.S. response to worldwide developments in the testing and certification market.

In order to develop such a response, a complete re-examination of the U.S. testing, certification and accreditation industry needs to be undertaken, squared with developments internationally, and performed by a congressionally chartered national commission.

In summary, a system that ACIL could support would include, but would not be limited to, some of the following elements: Principally, private sector subject to congressional oversight, open and transparent, subject to administrative procedures required by law, non-preemptive of existing federal programs unless requested by the affected agency, and equipped with sufficient checks and balances.

Functions of such a system would include, but not be limited to, one, the reciprocal acceptance of test data internationally.

Two, the recognition of U.S. laboratory accreditation schemes.

And three, the negotiation of U.S. laboratory access internationally.

Thank you, Mr. Chairman.

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

Well, I think your remarks were all encompassing.

MR. WILGUS: Thank you.

CHAIRMAN WARSHAW: I want to thank you both very much for a very fine presentation and again, we do have the comment period open until June 5th, should you have some additional comments you wish to submit.

MR. CASTINO: Thank you.

MR. WILGUS: Thank you.

CHAIRMAN WARSHAW: I will now ask the final three presenters for this afternoon, if they would come to the podium, namely the American Gas Association, Retlif Testing Laboratories, and Hartford Steam Boiler Inspection and Insurance Company.

(Pause.)

CHAIRMAN WARSHAW: Gentlemen, thank you for taking the time to present information today to us.

I would like first to call upon Mr. Schulte of the American Gas Association.

MR. SCHULTE: Thank you, Mr. Chairman, members of the panel.

My name is Richard J. Schulte. I am vice president of laboratories, for the American Gas Association.

I appreciate this opportunity to comment on behalf of AGA concerning the U.S. Government's role in standards development, product testing, certification and quality assurance.

My testimony and comments are in response to the notice of hearing published in the Federal Register, November 29, 1989. My presentation will consist of oral remarks supplemented by a written document for the record which has been submitted to your organization on March 22, 1990.

The American Gas Association is a trade

association consisting of approximately 250 gas utility and pipeline companies who transport, distribute and sell over 80 percent of the natural gas used in the United States. The Association has its headquarters in Arlington, Virginia.

For 65 years, the Association has also operated AGA Laboratories with facilities in Cleveland, Ohio and Los Angeles, California. The Laboratories is the principal U.S. safety certification agency for gas appliances and related equipment used in residential and commercial applications throughout the U.S.

AGA Laboratories is the administrative secretariat for approximately 23 committees and subcommittees that maintain design standards and the National Fuel Gas Code for gas-fired appliances and accessory equipment.

We are also one of the first U.S. organizations offering to audit and register manufacturers' quality assurance programs that comply with international standard ISO 9000.

From this introduction, you can see that virtually all of the topics raised in your Notice of Hearing are part of our day-to-day domestic business.

We are also engaged in international activity. Approximately 15 percent of our certification customers are located in foreign countries. The gas appliance sector that we serve is one of those subject to the new approach

directives of the European Economic Community.

We have a family of bilateral agreements installed or under negotiation with counterpart agencies in Canada, Europe and Asia. Consequently, we are interested in and involved in foreign trade matters.

From this national and international vantage point, I appear here to make four general statements concerning the role of the U.S. Government in standards, testing, certification and quality assurance matters affecting the gas industry.

For purposes of this hearing, I use the term gas industry to include consumers, local code officials, gas pipelines, gas distribution utilities and equipment manufacturers and laboratories.

Next the Association's position in summary. First, the U.S. gas industry uses private sector systems for developing standards, writing model installation codes, certifying gas-fired equipment, and monitoring manufacturers' quality assurance programs.

These systems are highly developed and widely accepted in our domestic market. The same systems are evolving through appropriate steps to satisfy new requirements for international markets.

AGA believes that the gas industry's private sector approach to standards development, product

certification and quality assurance will continue to be more than adequate to serve future U.S. interests at home and abroad.

Thus, we do not believe that our systems need to be augmented by creation of a new quasi-governmental accreditation body or adoption of new federal regulations in this area.

The gas industry is one area where business and local government have already demonstrated competence and foresight in protecting the consumer while constraining costs in a competitive environment.

Second, AGA is convinced that both the U.S. Government and private sector organizations, ANSI, for example, have a shared responsibility for the success of U.S. trade with other nations.

We believe the U.S. Government and the private sector have complementary roles that require cooperation and communication across a broad front. We look for the U.S. trade representative, the Department of Commerce and the State Department to (a) conduct government-to-government negotiations where required, to remove barriers including the marketing of U.S.-made products abroad; and (b) to provide timely communications to U.S. industry as to the status and impact of such negotiations.

At the same time, AGA expects the U.S. Government

will show restraint in a supportive role while private sector interests work out international arrangements for harmonizing standards, testing products and evaluating manufacturers' quality systems.

AGA, along with others who have spoken earlier, is an advocate for a partnership or alliance between government and private bodies. This alliance should operate to create an international environment wherein each U.S. industrial sector -- steel, gas medical equipment, for example -- can work with its foreign counterparts to develop and use standards, test methods and certification procedures appropriate for that industry.

The alliance of U.S. Government and private industry should seek to operate by use of existing organizations without creating new agencies and imposing new administrative burdens and costs on business or the Federal Treasury.

Consistent with this philosophy, AGA has endorsed formation of the Department of Commerce Federal Advisory Committee on the European Community approach to standards, testing and certification. Our endorsement is based on the expectation and belief that both U.S. Government and private sector interests can make creative use of this Committee to better develop and effective and well-reasoned U.S. response to European initiatives.

Third, AGA Laboratories has agreements in place for exchanging certification services with counterpart agencies in Europe. The EC Commission may require re-negotiation of these agreements with U.S. Government participation.

AGA looks forward to receiving assistance from U.S. Government agencies if such negotiations are required. However, if EC approval of our agreements should require imposition of additional accreditation requirements, regulation and expense on the U.S. gas industry, AGA will look upon these costs as a failure in the negotiating process.

We believe that the European and U.S. systems for standards development, testing, product certification and quality assurance can be different, and co-exist and interact successfully without being forced into a common mold.

Fourth, we encourage the U.S. Government and the U.S. Department of Commerce in particular, to become a constructive participant in U.S. private sector forums that are already available to receive, debate, find consensus and act on proposals for improving U.S. standards, testing, certification and quality assurance programs.

I serve as a director of the American National Standards Institute, as does the Director of the National

Institute of Standards and Technology, NIST. AGA stands ready to receive through that forum, from NIST, a description of those real or perceived obstacles to trade that the Department of commerce and the ANSI federation should address together.

These remarks comprise the oral testimony from AGA. We made written comments which are submitted for the record.

They show, by way of example, the substantial progress being made by the American Gas Association, its customers and foreign partners to position the U.S. gas industry for future business success at home and abroad.

These activities of the gas industry have not yet required U.S. Government intervention, mandate or direction to be successful.

I thank you for this opportunity to address this panel.

CHAIRMAN WARSHAW: Thank you, Mr. Schulte. Are there any questions of AGA? Mr. Ludolph.

MR. LUDOLPH: Mr. Schulte, how is it in your certification program here in the States that you accept foreign manufactured products and certify them? Do you certify them to a foreign standard, international standard?

MR. SCHULTE: At the current time, all of our certification is for products that are manufactured, whoever

manufactures for sale in the United States, that we are certifying foreign-made products to U.S. standards for sale in the U.S.

MR. LUDOLPH: Does your program contemplate the expansion of acceptance of foreign standards, or acceptance of foreign marks into the U.S. system?

MR. SCHULTE: Yes, it does. The principal trading partner with the U.S. in the gas product area at the moment is Canada.

We are in the process of harmonizing with the Canadian industry the standards which cover these products to develop a North American standard, for example, that will cover products sold in both the U.S. and Canada in the gas appliance regime. That's underway.

I foresee that in the longer haul, we will have harmonized standards, particularly in the gas controls area, with European entities leading to further harmonization of standards with other European product lines.

MR. LUDOLPH: And how do you contemplate that acceptance to be integrated into the acceptance criteria for inspection bodies at the state level?

MR. SCHULTE: I'm sorry, would you repeat your question?

MR. LUDOLPH: Well, if a state or locality looked for a safety acceptance, how do you work with the state

inspectors to develop the acceptance criteria?

MR. SCHULTE: Well, at the moment and for the foreseeable future, the local inspector or local code official, when he is making application of a gas product, looks for a certification mark. In our case, it would be HEA or it might be from some other third party agency.

In our case, those marks will continue to be applied. That is, if we are working with a product made in a foreign country, and perhaps made to a harmonized standard, we would still be the certification body testing against that standard.

In the longer haul, I think we will be in a position to exchange data packages so that the testing could be done in a foreign location and we would continue to apply our mark.

That is, in fact, the form of an agreement we have just installed with the Canadian Gas Association in which our customers, our mutual customers, can be tested now in either laboratory and we exchange data packages to provide certification in both nations.

CHAIRMAN WARSHAW: Mr. Donaldson.

MR. DONALDSON: Mr. Schulte, I may have missed, but did you happen to touch on the AGA participation at the international level? I know you referred to some of your bilateral work with groups of other countries, but did you

happen to mention the international work?

If you did, did I miss it?

MR. SCHULTE: The only remarks that I made were those that we have in place -- bilateral agreements at very low levels for exchanges of certain certification services with parties in both Europe and Asia, and those agreements currently cover relatively limited activities like the exchange of factory inspection services.

MR. DONALDSON: No, I'm sorry, I guess my question really was is there standards activity at the international level that AGA is involved in as an organization through setting up TAG's, secretariats and that kind of thing?

MR. SCHULTE: The direct answer is no. In the gas product area, there is only one ISO committee, TC 161 which deals with gas controls. The Gas Appliance Manufacturers Association holds the secretariat for that.

Outside of that activity, there is, in our sector, or has been, very little activity with the international standards arena, principally because there has been so little product movement, let's say, between Europe and this country. Most of the product movement is between Canada and this country, and so our emphasis has been there.

CHAIRMAN WARSHAW: Well, thank you, Mr. Schulte.

We move on to Walter Poggi of Retlif Testing Laboratories. Mr. Poggi.

MR. POGGI: Good afternoon. My name is Walter Poggi and I am president of Retlif Testing Laboratories, an independent testing laboratory specializing in both commercial and military electromagnetic interference testing.

Retlif maintains its headquarters in Ronkonkoma, New York, and a branch laboratory in Manchester, New Hampshire.

Its staffing consists of 16 employees in Ronkonkoma and six in Manchester. Our services are provided to a customer base of over 500, including the likes of IBM, Soundesign and Phillips Medical on the commercial side, Hamilton Standard and Northrup and Pratt and Whitney on the military side.

Retlif is small business, as is most independent laboratories in this country. It is from the small business viewpoint that I wish to make my comments on what I believe would be proper steps to improve the U.S. participation in international standards and testing activity.

First, I believe some additional points of background information might be of help. Retlif Testing Laboratories was founded in 1978 and has since that date experienced very measured and consistent growth both financially and internally as well as externally in regards to our organizational involvement.

The company and its employees hold either individual or organizational memberships in the American Council of Independent Laboratories, the American National Standards Institute, the Institute of Electronic and Electrical Engineers, the National Conference of Standard Laboratories, the Acoustical Society of america, the American Society for Quality Control, the Society of Automotive Engineers, the U.S. Chamber of Commerce, the National Federation of Independent Business and the Long Island Association.

I personally am Chairman of the Government Relations Committee of the ACIL as well as its Eastern Division Chairman. In addition, I am a member of the ANSI Z 34 committee on third party certification and the ANSI C 63 committee on Electromagnetic compatibility.

I am also a member of the Long Island Association's Small Business Council and was a congressional appointee to the 1986 White House Conference on Small Business.

Since the thrust of my presentation will center on the small business issues, I have not included much of the technical, historical and bureaucratic issues which I am sure have been or will be addressed in prior or future presentations.

The issue is simple: How do we make certain that

the position of small business in this country, in this case both manufacturing and testing, are protected in the areas of standards writing and testing and certification?

As we are all aware, the fastest growing segment of our economy for the past two decades has been small business. In that time period, employment in small business has steadily increased while it has steadily decreased in the big business sector.

Clearly, we must make certain that small business is protected and that we foster the proper environment for the continued development of small business in this country.

As our economy becomes more and more global, I find as a small business that it is increasingly more difficult to remain involved in the many developing areas which will and do have a direct effect on the very existence of my company.

What in the past required one association or society meeting a month, is now requiring one a week. In our own case alone, we must monitor the issues such as EC 1992 as it relates to standards development and laboratory notification, the Accreditation and Standards development programs in both the military and the FCC areas as related to EMI testing, ANSI committees C 63 and Z 34, ASQC programs for certification of manufacturer's Q.A. program, and related developments in Canada as a minimum, since all of

these issues directly effect our organization on a daily basis.

And all of this monitoring must be done by a company which has slightly less than 25 employees. It is easy then to see why in our case our efforts can only be to monitor rather than to shape.

Clearly this is where our interest can begin to erode since we in small business do not have the time, the money or the people to make certain that our interests are protected.

Regrettably, but predictably, the volunteer standards-writing concept as it is based in this country is in most cases driven by and controlled by big business. They have the people to support it and the money to devote to it.

Seldom if ever is the impact on small business consciously considered by these groups. It is my opinion that this in itself is one of the most important reasons why government must have an important role in the overall standards-writing effort in this country.

Beyond the issue of protection of small business, government involvement is required in the coordination of the overall system, including the areas of standards-writing, testing, certification and accreditation.

It is only then, that we can hope to eliminate

both the many duplication of efforts and the many special interests which now exist.

As an EMI laboratory, we maintain both a NVLAP accreditation and an FCC listing for performing testing to FCC standards. In addition, we all maintain a Canadian DOC approval for performing telecommunication testing for Canada. Why?

Why must we maintain three accreditation, approvals, or whatever you want to call them, all related to basically the same testing?

I might add that a recent GAO paper severely criticized the fact that the NVLAP and FCC program exist separately and strongly suggested the elimination of one. However, even within these two government agencies, there are special interests at work, each protecting their own territory at the expense of small businesses such as my own which again, must provide the time, money and people to support and maintain these programs.

Another example, to highlight the need for government coordination, can be seen by a brief review the generation of the present NVLAP accreditation in the field of FCC testing.

I myself requested the generation of this laboratory accreditation program and helped in its generation based on my involvement at the time with the

USTR.

At the time USTR was deeply involved in negotiations with Japan over the openness of the Japanese market to American telecommunications products. Based on those negotiations, USTR felt that a laboratory accreditation program for laboratories certifying such products would be helpful in its negotiations.

Interestingly enough they felt that the accreditation had to come from NVLAP since in their opinion the Japanese would only recognize a government-run or sponsored program and not one run by the private sector.

After much wrangling, the program was finally put in place and supported, through their involvement, by 18 independent laboratories. However, to date, it has never been embraced or supported by the FCC, who I might add, was requested to take a leadership role during its conception.

It has not been used to any degree of effectiveness with the Japanese and to my knowledge, has not even been mentioned to the Europeans. Quite honestly, since it is not fulfilling its intended goals in the international marketplace, I myself are beginning to question its worth.

Now I know that the Japanese and the Europeans would like us to believe that you measure such things as volts and amps differently in Japan and Europe but we all know that just is not the case and it appears that the

problem only occurs one way, that being when it comes to accepting U.S.-generated data.

Clearly it is not the case with our FCC since the FCC in their listing program is accepting data from approximately 19 Japanese laboratories and 12 European laboratories.

The fact is, and rightfully so, the FCC will accept data from any laboratory worldwide that shows that it is capable of performing the testing it is certifying to.

Now, we may take exception to the methods the commission uses to determine a laboratory's capabilities, however we cannot and should not take exception to their acceptance of data from all qualified sources.

However, what about us? What about the small U.S. laboratory who is totally qualified to perform testing to Japanese standards or European standards but are denied acceptance in those marketplaces?

Who is going to champion our cause? ANSI? NVLAP? There is no answer because there is no solution to the problem as our system now exists. In a recent special edition of the ANSI reporter, the headline states, "If it's not broken, don't fix it."

Who is it not broken for? IBM? General Motors? UL? I don't know. I do know that in my opinion as it relates to my company, the system is broken. I see more and

more competition from Europe, from Japan and from Canada, who can all offer acceptance in their country as well as ours, while we cannot because of their closed door policies.

For better or for worse, the times are changing and we must change with them in order to remain cooperative and productive in the developing global marketplace. The present voluntary consensus standard-writing approach used in this country for so long is clearly a burden on small business whose involvement represents a much greater financial and organizational commitment on their behalf as compared to big business who by virtue of their size and staff, can much easier support such a system while clearly protecting their interests.

The continuing developments in the EC and in the Pacific Rim are in many ways clearly troubling for small business such as Retlif and quite honestly, I would feel much more comfortable if I knew my government, who in many ways is answerable to me, was negotiating for me rather than an industry group or volunteer association which may, as in many cases, be driven by those capable of the greatest financial and personnel support.

I would recommend the organization of a governmental body as follows: Principally government run with strong private sector involvement through direct representation; subject to congressional oversight; subject

to administrative procedures required by law; pre-emptive of existing federal and private sector programs which are directly involved in international trade; responsible for the recognition of U.S. laboratory accreditation programs; and responsible for the acceptance of U.S. laboratory test data internationally.

Government-run, sponsored, or coordinated organizations to handle the tasks of standards-writing, testing, certification and accreditation are being developed in many countries.

Witness the Standards Council of Canada and the EC's newly formed EOTC. As these developments unfold before us, we must move forward to develop our own in order to remain competitive in this ever changing world marketplace.

I can only hope that NIST and the Department of commerce will rise to this occasion and seize the leadership role which is solely lacking in our present system.

Thank you for offering me the opportunity to present my viewpoints to you and I would be only to glad to answer any questions you may have.

CHAIRMAN WARSHAW: Thank you, mr. Poggi. Are there any questions? Mr. Ludolph.

MR. DONALDSON: Mr. Poggi, you mentioned several forms of recognition that your laboratory has achieved and then you mentioned a problem, potential problem with Japan

or European nations or elsewhere.

Does your lab personally have any experience in having test reports turned down by acceptance bodies in these other countries where a statement was made that you did carry this form of recognition?

MR. POGGI: Well, the way we have been attempting to penetrate those marketplaces, that it has been through agreements, so-to-speak. Those agreements have been with organizations such as TUV, as an example, in Europe.

The acceptance or recognition by NVLAP for the FCC holds very little weight with them. They still have required us to go through their own self-certifying type program before they would accept our data.

So I think it is a question of -- I don't want to put the blame on NVLAP because I don't think it's NVLAP's job necessarily to go out and sell its systems, but it is somebody's job in government to go out and sell the systems.

MR. DONALDSON: But as I understand what you're saying, in the case of TUV, you were seeking to establish some form of agreement with TUV, is that correct?

MR. POGGI: I was seeking to have my data accepted.

MR. DONALDSON: By them?

MR. POGGI: Right.

MR. DONALDSON: Thank you.

CHAIRMAN WARSHAW: Mr. Ludolph.

MR. LUDOLPH: As it stands now, according to the December 21st council resolution of the European community, you can either be a notified body or you can attempt to subcontract with notified bodies in Europe, the statement before of the American Council of Independent Laboratories indicated that there was a competitive problem in being accepted as a subcontract, and that notified bodies who are European who have subsidiaries in the United States, can offer one-stop testing both to U.S. and European standards, and that there is no incentive for them to subcontract with a competitor in order to give that same service.

Do you concur with ACIL's evaluation that there is an advantage for your type of lab or for your business to become a notified body? And is there a time frame that you see as required for you to become a notified body? Are existing European subsidiaries attempting to enter the U.S. market as notified bodies to compete with you?

MR. POGGI: Well, I might be talking out of turn and putting some of my own internal company secrets out, but I can assure you that TUV is much less interested in putting together agreements with me today than they were about six or seven months ago.

So I sense that as they perceived that they have acquired the acceptance that the necessarily need in this

country, they have less of a need for me.

I am not interested in moving forward with those type of arrangements in the future.

Similarly to the FCC situation, they accept data from qualified sources. I expect the same.

CHAIRMAN WARSHAW: Well, thank you, Mr. Poggi. We appreciate your comments.

Now we have Mr. Richard Feigel of the Hartford Steam Boiler Inspection and Insurance Company. Mr. Feigel, did I pronounce it right?

MR. FEIGEL: Yes, you did. Very rare.

(Laughter.)

MR. FEIGEL: Thank you, Dr. Warshaw. My name is, I go by my middle name which is Gene. I am Gene Feigel, the director of engineering operations for the Hartford Steam Boiler Inspection and Insurance Company. In that capacity, I am responsible for the management of my company's standards participation and standards development, both internally and our participation with consensus standards development bodies outside the company.

My company's name is hardly a household word. We are the largest boiler machinery insurer in the United States, and through a joint venture indirectly and through various re-insurance treaties, we also provide industrial insurance throughout the world.

In addition, directly and through various subsidiaries, we provide engineering, environmental and software services of a wide variety. Probably most germane to this forum, we are the largest third party inspection agency operating under the American Society of Mechanical Engineers, Boiler and Pressure Vessel third party inspection concept.

We provide those inspection services throughout the world, wherever they are required.

My company has had a longstanding commitment to participating in standards developing activities, again primarily through ASME but certainly with a number of organizations. We have been involved in standards development for over 75 years. We have a very long-term, very serious commitment.

Since I am the last speaker today and I have provided extensive written comments and suggestions, I am going to keep my comments extemporaneous and brief.

I would like to make two points. One is that at least currently we believe very strongly in de-coupling the commercial and technical issues in standards development, that we do believe that the government has a primary role certainly in championing international trade issues and probably there is no body or organization certainly that could champion that cause.

However, we believe that in terms of the technical and administrative management of actual standards development, that the OMB circular A 119 certainly provides an adequate framework, and that that framework is not a hypothetical one. It has been shown to work and I would cite as, in my mind, a very successful example that I have been personally involved with -- the Coast Guard's adoption of various sections of the ASME boiler and pressure vessel code for the technical regulations for boilers and pressure vessels under their purview.

I worked personally with them in their internal regulatory process when they were adopting that, and have watched what they have done since and how they have both participated and provided personnel to participate in the code committee activities that continue to develop those standards, and what they have done in terms of actually embodying them in the regulations, very much along the lines of the A 119 scenario.

In my estimation, it has been very successful and the feedback we have gotten from the Coast Guard is, in fact, that they are reasonably satisfied. There are certainly other federal and obviously state agencies that have taken that tact and we believe that it was well-founded and continues to be well-founded for the foreseeable future.

The final area I would like to make a comment in

is just in the general area of communications. We have found that often the trade barriers that appear to be and in fact are more a lack of information or accessibility of information than an actual technical trade barriers.

Once American companies find out what, in fact, they have got to do to participate or compete in various areas internationally, they very often are able to. It is simply a lack or a difficult time finding information, particularly for small companies.

One of the engineers on my staff essentially is working full-time with our clients in the U.S. to attempt to help them understand and find information on foreign codes and standards so they can compete in exporting. And again, the particular product we are interested in here is in the boiler/pressure vessel piping area.

So we would urge the government to take an appropriate agencies, wherever those might be, to take a much more aggressive and positive approach to providing that kind of technical informational assistance to American companies.

There are models that seem to be working fairly well in the world. One, of course, is the technical help or the exporters arm of the British Standards Institution which, depending on how you look at them, they are a quasi-governmental organization, and of course, the NOREX-AFNOR

group in France which provides much the same type of service and we think that something modeled along those lines in the United States would certainly be of substantial benefit.

I thank you and will answer any questions, if I can.

CHAIRMAN WARSHAW: Thank you, Mr. Feigel. Are there any questions? Mr. Ludolph.

MR. LUDOLPH: Mr. Feigel, I appreciate the brevity of your remarks, but in your written submission, and just so we are all working from the same document, this is the letter to Mr. Warshaw of March 16th.

MR. FEIGEL: Yes.

MR. LUDOLPH: You make a couple of statements in your paragraphs I would like to get a little bit of elaboration on.

On the last or second page, you allude to subtle non-tariff in the EC 1992 directives regarding simple pressure vessels and the requirement for independent inspections required on vessels under its scope be performed by organizations approved one of the EC member states.

The criteria, the point you make is that the criteria for application to become an approved inspection body is not specific and would apparently permit EC members considerable latitude in interpretation and implementation.

Do you have any recommendations in that sentence?

From that, do you make recommendations on how the U.S. should comport itself regarding elaboration of interpretation and implementation for approval of inspection bodies?

MR. FEIGEL: I would make two comments. One is I am not, I think the problem at the moment at this juncture in time is simply a lack of the EC fleshing out what the specific requirements are going to be.

So any specific recommendations would be sort of hypothetical and premature on my part.

On the supposition that they do something fairly onerous and fall down on the side of essentially approving existing European-based inspection organizations only, to the exclusion of American companies say, such as mine which are in that sort of business, our response is to joint venture.

We don't frankly, we are a little skeptical of butting heads on this type of issue. We are working with a subsidiary in Europe to joint venture and come through the back door and be approved that way.

MR. LUDOLPH: And you are comfortable with the accreditation you receive here in the United States for inspections to particular types of groups of standards such as pressure vessels under ASME?

MR. FEIGEL: Yes.

MR. LUDOLPH: Those kind of criteria you found to be compatible with U.S. manufacturing and could be applied in other environments.

MR. FEIGEL: Our general experience and exposure to other inspection authorities outside of the U.S. is that our requirements and theirs could be harmonized. They are not radically different, certainly on a technical basis.

MR. LUDOLPH: There is another area in your written statement that would help me understand a little bit, if you could give me an elaboration.

In the next paragraph, you allude to the EM 29,000 series of documents which are open to a wide range of interpretation and you are concerned that there is no transparent adjudication mechanism available for equal access to both European and U.S. entities.

Are you referring in that area to an adjudication mechanism here in the United States, or are you referring to an adjudication mechanism that deals with a North Atlantic inspection?

MR. FEIGEL: My comment was generic to that set of standards, not in terms of favoring or disfavoring American competition. I have been unable to determine where any company anywhere in the world might go for an adjudication of a concern about how those quality requirements were being imposed or applied to.

MR. LUDOLPH: Thank you, and the last question from me is -- I don't have a yellow light so I don't have to worry -- on that same page, you refer to specific suggestions for consideration, when competing U.S. standards have been developed, preference should be given to a standard developed under ANSI consensus committee method, over those developed by canvas and other methods.

What are these distinctions that you make? Why is the ANSI consensus committee method to be given preference?

MR. FEIGEL: Because in my estimation at least, it better assures a participation in the actual development of that standard by a broader range of interest, as opposed to the canvas method which on the face of it, frankly, is -- the people writing the actual standard very well likely have a parochial interest, and then disseminate it for after-the-fact comment.

My personal opinion is that on that simple basis, the consensus method is superior.

MR. LUDOLPH: All right, so is this a personal opinion, or is this the position of the Hartford Steam Boiler company?

MR. FEIGEL: What you see in these written comments are acceptable to my senior management.

MR. LUDOLPH: Let me ask you ---

MR. FEIGEL: They are my company's position.

MR. LUDOLPH: Do you have an opinion or recommendation about how the development of consensus committee methods should be carried out? Is that something that you see continuing to develop in the private sector, or are you recommending a government role in assuring a preference for consensus committee methods?

(Pause.)

MR. FEIGEL: I don't want to hedge, but I am not sure I am able to give a very brief answer to that.

MR. LUDOLPH: That's all right.

MR. FEIGEL: I think that is something that continually needs to be reviewed and possibly should be an issue for some government oversight. To that extent, I would agree.

MR. LUDOLPH: Thanks very much.

CHAIRMAN WARSHAW: Thank you, Mr. Ludolph. Ms. Moore.

MS. MOORE: This is a question the panel has raised with a couple of other panelists. I am referring once again to your written statement where you say when it is clear that explicit recognition of U.S. standards either by direct reference or reciprocal agreement is not feasible, the government should encourage the use of international standards development mechanisms such as ISO.

That seems to imply a preference for U.S.

standards first, and international standards a poor second. What are your views on efforts to try to incorporate international standards into U.S. systems almost as a primary source for use standardization?

MR. FEIGEL: I think the issue here is we can't sort of in a vacuum pick out what would be technically preferable. There are historical antecedents at work here and I think the going-in position, not in all cases pushed very vigorously, should be to promote the use of American standards wherever, not on a sort of vicious parochial basis, if you will, but I think on a clear commercial basis.

I think, again, the focus very much is today, our mindset is toward the European economic community. Well, that is simply not apropos.

There are other areas of the world where it very much is, and I think it is very feasible for us to get out standards verbatim at least recognized, if not actually incorporated, in local law and regulation in some areas of the world, and if that is to our benefit and technically acceptable to the appropriate authorities there, I think it should be pursued.

CHAIRMAN WARSHAW: Thank you, Mr. Feigel.

If there are no more questions, I would like to thank all three panelists today. I particularly want to thank all the panelists today for holding so well to the

very short time frame that we had for everybody.

Tomorrow we will begin at 9:00 sharp in the same room.

(Whereupon, at 4:57 p.m., the hearing was adjourned, to reconvene on Tuesday, April 3, 1990 at 9:00 a.m.)

REPORTER'S CERTIFICATE

DOCKET NO.: NATIONAL INSTITUTE OF STANDARDS AND TECHNOLOGY

CASE TITLE: DEPARTMENT OF COMMERCE

HEARING DATE: April 3, 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 National Institute of Standards and Technology.

Date: April 11, 1990

Shelley B. Heller

SHELLEY B. HELLER
Official Reporter

Heritage Reporting Corporation

1220 L Street, N.W.

Washington, D.C. 20005

ADDENDUM

The following presenters have submitted supplementary material for the record in addition to their presentations. This material is available in the U.S. Department of Commerce Central Reference and Records Inspection Facility, Room 6628, Hoover Building, Washington, DC 20230, (202/377-3271).

STANDARDS DEVELOPERS & PROFESSIONAL SOCIETIES

James Pearse, Manuel Peralta, Jeff Smith
American National Standards Institute

Joseph O'Grady
American Society for Testing and Materials

Oscar Fisher, Melvin Green
American Society of Mechanical Engineers

Marco Migliaro, Andrew Salem
Institute of Electrical and Electronics Engineers

William Calder
Instrument Society of America

Ben Johnson
Industry Applications Society

James Decker
American Society of Civil Engineers

Richard Alley
American Welding Society

Russell Hahn, Robert Lanphier
American Society of Agricultural Engineers

Anthony O'Neill, Arthur Cote, Daniel Piliero
National Fire Protection Association

Michael Miller, Dennis Stupak, Robert Flink, Mort Levin
Association for the Advancement of Medical Instrumentation

James Bihr, Richard Kuchnicki, William Tangye, Paul K. Heilstedt
Council of American Building Officials

Thomas Flint
American Plywood Association

David Grumman, Frank Coda, Jim Heldenbrand
American Society of Heating, Refrigerating and Air Conditioning Engineers

Harry Sheetz, Jim French
American Institute of Aeronautics & Astronautics

John Mason
Society of Automotive Engineers

Ronald Reimer
U.S. Natl. Committee of the IEC

LABORATORIES, CERTIFIERS, ETC.

Tom Castino, Joe Bhatia
Underwriters Laboratories

Herbert Wilgis, Milton Bush
American Council of Independent Laboratories

Richard Schulte
American Gas Association

Walter Poggi
Retlif Testing Laboratories

Richard Feigel
Hartford Steam Boiler Inspection & Insurance Co.

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NATIONAL INSTITUTE OF STANDARDS AND TECHNOLOGY

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U.S. DEPARTMENT OF COMMERCE
NATIONAL INSTITUTE OF STANDARDS AND TECHNOLOGY
GAITHERSBURG, MD 20899

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10. SUPPLEMENTARY NOTES

[ ] DOCUMENT DESCRIBES A COMPUTER PROGRAM; SF-185, FIPS SOFTWARE SUMMARY, IS ATTACHED.

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)

Certification; hearing; international activities; laboratory accreditation; standards; testing.

13. AVAILABILITY

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