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The NIST Standards in Trade Program

A Review of the Current Program and Analysis of Alternative Approaches

Dr. Peter L. M. Heydemann
Director, Technology Services

U.S. DEPARTMENT OF COMMERCE
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The NIST Standards in Trade Program

A Review of the Current Program and Analysis of Alternative Approaches

(1) Introduction:

The National Institute of Standards and Technology (NIST) is the federal government's multipurpose technology partner for U.S. industry. As an agency of the Commerce Department's Technology Administration, NIST promotes economic growth by working with industry to develop and apply technology, measurements, and standards. NIST provides the research, products, services, and cost-shared funding that U.S. industry continually needs to overcome barriers to commerce in new or improved, and less expensive products. NIST also supports trade through the domestic Weights and Measures System; internationally through its efforts to establish uniform and accurate measurements in foreign markets; and through the Standards in Trade Program which assists industry in overcoming technical barriers to trade caused by the lack of harmonization of standards, conformity assessment rules, and other technical-based actions that limit U.S. industry's access to markets. Like similar organizations, NIST must continually prioritize its activities and, from time to time, must examine whether some of its programs could be better carried out by industry or by other parts of the federal or local governments. This report first describes our very successful Standards in Trade Program in some detail, then examines the strengths and weaknesses of the program, and finally considers two alternative approaches to carry out this program.

Many countries compete intensely to influence the standards and conformity assessment practices in other countries to their own advantage. The utility of standards and conformity assessment practices for opening or closing markets to competing businesses has become widely understood. The following table illustrates the financial commitments of major countries to international standardization and to technical assistance activities.

Organization	Budget	% Government Funded
UK/BSI	\$150 million	4%
Germany/DIN	\$111 million	16%
France/AFNOR	\$ 89 million	22%
Japan/JISC	\$ 27 million	100%
United States/ANSI	\$ 21 million	0.001%

Table II Technical Assistance		
US/NIST 1998 international (global) training/experts initiative		\$2 million
European Commission regional technical assistance funding (EC/CEN)	Central/Eastern Europe	\$37 million ('96-'99)
	NIS only	\$1.2 million ('96-'98)
Federal Republic of Germany	South and Central America	\$40 million ('96-'98)

(2) Problem:

Trade in any market requires an infrastructure that includes not only transportation, mail and telephone systems, electric power, and banking, but also a system of clear and reasonable normative standards, conformity assessment procedures, weights and measures, and import regulations. It also requires competent authorities to set and administer these rules in a public and transparent fashion. When these conditions are not fulfilled, or if there are arbitrary rules, corruption, or cheating in the market place, then our access to the market is impaired. Many developing markets, and even a few developed ones, do not meet all of the conditions identified above, and industry requires and requests NIST assistance. In the National Institute of Standards and Technology Authorization Act for Fiscal Year 1989, Congress instructed NIST to establish a program to assist countries (e.g., Saudi Arabia) or groups of countries (e.g., European Union) to harmonize standards to remove technical barriers to trade.

(3) Objective of the NIST Standards in Trade Program:

The objectives of the Standards in Trade Program are to assist U.S. industry to overcome technical barriers to trade caused by restrictive normative standards, testing or other conformity assessment procedures, and by measurement problems in major existing or developing markets, and to encourage adoption of U.S. technology and concepts into standards and conformity assessment rules to facilitate and enhance trade (NIST Authorization Act of 1989).

Numerous mechanisms are utilized to pursue this objective. They include the following.

- Directly address the technical trade barriers encountered by U.S. companies
- Provide technical assistance to government and private sector organizations through workshops*, seminars, technical information, and meetings of technical experts
- Participate in and influence the standards development process in other countries
- Promote the recognition and acceptance of U.S. standards and product certifications
- Assist individual companies and industry sectors with specific export problems
- Provide training, advice, and consultations to U.S. industry, foreign governments and private sector organizations
- Establish and strengthen links between U.S. government and private sector organizations with their counterparts in other countries

*Includes Standards in Trade workshops and those of the Special American Business Intern Training Program (SABIT) administered by the Department of Commerce under the Freedom Support Act.

(4) Current Approach:

Several chapters of the report on NIST International Activities, NIST Special Publication 915, discuss the conditions in developing and developed markets and describe the program that NIST Technology Services is embarking on to improve access to those markets. We recommend that report for background reading.

Achieving a level playing field for U.S. exporters in world markets is the domain of the United States Trade Representative (USTR). The USTR pursues national objectives through high level policy discussions and negotiations. NIST supplements the USTR's work on a technical level, concerning ourselves with normative standards, conformity assessment, and metrology. We concentrate on influencing foreign standards authorities to set reasonable normative standards compatible with U.S. or international patterns; to recognize the results of testing done in the United States; and to provide fair weights and measures services. Major tools for achieving these technical objectives are the establishment of relations with other governments based on mutual trust and confidence; provision of training, advice, and consultation; and assistance in the establishment of appropriate organizations. This, then, is the basis for achieving the objectives of harmonizing normative standards, for evolution of a worldwide system of uniform and accurate measurements, and for reaching the elusive goal of "one product, one standard, one conformity assessment". This work is urgent. Other nations are many years ahead of us in establishing systems in developing markets that favor their traders and exclude ours.

In the short term, our Standards in Trade Program assists U.S. industry to overcome technical barriers to trade in those markets where industry has significant technical problems. In the long term, the solution of technical problems to trade must include the harmonization of standards, mutual recognition of accreditation systems, a system of uniform and accurate weights and measures, and, most of all, the will to collaborate on a free trade system for the world. To solve the many intentional, and the even larger number of unintentional, technical barriers to trade requires negotiations in trust and confidence between the "technicians" on both sides.

The Standards in Trade Program uses two major approaches to achieve this: (a) workshops at NIST on standards, conformity assessment, metrology and other related subjects, and (b) placement of NIST Standards Representatives to work with U.S. Embassies and Missions in foreign markets. The workshops are an excellent opportunity to show how we develop and use standards and to develop professional contacts. Placing a Standards Representative in a country where we have already established contacts affords us the opportunity to negotiate, to collect information, and to influence technical trade processes.

(5) Workshops on Standards in Trade and their Impact:

A major purpose of the workshops is to impart information on our way of dealing with trade; another is to establish professional and personal contacts with key officials from foreign governments and private sector organizations that deal with trade. We have found that our workshops on standards, conformity assessment, metrology and various other related topics held at NIST are very effective for establishing meaningful contacts with standards and metrology officials in other markets. NIST has an excellent reputation abroad for its technical accomplishments and its

integrity. An invitation to come to NIST rarely fails to excite our foreign colleagues and is always considered an honor.

For many, participation in a NIST workshop is also the first opportunity to visit the United States. Combined with the genuine hospitality shown by the workshop staff, this creates an atmosphere for establishing excellent and lasting professional contacts on which we can draw with advantage in the future. In particular, these contacts assist us in overcoming technical barriers to trade.

The workshops cover a broad range of topics, including development and use of normative standards, accreditation, conformity assessment, principles of metrology, and technical regulations. We also review for the participants the organization and function of the government, the role of the private sector, and the duties and prerogatives of the regulatory authorities. The 25 participants in each workshop are selected in consultation with officials of the country of origin, the U.S. Embassy, U.S. Foreign Commercial Counselors, ITA country desk officers, U.S. standards development organizations, and U.S. industry. Some workshops are funded by the United States Agency for International Development (USAID) which, through the Special American Business Internship Training (SABIT) program, lends substantial help. Lectures are delivered by experts from the Office of Standards Services, other TS staff, staff from the NIST Laboratories and the Office of International and Academic Affairs (OIAA), representatives of the International Trade Administration, U.S. Trade Representative's Office, various regulatory agencies (FCC, FDA, USDOT etc.), the Department of State, and cognizant experts from industry. Attachment I is the schedule of a recent Workshop on Standards in Trade. Attachment II lists the lecturers and their affiliations. NIST is very fortunate to be able to draw on so many specialists who contribute their expertise to the cause of overcoming technical barriers in trade. The workshop participants usually come from one country or from an economic region, or, in the case of the former USSR, from a particular industrial sector, e.g., oil and gas production. In Attachment III, we list the participants of a particular workshop to indicate the diversity of their affiliations and their organizational level. Another benefit of the Workshops is to establish effective business contacts. U.S. companies have frequently been able to negotiate contracts with participants in the Workshops. Attachment IV gives a few examples of short term workshop results. The major and long term result is in the often dramatically improved working relations with these countries.

Technical assistance to other countries is critical to strengthening ties to the United States, increasing U.S. influence, promoting the U.S. philosophy in standards and regulations, promoting the recognition and acceptance of U.S. products and U.S. certification programs, and facilitating work relationships with key people and organizations in other countries.

The SIT workshops lay the foundation upon which the United States can continue to build and spread its influence over time. Areas of special interest and need are identified during the workshops and possible follow-up activities and collaborative projects with the invited countries are discussed. Permanent collaborations in various standards and conformity assessment areas, that do not need direct SIT support, provide long-term benefits to U.S. industry and U.S. standards developing organizations.

Many of the initial technical assistance workshops for different regions resulted in subsequent workshops with a focus on specific industry sectors. Other U.S. government agencies are implementing similar workshops, and other participating countries have proposed and have scheduled reciprocal workshops for U.S. government and industry representatives as a means of furthering information exchange, cooperation, and enhanced trade.

In April 1996, an SIT Workshop was held for Mexican representatives. Seventeen representatives of the Government and private standards organizations and product certification bodies attended. Three examples demonstrate the growth of activities as a result of this workshop:

Legal Metrology

As a result of the SIT Workshop for Mexican officials, continuous interchanges of technical information with Mexico's Directorate for Standards (DGN) were greatly facilitated, and it was agreed that the United States would provide technical assistance to help Mexico strengthen its legal metrology infrastructure. Mexican officials attended Annual and Interim Meetings of the U.S. National Conference on Weights and Measures (NCWM). Three Mexican officials met with Maryland Weights and Measures officials to observe weights and measures inspection and enforcement practices. As a consequence, Mexico is planning to purchase U.S.-manufactured test equipment for testing gasoline dispensers. In November 1998, Mexico will hold its first National Conference on Weights and Measures, based upon the U.S. model. Mexico has requested U.S. input on legal metrology issues and plans to invite U.S. experts to speak at their NCWM regarding the U.S. programs in areas critical to Mexico. It is expected that representatives from the United States and Mexico will participate in each other's NCWM on a continuous basis. This will result in a more open and transparent system of standards development in Mexico's legal metrology system. U.S. industry representatives have expressed a strong interest in participating in Mexico's NCWM. In addition, in June 1998, a Workshop for Legal Metrology for the Americas was held for 30 countries. NIST, the OAS, and U.S. industry jointly sponsored this workshop.

Water Meters

Following the SIT Workshop for Mexico, several meetings were held with directors from the NIST Office of Standards Services and Mexico's Directorate for Standards. During these meetings, DGN officials specifically requested information on U.S. water meter standards. In June 1997, the NIST Standards Attaché in Mexico discussed the technical issues with a DGN official and was asked to recommend action to resolve the issue. His recommendation was followed: a technical committee meeting was held in Mexico, which included a key representative of a U.S. meter manufacturer, and Mexico revised its water meter standard to recognize critical water meter specifications developed by the American Water Works Association (AWWA, September 1997). Subsequently, the Standards Attaché helped the U.S. meter manufacturer to obtain its product certification certificate in less than 24 hours. This enabled the U.S. manufacturer to bid on two Mexican tenders, of which he won one contract to supply 50,000 water meters to the city of Tijuana. Additionally, as a result of successfully promoting AWWA meter specifications in the Mexican standard, the United States used this action as leverage to open negotiations on the ISO water meter standard. A key U.S. meter manufacturer chairs of the ISO technical committee and has conducted two meetings to consider revisions to the standard.

Intelligent Highway Systems

The SIT workshop for Mexico included a session on U.S. Department of Transportation standards. In July 1997, a U.S. manufacturer alerted the Commercial Service in the U.S. Embassy that Mexico's Commission on Bridges and Highways (CAPUFE) was going to issue a tender for automatic (electronic) toll collection to upgrade their toll collection system. The tender was going to specify a proprietary communication protocol from a French equipment manufacturer. A meeting of representatives of CAPUFE and key U.S. technical experts was arranged to discuss the issues and the development status of a proposed North American standard and the proposed international standard. As a result, Mexico revised the specifications for the tender and made them consistent with the proposed North American standards under development. In addition, the appropriate U.S. trade association and the Department of Transportation established a continuing program of dialog and interaction to include Mexico in the process to develop the North American standard and support a proposal to ISO to develop its standard based on the North American standard. Use of an ISO standard, which includes U.S. technology, will facilitate our access to the billion dollar intelligent highway transportation system that will be used throughout the Western Hemisphere. The U.S. industry association sponsored the first International Intelligent Highway Systems Symposium this spring in Buenos Aires, Argentina.

(6) NIST Standards Representatives and their Impact:

At the request of U.S. industry, Congress instructed NIST in 1989 to work with other countries with whom we have significant trade and to assist them in establishing standards regimes that are compatible with U.S. and international standards. In the discussion accompanying the formulation of this instruction, members of Congress made it clear that they wanted NIST to establish a NIST Standards Representative in Saudi Arabia to assist industry with access to that market (see (①) on the map in Fig. 1 on page 8). At that time, the Kingdom of Saudi Arabia was a rapidly expanding market and the European nations launched an all-out campaign to establish European standards in the Kingdom that would restrict U.S. access to this market. Under the Act the private sector hired and paid for the first standards expert, an American engineer with extensive experience in Saudi Arabia and provided him with training and extensive back-up from its Office of Standards Services. NIST succeeded in placing the Standards Representative in the Office of the Director of the Saudi Arabian Standards Organization (SASO), but from the beginning, this NIST Standards Representative in Saudi Arabia and his successor have had a very close association with and support from the Embassy's Commercial Section at the specific request of the Senior Commercial Officer and with the strong endorsement from the Ambassador. One of the duties of our current Representative, Mr. Edward Wunder, is to review all Saudi normative standards that are either proposed, newly issued, or subject to revision and send them to NIST for review by public and private sector experts, especially those standards that might create technical barriers to U.S. products. Based on appropriate comments, NIST proposes revisions, or even entirely new text for these standards. Over 900 standards have been thus reviewed and revised, and only two revisions were not accepted by SASO. Beyond this, the NIST Standards Representative has assisted hundreds of U.S. companies in a variety of ways. In May, the American Business Council of the Gulf Countries (ABCGC), representing about 700 American firms in the Near East, nominated Peter Heydemann, Director of Technology Services and an architect of this program, the "Patriot of the Expatriates" in gratitude for our support. In Attachment V, we reproduce a recent report about this program. The U.S. business community in Riyadh estimates that this service has enabled them to increase U.S.

exports to Saudi Arabia by between \$300 million and \$400 million per year. Even if the actual annual increase due to our work were only \$100 million, it would still be extremely valuable and very cost effective. The Gulf countries are an important market. The U.S. currently has a dominant position (25% of total imports into Saudi Arabia) in this market. The important role of standards representatives is reflected in Attachment VI. The United States exported \$12.4 billion to the GCC in 1996 excluding military sales), but the competition from Europe and Japan is very strong and extremely well supported by their governments.

Based on the success of the program in Saudi Arabia, industry and the trade agencies urged NIST to expand the Standards in Trade Program to other markets. In FY1994, Congress allocated \$4 million to NIST for international standards and Weights and Measures activities. Consequently we expanded the program and the map in Fig.1 on page 8 illustrates where we currently have NIST Standards Representatives and where further representatives are needed.

NIST (marked with ● on Fig.1) in Gaithersburg provides the technical and administrative support for the Standards Representatives. Here NIST maintains the National Center for Standards and Certification Information (NCSCI), the GATT/WTO inquiry point, and the technical office for non-agricultural products, all mandated by the U.S. Trade Agreement Act of 1979. Here we consult with NIST scientists and engineers with a very broad range of knowledge and experience to provide our representatives with information needed in the field, and from this home office we maintain contacts with other government agencies and with the private sector.

A second NIST Standards Representative (marked ② on Fig.1) was established in Brussels to work with the European Union. This position is in the Foreign Commercial Service Office of the U.S. Mission to the European Union. Second to Canada, Europe is our largest market, with U.S. exports of over \$125 billion per year. In the early 1970s, when the idea of a European Union with a protected market was first discussed, it was quite clear that access to this market by American and Japanese competitors was to be quite restricted. Under GATT and WTO rules such a goal cannot be openly pursued, but impediments to free market access in Europe persist. The New Approach Directives alone, with their attached European standards and their tortuous route to obtain the CE-mark -- passport to the EU market -- that allows for the acceptance of products in various national markets, make it quite necessary to have a standards expert at the U.S. Mission. Numerous other technical barriers to trade are associated with conformity assessment, acceptance of test data, domination of international standards organizations by the Europeans, development of standards at closed meetings, discrepancies in standards and conformity assessment practices between the EU and individual countries. Moreover, the NIST Standards Attaché in Brussels provides technical support for the USTR in the MRA negotiations.



Fig. 1 Current placement (clear background) and possible future placement (solid background) of NIST Standards Representatives

The NIST Standards Representative was placed at the Brussels Mission from 1992 to 1994, but the position then became vacant until 1996. Ambassador Eizenstat forcefully requested prompt appointment of another NIST representative and the post was then staffed by a NIST employee, Mr. Roger Rensberger, on an interim assignment. His performance and accomplishments were obviously highly valued by the Mission, as shown by the letters in Attachments VII and VIII.

Ms. Helen Delaney, became the next NIST Standards Representative in Brussels, as an attaché in the FCS office. She is a widely known and appreciated standards expert, who very quickly gained the full support and respect of the Embassy, the Foreign Commercial Service, and of the business community. She has assisted literally hundreds of U.S. companies, has supported the MRA negotiations with the European Union, and has, at times, acted for the Minister Counselor of the FCS. Attachment IX reprints a letter from the Executive Vice President of the Information Technology Industry Council, who was in the beginning opposed to placing NIST Standards Representative abroad. This letter shows his appreciation for the work of the NIST Standards Representative in Brussels. The excerpt from Helen Delaney's performance appraisal in Attachment X is similarly enthusiastic about her contribution to the work of the Mission on behalf of U.S. industry.

Due to the political and economic importance of the Free Trade Area of the Americas (FTAA), NIST established Standards Representatives in Mexico City (marked ③ in Fig.1) and in Buenos Aires, Argentina (marked ④ in Fig.1). The latter office moved to Brasilia in the summer of 1998 to better serve U.S. industry. These positions were established at the request of the Department of State and its Embassies, the International Trade Administration, and U.S. industry. These and other Latin American countries, which are assisted insofar as possible by the two assigned experts, are developing their private and public sector infrastructures. There is currently little stability in the system of rules and regulations governing imports into these countries. Government agencies and private institutions are established, their assignments change, leadership is appointed and shifted again at a rapid rate. Consequently the rules governing trade, finance, customs, standards development, and conformity assessment change frequently and often dramatically. Embassies and Foreign Commercial Service Officers in the Americas are hard pressed to supply the necessary support for U.S. industry. Our NIST Standards Representatives and the series of Standards in Trade Workshops arranged for various countries from the FTAA are beginning to make a difference. We now have excellent contacts with relevant organizations and their leadership in both Mexico and Argentina. We are beginning to influence the thinking of new leaders, and are able to provide U.S. industry with timely information on a broad sweep of technical rules and regulations with impact on imports.

Our two representatives in the Americas take a regional approach to their work. Henry Oppermann, who recently returned from Mexico City, also dealt with most of the Caribbean and the Central American countries. Dr. Ivan Rios, who replaces Henry Oppermann, will follow the same pattern. Ileana Martinez, now stationed in Brasilia, Brazil, works mostly with the Mercosur countries. In all of the FTAA countries, the European Union has spent years and millions of dollars in a systematic effort to gain control of the standards development and conformity assessment authorities. If the European Union succeeds in introducing its New Approach Directives, design-

oriented standards, and notified conformity assessment bodies, then this market will become difficult for U.S. traders. Our representatives have to try to counter, or even overcome, the technical barriers created by the European Union and by the rapid and often confusing transition from government-controlled developing economies to free market economies.

Finally, as an experiment, we established an office for South Asia in New Delhi, India (marked ⑤ in Fig.1), which is currently staffed by Mr. S.K. Dutt, an Indian scientist who had previously worked for over 20 years in the Science Office of the U.S. Embassy in New Delhi. Mr. Dutt is very well connected to all of the technical departments and ministries of the Indian government, the standards organizations, and the testing and metrology authorities. The Indian National Physical Laboratory (NPL) kindly offered us an office in their headquarters in New Delhi. Mr. Dutt works closely with the American business community, the Confederation of Indian Industries, the Foreign Commercial Service Office in the U.S. Embassy and with the standards and metrology organizations of the Government of India. Not being an American citizen, Mr. Dutt's access to and collaboration with the U.S. Embassy is less close than it is with our posts described above. On the other hand, he has far easier access to most parts of the Government of India and to private industry. Thus he is very able to collect information for us on the development of standards, conformity assessment, test and measurement problems, S&T policies, and on problems with imports into India.

We undertook this experiment in South Asia in the expectation that we could use foreign hires to our advantage, but at a much lower cost than American representatives. The typical cost of maintaining an American representative abroad, including the overhead cost (ICASS) paid to the Department of State, is over \$250K (see Table III), while the cost of maintaining an office staffed locally ranges from \$35K in India to an estimated \$60K in Russia, a prospective location for a standards expert. Local hires need more guidance and support from headquarters, and must be backed up by more frequent visits from or to headquarters. Nevertheless, the difference in cost is very significant. Local hires may not be effective in some markets, but we expect them to be an excellent solution for some of the additional posts that we need to establish in the future.

Nationality	Assignment	Placement	Cost
U.S.	FCS	Embassy	\$250K
U.S.	Contract	local NMI or SDO	\$220K
Local hire	Contract	local NMI or SDO	\$35K to 60K
FCS:	Foreign Commercial Service		
NMI:	National Metrology Institute		
SDO:	Standards Developing Organization		

Table III The two types of assignment made for NIST Standards Representatives are limited appointments to FCS and contract representatives.

Consequently, two types of assignments have been adopted for standards representatives in foreign countries. The first type is a limited appointment as a Commercial Officer posted to a

Table IV NIST Standards Representatives: Position Types, Requirements, and Conditions

Type	Funding mode	Performance Supervision	Location	Expense to NIST	Country	Language Requirement	Other Requirements	Training provided	Training Expense to NIST
FCS Officer	NIST reimburses FCS per MOU	Performance plan agreed to by NIST and FCS. FCS rates	FCS at Embassy	\$300k* \$205k* \$303k*	EU Mexico Argentina	None in EU, 3/3 Spanish for Mexico & Argentina	US citizen, top secret clearance	Language 6 months, FCS 6 to 8 weeks, NIST 4 weeks	Up to 10 months, \$100k
US citizen under contract	Contract for specific deliverables	Deliverables as defined in contract	Local SDO ¹ , NMI ² , etc.	\$240k	Saudi Arabia	No requirement	Technical background, good local contacts	Up to 11 weeks NIST training and consultations	\$15k for travel and per diem plus salary
Foreign national under FCS contract	PSC contract - NIST reimburses FCS	Performance plan agreed to by NIST and FCS; NIST supervises	FCS Office at Embassy	\$60k	Russia**	3/3 in English and local language	Citizen of country serving in; technical background	Up to 11 weeks NIST training and consultations	\$15k for travel and per diem plus salary
Foreign national under NIST contract	Contract for specific deliverables	Deliverables as defined in contract	Local NMI	\$35k	India	3/3 in English and local language	Technical background, good local contacts	Up to 11 weeks NIST training and consultations	\$15k for travel and per diem plus salary

* FY 1999 estimated cost according to the Foreign Commercial Service

** estimates; there is no NIST Standards Representative in Moscow

¹ SDO = Standards Development Organization

² NMI = National Measurement Institute

Table V. NIST Standards Representatives: Cost of Stationing, Secretarial Support, and Operation at U.S. Embassies/Missions

Post	Officer		Operating Budget	FSN or PSC		ICASS Costs	Total
	Salary	Benefits		Salary	Benefits		
Brussels	90,000	19,000	95,000	56,000	18,500	42,000	322,500
Mexico	65,000	15,000	95,000	0	0	30,000	205,000
Brasilia	75,000	16,000	140,000	22,000	17,000	33,000	303,000

U.S. Embassy or Mission for two years, with possible extension on an annual basis for a maximum of five years. The office is normally located within the U.S. Embassy or Mission in the host country. The second type of assignment is through contract with a technical expert (either a U.S. citizen or a foreign national) who works closely with the U.S. Commercial Service.

The decision to assign a standards representative as a Commercial Officer, rather than contracting with an individual, is based on:

- (1) The level of responsibility, difficulty of problems likely to be encountered, and the level of independent operation expected;
- (2) the magnitude of trade the U.S. has with a particular country or region;
- (3) the types of non-tariff trade barriers that have been encountered in the past;
- (4) the level of expertise believed to be needed by the standards representative to address existing and anticipated problems; and
- (5) the level of technical contacts and long-term relationships that are desired to be established and maintained with the country.

(7) Training and Support of NIST Standards Representatives:

The previous section of this report discussed the arrangements that we currently make for NIST Standards Representatives (see Tables III and IV). We will now discuss their selection, training and support. In the following section we will then compare the advantages and disadvantages of these types of assignment. Prior to posting, NIST Standards Representatives need to be identified, trained, and, if they will be placed in an FCS Office, will have to pass through the Foreign Commercial Service bidding and panel process, which includes consideration of NIST's recommendations. Once at post, they require continuous support and further training.

Concurrence of the Departments of State and Commerce is obtained prior to placing an officer in a U.S. Embassy. In all cases the Ambassadors have strongly supported our proposals, as have other agencies and the private sector. Once a decision has been made to establish or re-staff a position abroad, we solicit applications from NIST staff and from suitably experienced outsiders through advertisements and personal contacts. We seek advice from standards development organizations, trade agencies, and from industry. Candidates are expected to be knowledgeable in

standards, metrology, and conformity assessment, and should possess a broad range of contacts in relevant private sector and government offices. A major criterion in the selection of a candidate is the ability to work knowledgeably and independently, with little supervision, on unstructured assignments, in unfamiliar environments. This requires candidates with strong motivation to set challenging objectives and to accomplish them. Candidates need to have excellent interpersonal skills, respect diversity, and maintain credibility at all cost. Their tenure abroad is usually three years for FCS posts and unlimited under contract. Our experience, to date has been excellent.

Candidates to be designated as Foreign Commercial Officers in a U.S. Embassy must be U.S. citizens with a top secret security clearance. They are selected by the Foreign Commercial Service in collaboration with NIST after competing against other candidates in the FCS selection process. Depending on the post, they may need to pass the Department of State language skills examination with at least a 3/3 rating. NIST may arrange for appropriate language training with the Department of State. With permission of the Departments of State and Commerce, foreign nationals may serve under contract as NIST Standards Representatives in an FCS Office.

Candidates, who work under contract and are not placed in a U.S. Embassy (see Table III on page 10), do not go through the FCS competitive process. Nevertheless, they are trained in much the same way as the FCS appointees and have to fulfill most of the same requirements.

The selected candidates receive at NIST any needed additional training in all aspects of the development and use of standards, conformity assessment, and metrology. They are familiarized with recent legislation and with plans for future legislation. They work in the headquarters of NIST's Technology Services organization on current problems. Depending on their background and experience, candidates are introduced to a broad range of technical and supporting experts at NIST, in the trade agencies, and in standards and metrology organizations. Candidates must also be familiar with the work of the NIST technical laboratories and with the extramural programs of NIST.

During their tenure abroad, all NIST Standards Representatives return to headquarters at least once per year for debriefing and further training. They attend the workshops arranged for a country in their region of responsibility, which has been of great value in expanding and deepening contacts with important foreign officials.

NIST Standards Representatives have a regular reporting schedule. In addition, they are expected to report immediately about new developments in trade that need to be brought to the attention of trade agencies of industry. In fact, most posts report on technical matters several times daily via e-mail. All official, major reports and any classified material are funneled through Embassy channels. This is also true for our NIST Standards Representative in Riyadh; although he does not have access to classified material, he works very closely with the FCS office in the U.S. Embassy. Our NIST Standards Representative in New Delhi, an Indian national, does not have access to classified information and reports directly to headquarters via FAX. The Office of Standards Services assigns staff to follow events in specific regions and to serve as the main contact points with individual Standards Representatives, remaining cognizant about standards-related activities in the designated countries, often speaking the local language, and providing any needed

support. These staff members are also responsible for evaluating information from the field which is used in our standards programs, forms the basis for specific actions in support of U.S. companies or organizations, and is forwarded to all interested parties. The Standards Officers frequently organize meetings or visits, clearing administrative matters with our administrative staff.

NIST pays the salaries and personal benefits for all of the NIST Standards Representatives. When Representatives work under the FCS in U.S. Embassies, NIST also pays the ICASS charges for services provided by the Department of State (see the example in Attachment Table XI). The Representatives not assigned to U.S. Embassies are also reimbursed for the cost of maintaining offices, etc. The total cost ranges from \$35K in India for a local hire, to an estimated cost of \$60K in Moscow or Shanghai (where there are no NIST Standards Representatives now).

It is difficult to assess the training cost for a U.S. NIST Standards Representative since it depends completely on the individual's opposite experience: the ideal candidate is fully familiar with development and use of standards, conformity assessment, and basic metrology. The cost of a language course for a person with no basic knowledge of the foreign language to be acquired at the 3/3-level is about \$570 per week and requires about one year of intense study. Familiarization of someone unfamiliar with the standards work at NIST may require four weeks or longer. General familiarization with the work of other relevant programs at NIST can be accomplished in three weeks. Any necessary introduction to private sector standards development organizations and to regulatory agencies requires about four weeks. The total training may cover many months during which salary and overhead is drawn in addition to the course fees. Table IV on page 11 collates data from our current, somewhat limited, experience.

Locally hired standards experts need to become familiarized with the standards work at NIST for about four weeks. Familiarization with the work of other relevant programs at NIST can be accomplished in another three weeks. Introduction to the private sector standards development organization and to the regulatory agencies requires about four weeks. The requirements for a local hire are not as stringent as for an American expert placed in a foreign country because the expectations for reporting, interaction with the business community, contacts with the host government are different and lesser. During this training time, the NIST Standards Representative, a foreign national in this case, will have to be supported in Gaithersburg/Washington. We estimate the total cost to be about \$15,000 for eleven weeks of training, or \$200 per day.

(8) Measuring the Effectiveness of the Standards in Trade Program

The NIST program of assigning standards experts to work with U.S. Mission and Embassy staffs in key countries was designed to enhance trade. Through exchange of information about standards and certification practices, we foster the adoption of U.S. techniques and technology by other countries; obtain information to alert U.S. manufacturers and exporters of impending new or proposed revisions of foreign regulations; provide technical assistance for overcoming specific roadblocks to the importation of U.S. goods and services; and coordinate with other agencies on matters relating to technical barriers to trade in specific countries and products.

Specific Tasks for Standards Experts in the Field:

1. Maintain close contact with governmental and private sector standards, conformity assessment, metrological, and other technical organizations in the host country;
2. Report on standards-related developments that might significantly affect trade in the assigned areas of responsibility;
3. Conduct various types of formal and informal meetings to explain U.S. systems, both in general terms and to pursue resolution of specific technical, standards-related issues;
4. Serve as an on-site, technical resource to provide immediate assessments and technical assistance to the U.S. Commercial Section, other Embassy staff, and cognizant offices within the International Trade Administration and the U.S. Trade Representative with respect to standards-related problems and other areas where NIST can be of assistance; and
5. Provide technical assistance to companies and industries facing specific standards-related problems regarding exports to the host countries.

Measuring Effectiveness:

Most of the listed tasks are accomplished through personal interactions, aimed at establishing strong technical bonds and creating the potential for enhancing standards and conformity matters to support U.S. opportunities, not only for immediate benefit, but extending over the long term. The degree of success attained can best be judged by the magnitude and extent of the contacts and feedback -- primarily from U.S. and domestic organizations in the host country -- regarding their appreciation of the efforts of the field representatives. On the other hand, specific instances of direct results, with observable payoff -- often estimated in dollar amounts of sales -- to American businessmen, can also be cited.

Examples of specific accomplishments of NIST Standards Representatives include:

- **Electronic Postage Machines in Europe:** The U.S. parent of Pitney Bowes was concerned that new EU standards would restrict their business in Europe, especially when a Paris-based representative of the firm was denied participation in a European Union Standards Committee (CEN) that was considering development of a new postal standard. The U.S. standards expert in Brussels worked with Pitney Bowes representatives and with CEN officials, who gave assurances that CEN's technical activities are conducted under a policy of openness and transparency, as directed by the Commission of the European Union. CEN then agreed to notify Pitney Bowes' Paris representative whenever work items are established in the relevant area; the company now has access to standards development activities related to franking and other postal matters.
- **High-End Audio Equipment for Europe:** In response to concerns of the U.S. Electronics Industry Association (EIA), the Brussels standards expert conducted a search on energy efficient standards for specialty audio products, such as high-end CD transports, digital converters and processors, turntables, amplifiers, electrostatic and dynamic speakers, and cables. After meeting with EU officials in the General Directorate for Industry (DG-III), the U.S. representative was able to assure EIA that there are no EU energy efficiency standards related to high-end audio equipment that could affect the export of the specified products manufactured by EIA member companies. At the same time, however, EIA was cautioned that Switzerland, which is not a member of the EU, has developed a series of draft

standards for energy reduction for telefax, TV's, non-professional video recorders, photocopiers, monitors, and terminals, and single work station personal computers. The EU has warned the Swiss that labels for these requirements could be considered as obstacles to trade.

- **Delay of Mexican Labeling Requirements:** New requirements for labeling consumer goods did not clearly specify how the regulations would be implemented, and the effective transition period was too short to allow manufacturers to comply by the middle of the upcoming Christmas season. Since non-complying U.S. goods had already been stockpiled in Mexican warehouses, NIST's expert provided invaluable technical assistance as part of the team of the Foreign Commercial Service (FCS) and other embassy staff, U.S. and Mexican businessmen, and the U.S. Trade Representative. As a result, the Government of Mexico postponed implementation of the new regulations. The timely technical information prepared and furnished by NIST's representative was a major factor in avoiding losses of sales of U.S. products that could not have been relabeled in time for the large seasonal sales opportunity. Avoiding disruption saved an estimated \$500 M at the time, and another \$10 M a month for the next five months.
- **Clothing Care Symbols:** The U.S., Mexico, and Canada were working to develop a set of harmonized clothing care symbols to facilitate trade in the NAFTA countries. The standards representative participated in the Mexican standards committee that was developing and reviewing these standards. When Mexican representatives decided to reject a proposal that had been agreed upon, the reporting of the situation to Washington triggered action and a response that put the effort back on track. A memorandum dated February 20, 1998, from the American Apparel Manufacturers Association stated that Mexico has accepted the NAFTA Care Labeling Symbol System.
- **Legal Metrology:** After technical exchanges, meetings, and participation (initiated and coordinated by the standards representative) in the U.S. National Conference on Weights and Measures, Mexico will hold its first National Conference on Weights and Measures, based upon the U.S. model, in November 1998
- **Argentinean Certification of Building Products:** Based on assistance and advice from the NIST representative, the International Conference of Building Officials (ICBO) and its private sector affiliate, a building code developer, applied for an Inter-American Development Bank grant for technical cooperation in Argentina. ICBO signed an agreement with the primary national testing laboratory in Argentina, obtaining the right to exclusive building products services. U.S. building product certification practices will now be used in Argentina, which significantly enhances trade in U.S. building materials and services
- **Highway Management in Brazil:** Highway management (e.g., maintenance, tolls, etc.) is being privatized in Brazil. In cooperation with the FCS office in São Paulo, the regional standards expert (then stationed in Buenos Aires) consulted with cognizant Brazilian authorities. As a consequence, a U.S. firm was assigned a contract to prepare a feasibility

study for all aspects of highway management, using U.S. engineering standards. This will increase the likelihood of subsequent successful U.S. bidding on tenders.

- Access to Mercosur and the FTAA: The standards expert now in Brasilia maintains close contact with officials concerned with the developing regional organization, Mercosur, and with the Free Trade Area of the Americas (FTAA), often through the cordial cooperation of Argentinean and Brazilian contacts. This gives those nations the opportunity to consider the adoption of U.S. techniques and technology. It also provides first-hand information to U.S. business interests about technical activities in this rapidly-developing trade bloc, information that is otherwise not readily available.
- Eliminating Technical Barriers to Trade in India: Following up on the U.S.-India Standards in Trade workshop, NIST's representative collaborated with the Indian National Physical Laboratory to convene a workshop, held in India in February 1998. The workshop considered technical aspects of standards in trade (including metrology, statements of uncertainty, standard reference materials, and management standards for quality and the environment) with a view towards harmonizing Indian practices with international standards and guides and with those prevalent in the United States.

The NIST representative has also provided important technical support for ongoing discussions and exchanges toward establishing the technical equivalence of laboratory accreditation programs conducted by the United States (NIST/NVLAP) and India (NABL) for both testing and calibration laboratories.

- Review of SASO Standards: The NIST representatives, in cooperation with SASO, have coordinated the technical review, by U.S. Government and private sector experts, of more than 2000 Saudi standards. U.S. businesses have submitted comments, and sometimes alternative language, which have been examined for consistency by NIST technical staff and then transmitted to SASO. Since many SASO standards are adopted by the other five Gulf Cooperation Council countries, the benefits of this technical cooperation are extended to U.S. businesses selling goods to those countries as well. Since 1990, U.S. comments have been very well received by SASO, and only two standards adverse to U.S. business interests have been promulgated by Saudi Arabia.

It is well and widely known that U.S. Embassy personnel overseas carry heavy loads. Moreover, the program of assigning standards experts to work with the Commercial Sections was initiated to fill the void of inadequate knowledge of standards-related matters on the part of Economic, Commercial and Scientific Counselors. As documented by Ambassadors and senior FCS officers, the NIST experts have not only been delegated responsibility for all matters related to standards and conformity assessment, but have also repeatedly been pressed into service to provide a variety of technical support; to work with American businessmen on specific problems (see next section); and to assist the commercial staff in various ways.

The specific trade problems brought to the attention of U.S. Embassies -- and to the standards experts assigned there -- are many and varied. Some illustrative examples follow:

- Mexican Acceptance of U.S. Certification of Respirators: The NIST standards representative participated in many technical meetings with Mexican government and industry representatives to discuss Mexican certification requirements for respirators. These air-purifying devices are either half-face or full-face equipment designed to protect workers from specific hazards in the workplace (ranging from dust to chemicals). The use of air-purifying respirators is often mandated by laws or regulations for worker protection. Most of the respirators sold in Mexico are imported from the United States, but there was Mexican reluctance to accept certification by the U.S. National Institute of Occupational Safety and Health (NIOSH) as evidence of compliance with Mexico's regulations. After nine months of technical effort and consultations, a meeting of 20 technical experts, representing the United States and Mexico, was held in September 1996. Technical standards-related issues were resolved, and the U.S. Trade Representative is now negotiating an agreement which will avoid future expensive and time-consuming duplication of the testing and certification process as applied to respirators manufactured in the United States.
- After the Mexican water meter standard was revised to recognize meters made to the U.S. standard, a major U.S. manufacturer was slow to submit its products and documentation for product certification. Two Mexican municipalities had issued tenders to purchase water meters; one tender, for 500,000 meters, was going to close on March 19 and another tender was going to close the following week. A product certification report (NOM certificate) is needed to bid on tenders. On March 16, the standards representative was asked by U.S. interests to intervene. Due to the excellent working relationship that has been established with Mexico's Directorate for Standards (DGN), the NOM certificates were ready in less than 24 hours and the company was able to bid on the tenders.
- Under an agreement negotiated by USTR with Mexico, Mexico accepts tire test data for product certification from U.S. laboratories designated as acceptable by the U.S. Department of Transportation (DoT). The DoT had submitted a request in April 1997 to add a laboratory to the list, but was unable to get a response from DGN. The standards representative was contacted on November 3, 1997, to assist. On November 24, the response accepting the laboratory into the program was faxed to DoT. In a two-month period, the company submitted test data for 70 products, thereby avoiding the cost and delay of duplicate testing in Mexico and facilitating access to the Mexican market.
- Accreditation and Certification in Argentina: The NIST on-site standards representative consulted on technical issues with the Argentine National Administration for Pharmaceuticals, Food and Medical Technology (ANA), obtaining advance information on ANMAT plans for accreditation of laboratories that test products for which it has oversight. This will greatly help U.S. firms exporting covered products.
- Conformity Assessment: Argentina has recently mandated product certification for electrical and electronic products. To promote the recognition of U.S. conformity assessment programs and U.S. principals, the standards representative planned and developed a two-day seminar on product certification with speakers from U.S. standards

and product certification agencies. One seminar was held in Chile and two in Argentina during May 1998.

- **Conformity Assessment with the EU:** The standards representative assumed full Mission responsibility for the support and investigative work in the development of the U.S.-EU Mutual Recognition Agreement (MRA) for the exchange of conformity assessment test data and the certification of products. This MRA was signed on May 18, 1998.
- **Technical Assistance to U.S. Business in Europe:** The extensive personal contacts of the NIST representative, along with her comprehensive knowledge of the European Community and European national legislation, and the technical requirements pertaining to standards and conformity assessment, has enabled her to counsel U.S. exporters and help them to understand the regulations that apply to their goods and what they must do to comply. Top embassy officials have credited this valuable counseling with aiding literally hundreds of U.S. companies, enhancing their abilities to trade profitably in the region.
- **American Designs in CEN Standards:** The NIST standards expert in Brussels provided technical assistance to a U.S. manufacturer who was consulting with European standards organizations in a bid for U.S. standards to be considered for European specifications for steel drum closures. NIST's representative urged the European Commission and the standards officials to allow the company to present technical arguments in favor of including the American design in a standard about to emerge from CEN. Their arguments were successful, and the forthcoming CEN standard will include the U.S. design. According to the company, it would not have been able to meet the CEN standards without this technical intercession, and most likely would have gone bankrupt.
- **American Designs in CEN Standards:** In a similar situation, a draft CEN standard for pipe threads would have introduced a design requirement that only European manufacturers would have been able to meet effectively and economically, thus closing the European market to imports from the United States. Serving as a representative on the U.S. team, the NIST standards expert provided a technical basis for intercession with the Commission and with CEN. The inclusion of the American design in the resultant European standard is highly beneficial to the entire U.S. pipe-fitting industry.
- **European Acceptance of U.S. Manufacturers' Self-Declaration of Conformity:** The Steel Shipping Container Institute, which represents approximately 100 member companies, reported that a CEN standard would require, by reference, conformity assessment by independent third-party testing laboratories. Most small and medium-sized U.S. companies in this industry test in-house and self-certify that they meet all requirements of the U.S. Department of Transportation. NIST's standard representative participated in the delegation to meetings at CEN. After considerable, intensive technical consultations and follow-up, CEN management agreed to remove the conformity assessment reference from the standard and will allow U.S. container manufacturers to continue to export to Europe based on self-certification.

- Saudi Arabia power standards: European standards advisors stationed in Saudi Arabia in the late 1980's recommended that Saudi Arabia convert its electrical power generation to the European 220 volt 50 Hertz system. This proposal was thwarted when NIST established the position of standards advisor to SASO in early 1990. The technical advice, supported by American firms, influenced the Ministry of Industry and Electricity to refrain from taking that adverse action. Consequently, U.S. electrical products manufactured to U.S. 115/120 volt standards are acceptable for Saudi Arabia's nominal 127 voltage. Benefiting from acceptance of the U.S. electrical power system are goods as varied as refrigerators, motors, transformers, and power generation equipment. The continuing net value of this achievement has been estimated by the U.S. private sector as approximately \$500 M annually.
- Saudi Arabian Honey Standard: As originally written, the Saudi Arabian honey standard specified ingredients common only to European honey, effectively barring American honey from that market. Successful technical consultations and input from the U.S. standards expert resulted in a revision of the standard, opening the Saudi market for U.S. exports. The U.S. now exports honey to Saudi Arabia with an estimated value of \$1 M annually, an increase of \$500,000 since the change in the standard.
- Saudi Automotive Safety Standards: U.S. technical assistance resulted in the adoption of U.S. Federal Motor Vehicle Safety Standards & Regulations in Saudi Arabia and the other GCC countries. Consequently, American used cars (the sales of which almost equal new car sales) now readily meet SASO and GCC standards. As a result, U.S. exports of all cars and trucks to the GCC countries (including Saudi Arabia) are now valued at \$2 billion per year.

(9) Strengths and Weaknesses of this Approach:

This approach to assist U.S. industry in overcoming technical barriers to trade (TBT) is widely regarded as highly successful by industrial and trade associations, such as the National Manufacturers Association (NMA) and the American Business Council of the Gulf Cooperation countries (ABCGC), and by U.S. Embassies. The NIST Standards in Trade Program addresses one of this Administration's most pressing goals: to increase U.S. exports. Attachments IV to X document the successes of this approach and the high regard that the program is held in by our stakeholders. One of the strengths of this approach to overcoming TBTs is the high regard in which NIST is held by U.S. government agencies, and by foreign standards and metrology organizations. In many foreign countries the prestige of NIST opens doors to government officials who would otherwise be difficult to contact. NIST workshops contribute strongly to these excellent relations that we enjoy in many places. There probably is no other U.S. government agency that enjoys the same access to relevant people. But, although by government standards this program is unusually effective and highly regarded by U.S. industry, there are a few problems, described below.

Technical barriers to trade result from policy concerns as well as from technical. NIST's strength is to deal with technical problems: NIST has neither expertise nor authority to deal with policy problems in the trade regime. NIST and its Standards Representatives must therefore be

very careful to limit their work to technical problems, leaving the policy issues to other Embassy or Mission staff, to ITA, or to USTR. This has caused difficulties in a few cases, and those might well occur again, but the solution lies in increased cooperation. The Standards in Trade program is relatively new; the NIST Standards Representatives are an innovation in the FCS and U.S. Embassies, and all parties need to evolve new ways for effective and efficient collaboration. Judging from past reports from the FCS and the Embassies, this collaboration has developed very quickly even in the posts that were only recently established, and the standards experts have generally become an important component of the Commercial Section, heavily relied on by the Ambassador and staff. NIST Standards Representatives have had excellent success in assisting U.S. industry with access to markets.

There have also been a few minor administrative problems. These problems are real, but completely distinct from the successful technical achievements of the program. Including NIST Standards Representatives among their staff is new to the Foreign Commercial Service; pay scales at FCS and NIST are different; and there have been questions about rank. We have had to establish detailed procedures for the reporting process and authorities. Billing for the FCS and Department of State overheads (ICASS) remains problematical, subject to delays, and lacking in detail. Payment of salaries, benefits, and office cost to those Standards Representatives, who are not stationed in U.S. Embassies, is slow and difficult.

We believe that the trade agencies might make better use of the available services and of the information provided by the NIST Standards Representatives.

(10) Alternative Approaches to Establishing a Standards in Trade Program

As any other similar organization, NIST needs to continually review its priorities and must, from time to time, examine whether some of its programs could be better carried out by the private sector or by another government agency. In this report we have examined the strengths and weaknesses of our very successful Standards in Trade Program. We also consider two alternative approaches to carry out this program with substantially reduced NIST staff and NIST resources. One possible alternative is for the International Trade Administration (ITA) to carry out the Standards in Trade Program with its own staff and funds. A second alternative is for the American National Standards Institute (ANSI) (or other private sector body) to fund and carry out the program.

(A) International Trade Administration

The International Trade Administration operates the U.S. and Foreign Commercial Service (FCS) with offices in most U.S. Embassies or Consulates General, and in Commercial Offices. The large FCS staff are familiar with international trade and encounter some of the technical barriers to trade, but are not very familiar with the development and use of normative standards or conformity assessment as a cause of such technical barriers to trade. Our observations from years of collaboration with the International Trade Administration are that they welcome the assistance from our NIST Standards Representatives placed in their FCS offices, since they lack both the time and the expertise to strongly assist industry in overcoming technical barriers to trade themselves. The FCS does not have technical expertise in metrology or conformity assessment testing. It does

not have laboratories for technical back-up, but does have experience in training its staff members. In general, the FCS management chain is not familiar with the technical aspects of causing or overcoming technical barriers to trade.

The International Trade Administration clearly has a Congressional mandate to support U.S. exports. Whether ITA needs an additional or new Congressional mandate to carry out a Standards in Trade Program may, in part, depend on how the program is funded. A new mandate is probably not needed if activities within the FCS are appropriately redirected. This would, of course, be accompanied by the loss of some FCS services world-wide. Establishing a Standards in Trade Program in addition to the traditional FCS activities would clearly require substantial budgetary resources and staff, and would require Congressional concurrence and support.

We met with Mr. Timothy Hauser, the Acting Under Secretary for International Trade at the Department of Commerce, to discuss these questions. Mr. Hauser is very familiar with the program and recognizes its benefits for U.S. exporters because the NIST Standards in Trade Program works very closely with the Foreign Commercial Service of the International Trade Administration (ITA). Mr. Hauser believes that this program should continue to be carried out by NIST because NIST has the technical expertise, the backup of its Laboratories, and the easy access to foreign standards and conformity authorities. The FCS does not have the same level of access to foreign standards and conformity assessment authorities that NIST has.

(B) American National Standards Institute (ANSI)

ANSI is widely regarded as the “umbrella” organization of the private sector standards developing and conformity assessment organizations in the U.S. ANSI deals with standards domestically and internationally.

At the American National Standards Institute (ANSI) we met with Mr. Sergio Mazza, President of ANSI, and with Ms. Jane Schweiker, Director of Public Policy and Government Relations of ANSI, to discuss this report on the NIST Standards in Trade Program. According to Mr. Mazza, ANSI’s senior staff and many of its members participate world-wide in major standards and accreditation organizations, where they represent U.S. interests. ANSI hears increasingly from its members that the NIST Standards in Trade program has helped numerous companies to overcome technical barriers to trade, to make contacts in new markets, and generally to achieve more market access. But ANSI is a membership organization and, as such, is dependent on the policies developed by the membership. The current set of objectives does not include the operation of a Standards in Trade Program similar to what NIST is currently carrying out. This program would clearly be in the interest of many of its members, but would require a concerted effort to convince the ANSI membership to undertake and fund such a program. One problem is the infrastructural nature of the program and the lack of clear transaction points for the collection of fees. ANSI is involved in national and international discussions on several levels in several places to bring about harmonization of standards and conformity assessment rules between the U.S. and our trading partners. ANSI shares many objectives with NIST, and the two organizations have a very good working relationship based on mutual trust and respect.

ANSI's members have excellent expertise in normative standards and conformity assessment, but little expertise in metrology. ANSI does not have staff permanently placed in major markets. Its office in Brussels was abandoned a few years ago. ANSI has few staff members, who are familiar with the details of overcoming technical barriers to trade in major developing or developed markets. ANSI could develop trained staff with the help of some of its company members, or, at ANSI's expense through training at NIST and other places. ANSI also does not have the technical base or staff skills that NIST has available to provide critical technical assistance to the NIST Standards in Trade Program.

ANSI's budget is extremely strained by a number of activities that ANSI undertakes for the good of the country without reimbursement. Among these activities is the support of international standards development, membership fees for ISO (\$2 million), and the organization and support of numerous standards committees and working groups. A Standards in Trade Program would cost about \$2 million plus the substantial cost for training of staff.

(11) Conclusions

Our conclusion from the intense study of the Standards in Trade Program is that we are providing a very useful service with a benefit to cost ratio that, while difficult to assess, is certainly much higher than that for most government programs. The Program has no specific problems and does not interfere with or duplicate similar programs of other federal agencies or private sector organizations. The program addresses one of this country's more serious concerns: gaining and maintaining international market shares. The program has the support of industry, the Department of Commerce, and of U.S. Embassies. We believe that the program should be expanded to other developing markets such as Russia, Central Asia, China, and the South East Asian part of the Asia Pacific Economic Cooperation. Further moderate expansion in South and Central America would support the formation of the Free Trade Area of the Americas.

Attachment: I - Schedule of Standards in Trade Workshop

U.S. - ANDEAN PACT STANDARDS IN TRADE WORKSHOP
(Bolivia, Colombia, Ecuador, Peru, Venezuela)
June 2 - 13, 1997

Day 1

All sessions are at NIST unless indicated otherwise.

Monday, June 2, 1997

Administration Building 101, Lecture Room - B

8:00 AM Bus pick-up from Hotel

OPENING SESSION

8:30-8:45 AM

Introduction

David E. Edgerly, Deputy Director
Technology Services (TS)

8:45-9:00 AM

Standards in Trade Program Overview

Kathleen D. Gaaserud, Chief
Standards in Trade Program (SITP)

9:00-9:30 AM

The Role of the NIST Regional Standards Attaché

Ing. Ileana Martinez, Standards Attaché
U.S. Embassy, Buenos Aires

9:30-10:00 AM

Schedule Overview

Dr. Carmiña Londoño, Western Hemisphere Specialist
Global Standards Policy Program, OSS
Ing. Ileana Martinez

10:00-10:30 AM

NIST Overview

David E. Edgerly

10:30-10:45 AM

BREAK

10:45-11:45 AM

U.S. Government Overview

Walter G. Leight, Deputy Director
Office of Standards Services (OSS)

11:45-12:15 PM

Logistical Orientation and Administrative Needs

Sandra Hale, Facilitator

12:15-1:45 PM

LUNCH - NIST Cafeteria
Group Photo

1:45-3:00 PM

NIST Campus Tour

3:00-3:15 PM BREAK

3:15-4:15 PM Organization of Federal Agencies
Dr. Carmiña Londoño

4:15-4:30 PM Questions and Answers

4:30 PM **DOUBLETREE HOTEL** Tel: (301) 468-1100
1750 Rockville Pike Fax: (301) 468-0308
Rockville, MD 20852

7:00 PM WELCOME DINNER - Parklawn Room, DoubleTree Hotel

Day 2

Tuesday, June 3, 1997 Administration Building 101, Lecture Room - B

8:00 AM Bus pick-up from Hotel

8:30-8:45 AM Daily Orientation

8:45-9:15 AM Overview of Office of Standards Services
Walter G. Leight

STANDARDS DEVELOPMENT

9:15-10:15 AM Role of the Private Sector in Standards Development
Walter G. Leight

10:15-10:30 AM BREAK

10:30-12:00 PM Panel- Private Sector Standards Development Organizations
Jane Schweiker, Director
Government and Organization Relations
American National Standards Institute (ANSI)

 Scott Coates, Director
 Technical Services
 AOAC, International

 Alvin Lai, Director
 T-1 Discipline
 Alliance for Telecommunications Industry Solutions (ATIS)

12:00-12:30 PM Questions and Answers

12:30-2:00 PM LUNCH - NIST Cafeteria

CONFORMITY ASSESSMENT SYSTEMS

2:00-3:00 PM Overview of U.S. Conformity Assessment

Walter G. Leight

3:00 PM

Shuttle to NIST North

NIST North Lecture Room 145

STANDARDS INFORMATION

3:15-4:30 PM

Overview of National Center for Standards and Certification Information (NCSCI)
JoAnne Overman, Chief
Standards Information Program, OSS

4:30 PM

HOTEL - DoubleTree Hotel, Rockville MD

Day 3

Wednesday, June 4, 1997

Administration Building 101, Lecture Room - B

8:00 AM

Bus pick-up from Hotel

PRODUCT CERTIFICATION

8:30- 8:45 AM

Daily Orientation

8:45-9:30 AM

Product Certification
Charles W. Hyer, Consultant and Editor, TMO Update
The Marley Organization (TMO)

9:30-10:15 AM

Product Certification
Maureen A. Breitenberg, Economist
Global Standards Policy Program, OSS

10:15-10:30 AM

BREAK

10:30-12:00 PM

Panel - Product Certifiers
Manuel Gutierrez, Managing Director, Technical
The American Society of Mechanical Engineers (ASME)

Gale Mason, Assistant National Supervisor for Shell Eggs
U.S. Department of Agriculture (USDA)

Dusty Stillman, Director, ARI Certification Programs
Air-Conditioning & Refrigeration Institute (ARI)

12:00-12:30 PM Questions and Answers

12:30-1:30 PM LUNCH - NIST Cafeteria

ACCREDITATION ACTIVITIES

1:30-2:15 PM ANSI Conformity Assessment Program
John Donaldson, Vice President for Conformity Assessment
American National Standards Institute (ANSI)

2:15-3:00 PM ANSI - RAB National Accreditation Program for EMS
Registrar Accreditation Board (RAB)
John Donaldson

3:00-3:15 PM BREAK

PRODUCT CERTIFICATION (continued)

3:15-4:15 PM Manufacturer's Declaration of Compliance
Dr. Calvin R. Dyer, Technical Standards Engineer, Sr.
Ford Motor Company

Ernest Sambrano, Technical Standards Engineer, Sr.
Ford Motor Company

NIST OUTREACH

4:15-5:00 PM Malcolm Baldrige National Quality Award
Debbie Smyth, Administrative Specialist
Office of Quality Programs

5:00 PM HOTEL - DoubleTree Hotel, Rockville MD

5:30-7:00 PM RECEPTION hosted by Ford Motor Company
The Gazebo, DoubleTree Hotel

Day 4

Thursday, June 5, 1997 Administration Building 101, Lecture Room - E

8:00 AM Bus pick-up from Hotel

METROLOGY

8:30-8:45 AM Daily Orientation

8:45-9:30 AM Overview of Metrology at NIST
 Dr. B. Stephen Carpenter, Director
 Office of International and Academic Affairs (OIAA)

9:30-10:00 AM U.S. Activities in the International Organization of Legal Metrology (OIML)
 Dr. Samuel E. Chappell, Chief
 Technical Standards Activities Program, OSS

10:00-10:30 AM Role of NIST in the National Conference on Weights and Measures (NCWM)
 Ken S. Butcher, Weights and Measures Coordinator
 Weights and Measures Program, OMS

10:30-10:45 AM BREAK
 10:45-12:00 PM NIST Weights and Measures Laboratory
 Georgia L. Harris, Physical Scientist
 Weights and Measures Program, OMS

12:00-1:15 PM LUNCH - NIST Cafeteria

MEASUREMENT SERVICES

1:15-1:45 PM Overview of NIST Measurement Services Program
 Thomas Gills, Chief
 Standard Reference Materials, OMS

1:45-2:30 PM Calibration Program
 Sharrill Dittmann, Chief
 Calibration Program, OMS

2:30-3:00 PM Traceability
 Thomas Gills

3:00-3:15 PM BREAK

NIST OUTREACH (continued)

3:15-4:00 PM Manufacturing Extension Partnership Program
 Margaret Phillips, Senior Regional Manager of Great Lakes Region
 Manufacturing Extension Partnership Program (MEP)

4:00 PM Depart for Washington, D.C.

5:00 PM ANSI Reception
 Old Ebbitt Grill (Atrium)
 675 15th Street, NW

7:00 PM Tour by Night

White House
Congress
Supreme Court
Monuments

9:00 PM Depart for DoubleTree Hotel, Rockville, MD

Day 5

Friday, June 6, 1997 Administration Building 101, Lecture Room - E

8:30 AM Bus pick-up from Hotel

9:00-9:15 AM Daily Orientation

9:15-11:30 AM NIST Laboratory Tours
Force Calibration Laboratory
Radiation Dosimetry

11:30-12:15 PM Site Visit - Standard Reference Materials Storage and Packaging
Nancy Trahey, Deputy Chief
Standard Reference Materials Program, OMS

12:15-1:30 PM LUNCH - NIST Cafeteria

REGULATORY PROCESS

1:30-3:00 PM U.S. Regulatory Process
Audrey Talley-Carter, International Agricultural
Marketing Specialist
U.S. Department of Agriculture (USDA)

Linda Horton, Director, International Policy Staff
U.S. Food and Drug Administration (FDA)
Department of Health and Human Services

3:00-3:15 PM BREAK

3:15-3:45 PM Questions and Answers

3:45-4:30 PM National Voluntary Conformity Assessment System Evaluation
(NVCASE) Program
Mary H. Saunders, Chief
Global Standards Policy Program, OSS

4:30-5:00 PM Questions and Answers

5:00 PM HOTEL - DoubleTree Hotel, Rockville MD

Day 6

Saturday, June 7, 1997

Shopping all day
or
Sightseeing on your own

Day 7

Sunday, June 8, 1997

9:30 AM Meet in the Hotel Lobby

10:00 AM Sightseeing - Washington, D.C.
METRO Subway

Smithsonian Institution Museums 10:00 AM - 5:30 PM
National Gallery of Art 10:00 AM - 5:30 PM
National Zoological Park 9:00 AM - 4:30 PM
Monuments always open

6:30 PM Bus depart Hotel

7:00 PM Team Dinner for Delegation
Home of Kathleen Gaaserud
Arlington VA

Day 8

Monday, June 9, 1997 Administration Building 101, Lecture Room - E

8:30 AM Bus pick-up from Hotel

LABORATORY ACCREDITATION

9:00-9:15 AM Daily Orientation

9:15-10:00 AM Overview of U.S. Laboratory Accreditation
James L. Cigler, Chief
National Voluntary Laboratory Accreditation Program (NVLAP)

10:00-10:45 AM International Activities of NVLAP

Jeffrey Horlick, Physicist
National Voluntary Laboratory Accreditation Program (NVLAP)

10:45-11:00 AM BREAK

11:00-12:00 PM U.S. Private Sector Laboratory Accreditation
Bertha Hicks, Administrative Officer
American Association for Laboratory Accreditation (A2LA)

12:00-12:30 PM National Council for Laboratory Accreditation (NACLA)
Walter G. Leight

12:30-1:30 PM LUNCH - NIST Cafeteria

1:30 PM Depart for MET Laboratories

2:30-4:00 PM Site Visit - MET Laboratories
914 West Patapsco Ave.
Baltimore, Maryland 21230

4:00-4:30 PM Questions and Answers

4:30 PM HOTEL - DoubleTree Hotel, Rockville MD

Day 9

Tuesday, June 10, 1997

Department of Commerce, Room 3407

INTERNATIONAL TRADE

8:00 AM Depart for Department of Commerce
Washington, D.C.

9:00-10:30 AM Panel - U.S. Government Role in International Trade

Role of U.S. Trade Representative (USTR)
Suzanne Troje, Director
Technical Trade Barriers
Office of U.S. Trade Representative

Role of Department of State (DoS)
Ambassador David Passage, Director
Office of Andean Affairs

Role of International Trade Administration (ITA)
Matt Gaisford, Desk Officer
Colombia and Ecuador

Tom Welch, Desk Officer
Bolivia, Peru and Venezuela

10:30-10:45 AM BREAK
10:45-11:15 AM Questions and Answers
11:15-12:00 PM Free Trade Area of the Americas (FTAA)
 Dr. Carmiña Londoño
12:00-2:15 PM LUNCH - Post Office Pavilion

Organization of American States, Salon Colon

2:30- 4:30 PM OAS - NIST Collaborative Efforts
 Presentations and Discussion
4:30 PM HOTEL - DoubleTree Hotel, Rockville MD

Day 10

Wednesday, June 11, 1997

7:00 AM Depart DoubleTree Hotel, Rockville MD

FIELD SITE VISITS

9:30-12:30 PM American Society for Testing and Materials (ASTM)
 Headquarters, West Conshohocken, Pennsylvania
12:30 PM Depart ASTM
2:30-4:30 PM Maryland Department of Agriculture Annapolis, Maryland
 Lou Straub, Chief
 Weights and Measures
6:00 PM HOTEL - DoubleTree Hotel, Rockville, MD

Day 11

Thursday, June 12, 1997 Administration Building 101, Lecture Room - D

8:30 AM Bus pick-up from Hotel

9:00-9:15 AM Daily Orientation

TECHNICAL AGREEMENTS

9:15-10:00 AM The Process of Developing Technical Agreements
Mary H. Saunders

10:00-10:45 AM Mutual Recognition Agreements
Keith A. Mowry, International Projects
Underwriters Laboratories Inc. (UL)

10:45-11:00 AM BREAK

11:00-12:00 PM Questions and Answers

12:00-1:15 PM LUNCH - NIST Cafeteria

U.S. GOVERNMENT INVOLVEMENT IN INTERNATIONAL TRADE

1:15- 2:00 PM ISO 9000
Maureen A. Breitenberg

2:00-2:45 PM ISO 14000
Mary Saunders

2:45-3:00 PM BREAK

3:00-4:30 PM Dialogue for Future Activities
Moderator - Henry Oppermann, Standards Attaché
U.S. Embassy, Mexico City

4:30 PM HOTEL - DoubleTree Hotel, Rockville, MD

7:00 PM FAREWELL DINNER - Parklawn Room, DoubleTree Hotel
Closing Remarks
Certificates

Day 12

Friday, June 13, 1997

Double Tree Hotel, Twinbrook Room

Before 9:15 AM Hotel Checkout - Registration Desk

NEXT STEPS

9:30-9:45 AM Perspective on Standards and International Trade
Dr. Peter Heydemann

9:45-11:00 AM	<u>Forum and Feedback Session</u> Dialogue with NIST Representatives and Guests Recommendations and Follow-up Strategies
11:00-12:00 PM	LUNCH - Woodmont Room
12:30 PM	Depart for Washington National Airport

Attachment: II - Non-NIST Workshop Briefers

This list demonstrates the participation of the public and private sectors in the Standards in Trade Program

GOVERNMENT

U. S. DEPARTMENT OF STATE

Mr. John Sammis, Economic Desk Office, Office of Mexican Affairs
Ms. Doreen McGirr, Chair, International Telecommunications Advisory Committee
Mr. Tony Interlandi, Chief, Division of Developing Countries Trade
Mr. Stephen Engleken, Country Desk Officer, Saudi Arabia and G.C.C.
Mr. Eric W. Luftman, Brazil Desk Officer, Economic Affairs
Ambassador David Passage, Director, Office of Andean Affairs

U. S. DEPARTMENT OF COMMERCE

Mr. John M. Andersen, Deputy Director, Office of Inter-American Affairs
Mr. Jay Dowling, Director, Brazil and Southern Cone Division, International Trade Administration
Mr. Tom Parker, Director, Office of the Near East, International Trade Administration
Mr. Matt Gaisford, Desk Officer, Colombia and Ecuador, International Trade Administration
Mr. Tom Welch, Desk Officer, Bolivia, Peru and Venezuela, International Trade Administration

U. S. DEPARTMENT OF TRANSPORTATION

Mr. Clive Van Orden, Assistant to the Director, International Harmonization
Mr. Frank Turpin, Director, International Harmonization, National Highway Traffic Safety Administration

U. S. FOOD AND DRUG ADMINISTRATION

Ms. Monica Maxwell
Consumer Safety Officer
Ms. Linda Horton, Director of International Policy Staff
Mr. Maritz Colon Pullano, International Regulatory Issues Staff

U. S. DEPARTMENT OF AGRICULTURE

Ms. Gale Mason, Assistant National Supervisor of Shell Eggs
Mr. Byron Reilly, Grain Marketing Specialist, International Monitoring Staff, Federal Grain Inspection
Ms. Audrey Talley-Carter, International Agricultural Marketing Specialist

CONSUMER PRODUCT SAFETY COMMISSION

Mr. David Schmeltzer, Director, Compliance
Mr. Colin B. Church, Commission's Voluntary Standards & International Activities Coordinator

OFFICE OF U. S. TRADE REPRESENTATIVE

Ms. Karen Chopra, Director Southern Cone Market
Ms. Suzanne M. Troje, Director, Technical Trade Barriers

FEDERAL COMMUNICATIONS COMMISSION

Mr. Julius Knapp, Office of Engineering and Technology

PRIVATE SECTOR

AMERICAN SOCIETY OF MECHANICAL ENGINEERS

Mr. Mel Green

Mr. Mark Sheehan, Director Pressure Technology, Codes and Standards

Mr. Manuel Gutierrez, Managing Director. Technical

NATIONAL ELECTRICAL MANUFACTURERS ASSOCIATION

Mr. Kyle Pitsor, Manager, Government Affairs Energy and Trade

AMERICAN SOCIETY FOR TESTING AND MATERIALS

Ms. Helen Davis, Washington Representative

Ms. Kathleen Kono, Washington Representative

Mr. Steven Mawn, Staff Manager

UNDERWRITERS LABORATORIES, INC.

Mr. Bob Williams, Corporate Manager

Mr. Keith Mowry, Manager Accreditation, International Affairs

Mr. David C. Haataja, Governmental Affairs

MET LABORATORIES

Mr. Leonard Frier, President

W. Carlton Bennett, Quality Manager

NSF INTERNATIONAL

Mr. Randy A. Dougherty, Vice President, Management Systems

AMERICAN ASSOCIATION FOR LABORATORY ACCREDITATION

Mr. John W. Locke, President

Mr. Warran Merkel, Laboratory Service Officer

Ms. Janneth Ignacio, Laboratory Services

Mr. Peter Unger, President

Ms. Bertha Hicks, Administrative Officer

AMERICAN NATIONAL STANDARDS INSTITUTE

Ms. Jane Schweiker, Director, Government and Organization Relations

Mr. John Donaldson, Vice President for Conformity Assessment

Mr. Rick James, Director of Conformity Assessment

TELECOMMUNICATIONS INDUSTRY ASSOCIATION

Ms. Suan Hoyler, Manager, Technical Regulatory Affairs

INFORMATION TECHNOLOGY INDUSTRY COUNCIL

Mr. Jean-Paul Emard, Director, Standards Secretariat

ALLIANCE FOR TELECOMMUNICATIONS INDUSTRY SOLUTIONS

Mr. Alvin Lai, Director, T-1 Disciplines

NATIONAL SANITATION FOUNDATION, INTERNATIONAL

Dr. Joyce M. Donohue, Manager of Toxicology

REGISTRAR ACCREDITATION BOARD

Mr. George Lofgren, President of RAB

GASCOYNE LABORATORIES

Mr. Francis Ptak, President,
Susana Ptak

NATIONAL PARTICLE BOARD ASSOCIATION

Mr. Gary Heroux, Laboratories Coordinator

EASTALCO ALUMINUM COMPANY

Mr. Joe Whipp

AMERICAN AUTOMOBILE MANUFACTURERS ASSOCIATION

Mr. Robert Donohue, Chairman, U.S. TAG for ISO TC22 on Road Vehicles

CATERPILLAR INCORPORATED

Mr. Paul McKim, External Standardization Manager

THE COSMETIC, TOILETRY, AND FRAGRANCE ASSOCIATION

Ms. Jennifer M. Rempe, Associate Director, International Affairs

TBE MARLEY ORGANIZATION

Mr. Charles W. Hyer, Consultant and Editor, TMO Update

AIR CONDITIONING AND REFRIGERATION INSTITUTE

Mr. Donald R. MacKay, Director, International Standards
Mr. Dusty Stillman, Director, ARI Certification Programs

SAFETY EQUIPMENT INSTITUTE

Ms. Patricia Gleason, President

NATIONAL CONFERENCE OF STATES ON BUILDING CODES AND STANDARDS

Mr. Robert Wible, Executive Director

NATIONAL FIRE PROTECTION ASSOCIATION

Mr. Richard A. Candee, Jr., Assistance Vice President, International Operations

NATIONAL ELECTRICAL MANUFACTURERS ASSOCIATION

Ms. Lori Tennant, International Standards Manager

FORD MOTOR COMPANY

Mr. Calvin R. Dyer, Technical Standards Engineer, Sr.
Mr. Ernest Sambrano, Technical Standards Engineer, Sr.

AOAC INTERNATIONAL

Mr. Scott Coates, Director, Technical Services

LABORATORY ACCREDITATION PROGRAMS

Mr. Fred Gruender, Manager

**Attachment: III -- Participants in a Workshop for Indian Officials
May 22 - June 1, 1995**

This list shows the diversity in organizational affiliation and level of the participants

Mr. A.R. Banerjee Director, International Relations Bureau of Indian Standards 9 B.S. Zafar Marg New Delhi, 110 002 Tel: 11 331 10 82 Fax: 11 331 40 62	Mr. S.I. Desikamani Director Electronics Test & Development Centre Ring Road, Peenya Industrial Estate Bangalore - 560 058 Tel: 11 436 2831 Fax: 11 436 3083 email: joe@doe.ernet.in
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Mr. B. Bhattacharya Deputy Director & Head Pilot Test House E 3 MIDC Area, Marol, Andheri (East) Bombay - 400 093 Tel: 11 571 4783	Mr. S.P. Kar Scientific Officer (Mechanical) National Test House P.O. Alipore, Calcutta - 700 027 Tel: 33 479 1231 Fax: 33 479 1532
Dr. Mahesh Chander Scientist EII, Head National Calibration Service Programme National Physical Laboratory Dr. K.S. Krishnan Marg New Delhi 110 012 Tel: 11 578 4479/1850 Fax: 11 575 2678 e-mail: npl@sirnetd.ernet.in	Mr. D.R. Kohli Director, Ghazibad Branch Office Bureau of Indian Standards 9, Bahadur Shah Zafar Marg New Delhi, 110 002 Tel: 11 331 0131/1375 Fax: 11 331 4062
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Attachment: IV -- Impact of Standards in Trade Workshops

Recent Workshops on Standards in Trade: Accomplishments

- A U.S. auto manufacturer gained long-awaited Russian import permits for two vehicle types when a senior participant in the SABIT Standards Program's session for the automotive sector, impressed by his observations of quality assurance at the U.S. manufacturing facility, cleared the permits with a single phone call to his office in Russia.
- Contacts during the SABIT Automotive Standards Session also led to agreements between PACCAR, a parts manufacturer for Kenworth and Peterbilt (large U.S. truck manufacturing firms), accepting the equivalence of U.S. standards with Russian standards, a reversal of an earlier Russian decision to adopt European standards exclusively.
- Following his training experience in the U.S., a senior Russian participant in the SABIT food processing and packaging standards session changed his mind about legislation that he had been drafting that would have curbed imports of American products.
- A U.S. telecommunications company that had submitted a bid for a \$10M contract with the Ministry of Telecommunications in Kyrgyzstan was awarded the contract, but only after a key person involved in the project at the Ministry returned from the SABIT telecommunications standards session.
- After the 3M Company hosted the SABIT medical equipment standards session and explained to Russian certification officials how 3M generate their test data reports for dental materials, 3M was able to obtain Russian approval for materials that had previously been denied access.
- Following the May 1997 SABIT power generation standards session, several US companies entered bidding for building a 200 megawatt power station in Sevastopol, Ukraine. Negotiations for this project were begun with Ukrainian participants in the program while they were in the United States for SABIT training.

Attachment: V -- 1997 Report of the American Business Council of the Gulf Countries (ABCGC) about Accomplishments of the Standards in Trade Program

Trade Promotion Exports Drive the Economy

Part of a Report of the
American Business Council of the Gulf Countries

The ABCGC, like other American business groups operating overseas, is on the "front lines" in the battle for market share in the global economy. Day in and day out, ABCGC member companies are going head-to-head with businesses from Europe, Asia, and the Middle East in the highly competitive markets of the Gulf Cooperation Council (GCC) nations. In this environment, U.S. companies face firsthand the sophisticated and unified national trade strategies developed by America's major trade competitors - all of whom have traditionally drawn on high-level support from their respective governments to win contracts overseas.

It has taken a long time, but American companies and the U.S. Government have begun to fight back in earnest. There have been some notable successes in recent years, representing important steps toward reversing bureaucratic bungling and ineffective policies that have handicapped American business efforts overseas for decades. These successes would not have been possible without a bipartisan commitment from American policymakers to strengthen America's competitiveness and create more U.S.-based jobs.

Numerous U.S. Government agencies have played a role in America's export promotion efforts. From one agency to the next, these efforts have met with varying degrees of success, a source of considerable discussion in the context of Washington's "Corporate Welfare" debate. The ABCGC is monitoring this discussion closely, and our position is unequivocal: **Wherever this debate goes, we want to be assured that America's current, improved trade focus is not blurred; rather, it needs to be sharpened even further. The ABCGC is less concerned about which government agencies control trade policy and much more concerned that the level and quality of America's trade promotion efforts be substantially enhanced.**

With this in mind, the ABCGC would like to single out four U.S. Government institutions whose work, from our experience, has begun to make an important difference for American companies operating in the Gulf:

- The U.S.-GCC Standards Cooperation Program
- The Commercial Service
- The Export-Import Bank of the United States
- The Overseas Private Investment Corporation

A profile of each, offering an ABCGC perspective, follows.

U.S. - GCC STANDARDS COOPERATION PROGRAM

Laying the "Building Blocks" of International Trade

Since the mid-1980s, the ABCGC has been highlighting the fact that America's trade competitors use standards setting and standards development as very effective non-tariff barriers to trade. By providing standards advisors (often free of charge) to emerging markets, our major competitors are attempting to systematically drive U.S. products out of the global marketplace.

Product standards are the basic building blocks of international trade and, as such, they have traditionally received very little attention from U.S. policymakers. It has taken years of effort, but this

*The remarkably successful U.S.-
Saudi Arabia Standards Cooperation
Program has been responsible for the
adoption of more than 750 product and
test method standards by the
Government of Saudi Arabia.*

policy of "out of sight, out of mind" has finally begun to change. In the 1996 report of the Trade Promotion Coordinating Committee, *National Export Strategy*, an entire section was dedicated for the first time to standards. Citing U.S. - European Union commercial relations as an example, Ambassador Stuart Eizenstat noted, "Standards, testing, and certification requirements have been identified as the most important impediment to a truly open and vigorous Transatlantic marketplace."

The growing awareness of standards setting and standards development can be attributed in part to the ABCGC's continuing efforts to draw attention to this issue. The remarkable success of the U.S. - Saudi Arabia Standards Cooperation Program has played an instrumental role in this process. Now in its seventh year, this public sector / private sector program has been responsible for the adoption of more than 750 product and test method standards by the Government of Saudi Arabia. The program has been expanded to include all six GCC nations, and similar programs are in place in the European Union, India, Mexico, and Argentina. Other regions around the world are under consideration. The ABCGC believes that these standards programs are very effective and should be expanded wherever practical.

Why Standards Cooperation is Critical

There is nothing alluring or sexy about standards development. For most government-to-government policymakers, this field generates very little interest. Despite this, or perhaps because of it, standards are a very important factor affecting American exports: U.S.-made goods aren't allowed off the boat if they fail to comply with host country product standards. Losses to the United States and American companies can very quickly mount into tens of millions of dollars for non-compliance. (In 1994, the most recent year for which figures are available, foreign requirements for testing, inspection, and certification affected more than \$150 billion of U.S. exports worldwide.)

Standards cooperation programs established by the United States are important for a number of reasons:

- **They send a signal that America means business.** The U.S. Government and American industry, together, must send a strong signal that the United States is serious about going head-to-head with our international competitors. Standards cooperation programs send such a signal - both to our competitors and to the host nations purchasing American goods and services. The fact that the U.S. is willing to actively defend its market share, and the recognition that America is not afraid to take on the competition, goes a long way toward generating additional U.S. sales around the world.

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around the world.*

- **They remove barriers to trade.** The U.S. Government and private industry only recently began to take seriously the threat posed by America's trade competitors through standards cooperation. For years, the governments of such countries as Japan, Germany, France, and the U.K. have "assisted" other nations in adopting standards with specifications that discriminate against U.S.-made products. These nations do not hesitate to put substantial resources into such programs:

✓ **The European Union** recently sent a standards advisor to Saudi Arabia with a \$2 million, three-year budget to establish a standards development program that will be in direct competition with the United States.

✓ **Japan** is now funding a major program with the Saudi Arabian Standards Organization (SASO) to improve the GCC's standards and certification program. In addition, Japan has dispatched seven standards experts to work with Saudi Arabia and six such experts to work with the Sultanate of Oman.

✓ Also in Oman, **Germany** has recently established an important center that will promote German-GCC technical cooperation. (It is revealing that Germany alone spends more in Guatemala annually to influence the flow of trade than America's National Institute of Standards and Technology is permitted to spend worldwide.)

✓ **Korea** and Saudi Arabia signed a wide-ranging technical agreement last year to promote Korean involvement in Saudi Arabia's standardization, metrology, certification, and laboratory accreditation.

The fact that America's trade competitors are working hard to undermine the U.S.-GCC Standards Cooperation Program speaks volumes about the program's success in enhancing U.S. competitiveness and opening up whole new markets to American

products. The ABCGC is pleased to see that, at long last, the harmonization of standards is gradually becoming an integral part of America's export promotion efforts.

- **They create jobs in the United States.**

Promoting standards overseas that are supported by U.S. industry paves the way for increased American exports. More exports means more jobs in the United States, some 14,500 man-hours of direct employment for every \$1 billion in exports, according to the U.S. Commerce Department and the National Economic Council.

The fact that America's trade
competitors are working hard to
undermine the U.S.-GCC Standards
Cooperation Program speaks volumes
about the program's success

Tens of thousands of Americans whose livelihoods depended on exports lost their jobs in the 1980's, in part because competitor governments were successful in promoting standards that pushed American companies out of overseas markets. For example, in Saudi Arabia, where America lost well over half of its market share in the 1980's, this situation has now been reversed--thanks in no small part to the U.S.-Saudi Arabia Standards Cooperation Program. In **1996, American companies increased their share of the Saudi market to 28 percent, the highest in recent memory.**

From the outset,
the program with the
Saudi Arabian
Standards Organization (SASQ)
has been a model of
cooperation between America's
business community and
the National Institute of
Standards and Technology

The U.S. - GCC Standards Cooperation Program: A Short History

In 1989, the ABCGC and the American/Saudi Business Roundtable proposed to the U.S. Congress the creation of a standards cooperation program in Saudi Arabia. At the time, there were some two dozen standards experts from other governments "advising" the Saudis on standards development. **None were Americans.**

From the outset, the program with the Saudi Arabian Standards Organization (SASO) has been a model of cooperation between America's business community and the U.S. Government (the National Institute of Standards and Technology, or NIST) - with both sides contributing substantial expertise and resources. As a result of this private sector /public sector cooperative effort, the program had an almost immediate impact on

America's ability to compete in Saudi Arabia. As the U.S. Ambassador in Riyadh noted at the time, this "superbly productive" program, although "badly outnumbered by the competition," is "starting to undo damage caused by years of U.S. non-involvement in Saudi standards making."

To date, more than 750 draft Saudi standards have been reviewed through this program. NIST has identified standards experts at over 250 companies and organizations who are reviewing these drafts, and approximately two-thirds (some 500) of the program's recommendations have been adopted *verbatim* by the Government of Saudi Arabia. In only two instances, out of hundreds of standards adopted thus far, have the Saudis taken steps contrary to the recommendations of the Standards Cooperation Program.

Last year, NIST and its Gulf Cooperation Council counterpart signed a Memorandum of Understanding expanding the program throughout the GCC. This is a very important development because the Gulf nations are moving toward adopting harmonized, GCC-wide product standards. **In coming years, these nations expect to issue such standards for more than 20,000 products.** Because of the success of the SASO program and its expansion throughout the Gulf, the United States is well positioned to spearhead that process.

*This "superbly productive"
program, although
"badly outnumbered by
the competition, " is
distorting to undo damage
caused by years of
U.S. non-involvement in Saudi
standards making."*

Success Stories

The program in Saudi Arabia, in the words of the U.S. Embassy in Riyadh, "has shown that a small investment can create great returns in U.S. exports. Few programs can rival the cost/benefit ratio of this one." Below are select success stories generated by this program in recent years.

- **Building Codes and Standards.** There are no construction code standards in Saudi Arabia, and only a limited number of building material standards. Through the Cooperation Program, SASO has requested assistance in developing the complete range of building standards. As a result, construction-related exports from the USA are expected to expand by hundreds of millions of dollars per year.
- **Electrical Voltage.** Through the Standards Cooperation Program, the USA has secured permission to sell a wide variety of 115-volt American products in the Saudi market. The Program also helped to beat back a challenge from the Europeans, who hoped to change the Kingdom's residential power system from one based on 127 volts and 60 hertz (generally compatible with U.S. products) to one based on 220 volts and 50 hertz - which is standard elsewhere in the GCC, Europe, and the Indian

Subcontinent. As a result, U.S. exports of electrical appliances to Saudi Arabia are expected to increase by more than \$200 million annually.

*As the experience in the Gulf
has shown, cost-effective programs like
these are a small investment that pays
big dividends for U.S. competitiveness,
American jobs, and our nation's market
share worldwide.*

- **American Honey.** In 1993, the Standards Cooperation Program, working closely with the National Honey Board, was successful in winning approval for U.S. honey producers to sell more extensively in Saudi Arabia. Exports are expected to continue rising by some \$10 million per year.
- **Earthmoving Equipment.** The Program succeeded in thwarting the promulgation of a standard which would have imposed an inappropriate warranty requirement on U.S.-made earthmoving equipment. As a result, unnecessary warranty costs were eliminated. Savings are expected to amount to approximately \$10 million per year, and additional sales of equipment have been estimated at \$40 million annually.

Conclusions and Recommendations

Success stories like these, and the very clear need for U.S.-driven standards cooperation programs, have played an instrumental role in raising awareness of standards setting and development. Perhaps this is summed up best in the TPCC's 1996 *National Export Strategy* report:

Standards and conformity assessment requirements imposed by other national and regional authorities have become critical factors in determining the competitiveness of American firms and workers The U.S. must develop a more proactive, strategic standards commercial policy to ensure that U.S. companies are not unfairly precluded from competing for contracts in our most promising markets.

With this in mind, the ABCGC strongly recommends the establishment of U.S. Standards Cooperation Programs in all of America's major markets, including the Big Emerging Markets (BEMs). As the experience in the Gulf has shown, cost-effective programs like these are a small investment that pays big dividends for U.S. competitiveness, American jobs, and our nation's market share worldwide.

Attachment: VI -- Letter from the U.S. Ambassador to Saudi Arabia
The letter reflects Ambassador Mabus' appreciation for
the Standards in Trade Program

EMBASSY OF THE UNITED STATES OF AMERICA
RIYADH, SAUDI ARABIA

August 15, 1994

Dear Colleague:

I would like to offer you a brief insight into one of our most successful trade support programs in the Kingdom of Saudi Arabia. Perhaps a word on our experience may be of benefit as you consider the value of such a program at your post.

For several years, a contract employee of the National Institute of Standards and Technology (NIST), Edward Wunder, has been attached to our Foreign Commercial Service (FCS) office. His job is to work with Saudi government entities to reduce, indeed eliminate if possible, the non-tariff barriers posed by standards specifications.

For example, at one time, American refrigerators were held up at Saudi Customs because the product nameplate was rated at 115 volts, the voltage in the U.S., versus Saudi Arabian voltage of 127 volts. Thanks to the NIST program, we were successful in convincing authorities that American refrigerators have a built-in safety factor of 10%, assuring the consumer that the product is safe. Each such step means a lot: American refrigerators represent an annual export market here of over \$25 million, and jobs for workers in American factories.

While every situation is unique, I urge you to give full consideration to the possibilities of a standards program. I am happy to report that the effort is working here in the Kingdom, and the benefits for U.S. competitiveness and jobs are considerable.

With best regards,
Sincerely

Signed Raymond E. Mabus, Jr.
Ambassador

**Attachment: VII -- Letter from Ambassador Stuart E. Eizenstat
Ambassador to the European Union,
to Roger Rensberger, NIST Standards
Representative at the U.S. Mission to the European Union**

**The letter demonstrates Roger Rensberger's valued contribution to the work of the
U.S. Mission**

UNITED STATES REPRESENTATIVE
TO THE
EUROPEAN UNION

June 29, 1995

TO: Roger A. Rensberger
Standards Office
U.S. Mission to the European Union

FROM: Ambassador Stuart E. Eizenstat
United States Representative to the European Union

SUBJECT: Tour of Duty at the U.S. Mission

I want to stress how much I appreciate the exemplary manner in which you have represented the U.S. Mission to the European Union in standards-related activities. Your work as the Standards Officer has been a credit to the Mission and highly beneficial to our role in support of U.S. industry in international trade.

I regret that your tour has been so short. I only wish we could have you with us for at least one year or for a longer period of time.

I know you will continue to support U.S. interests in international standards when you return to the National Institute of Standards and Technology and resume responsibilities as the NIST spokesperson for both domestic and international standards activities. You have been a valuable asset to USEU.

Thank you for your dedicated and sterling service.

**Attachment: VIII -- Letter from Earl Anthony Wayne, Deputy Chief
of Mission, to Roger Rensberger, NIST
Standards Representative at the USEU**

**The letter demonstrates Roger Rensberger's valued contribution to the work of the
U.S. MISSION**

UNITED STATES MISSION
TO THE
EUROPEAN COMMUNITIES

June 29, 1995

TO: Roger A. Rensberger

FROM: Earl Anthony Wayne
Deputy Chief of Mission
U.S. Mission to the European Union

SUBJECT: Tour of Duty as Standards Officer at USEU, Brussels
We are very pleased with the way you developed contacts with officials in the Commission of the European Union and at key standards organizations which are mandated by the Commission to develop standards for the EU single market.

These contacts enabled the Mission to respond quickly to numerous request from U.S. companies and European-based firms for information on product standards and conformity assessment issues related to the testing and certification of goods for export to the EU.

Particularly, praiseworthy are the widely distributed cables you prepared on standards issues. Especially useful were the cables on:

- 1) EU guidelines for developing mutual recognition agreements between the U.S. and the EU;
- 2) the new "key mark" for consumer products; and
- 3) your report on the 21st Technical Assembly Meeting of the European Telecommunications Standards Institute with information on the role of ETSI in the global information society.

I know you will continue to provide industry and government officials with highly valuable standards-related information on the European Union when you return to the National Institute of Standards and Technology.

Many thanks for your excellent service to the Mission.

**Attachment: IX -- Letter from the Executive Vice President of the
Information Technology Industry Council**

**The Executive Vice President of the Information Technology Industry Council
recognizes the contributions of the NIST Standards Representative in Brussels**

May 23, 1997

Dr. Belinda L. Collins
Director, Office of Standards Services
NIST, Bldg. 820, Room 282
Gaithersburg, MD 20899-0001

Dear Belinda,

As you may recall I was one of the doubters of the worth of having standards officers stationed in our missions abroad. In fact, at the time the program was up for approval, ITI was concerned that such officers would detract from achieving US standards interests abroad. Recent experience shows me that I was wrong, I would like to set the record straight.

In addition to managing ITI's standards programs, I chair the Information Infrastructure Standards Panel (IISP), a private sector initiative working to identify standards critical to the implementation of the Global Information Infrastructure (GII), or Information Highway, as it is sometimes called. This effort is sponsored by the American National Standards Institute (ANSI). Early last year the European Commission invited IISP to participate in the planning of a G7 "Global Information Society Conference" focused on standards. It was clear from the EC's proposal document that the planned content went far beyond standards into policy and political matters and would be contrary to U.S. interests in areas such as trade, copyright, etc.

After consultation with U.S. government representatives from NTIA in Commerce, the NEC in the White House, the ITL in NIST, etc., IISP representatives attended an EC hosted meeting in Brussels in February, 1996. Prior to the meeting we met with Helen Delaney and other U.S. representatives from the embassy to develop a common U.S. government-private sector strategy and positions. Helen accompanied us to that meeting and was most effective. She has remained involved in the planning for the conference, now scheduled for 10/1-3/97. This has involved numerous meetings in Europe and by conference call. She has not only collected critical information that only someone on the spot and accepted by the EC officials can do, she advocated the US government-private sector position in Brussels when we weren't there--that is most of the time. Thanks to our joint efforts, including enlisted support from other G7 representatives, the potentially negative aspects of the conference have been substantially removed.

Without detracting in any way from the enthusiastic support we have received from the other officers of the Mission, Helen is invaluable in a EC context, because a knowledge of standards as a system and of the policy issues existing across the many US technology areas is critical to successful information collection and advocacy. We cannot ask our more general representatives to have this level of expertise. Usually their generalized capabilities work well when applied to a specific issue, but the standards world is so sector specific, that this broad standards knowledge is necessary really to be effective.

So, while I am specifically praising Helen, I know that she has a limited assignment and when it comes time to replace her, I urge that the qualifications be the same: We need standards system and policy issue expertise to keep the US making continued progress against the EC program to push its standards approach and its standards everywhere.

Sincerely,

Oliver R. Smoot
Executive Vice President

cc: R.M. Hayden, IISP

The association of leading IT companies
1250 EYE STREET, NW- Suite 200 - WASHINGTON, DC 20005

**Attachment: X -- Excerpt from the Performance Appraisal of
Helen Delaney, NIST Standards Representative
at the U.S. Mission to the European Union**

**The appraisal demonstrates Helen Delaney's valued contribution to the work of the
U.S. MISSION**

Helen Delaney is the first standards professional to successfully perform the position of Standards Officer at USEU. Perhaps her paramount achievement this year was the transformation of the concept of a Standards officer into a reality. In this first year, Ms. Delaney defined the position of Standards officer that was conceived by NIST and supported by the Congress. She created an area of standards information and expertise that has become a resource not only for the Commercial Section, but for the interagency staff of the Mission, as well as the DOC office of European Union and Regional Affairs and the USTR office of GATT Affairs in Washington.

Because trade policies of the United States and the European Union are linked inextricably to standards practices, her contributions to Mission operations have been crucial. Standards policies and analyses, for example, have been articulated in numerous memoranda that have served two Ambassadors and the Senior Adviser to the President for Policy Development. She has enthusiastically taken on the task of educating not only the SCO, but also the Ambassador(s), DCM(s) and officers in the Economic Section, on all matters related to standards. In particular, she has sensitized us all to the particular standards problems of U.S. small business.

A considerable amount of her time was spent counseling U.S. exporters, and her knowledge of European legislation and technical requirements have benefited literally hundreds of companies. She has established solid contacts with Commission officials, heads of European and international standards organizations, and her counterparts in the Canadian, Japanese and Australian Missions. These contacts have served to foster understanding of U.S. positions and have proven to be valuable sources of insight and information.

Without any prior government experience, she has mastered a commercial officer's portfolio which includes mutual recognition agreements (MRAs), the European initiative on a global information infrastructure, and numerous technical barrier to trade issues involving U.S. companies. She has participated in several demarches this year, delivering some herself, and has written 18 major cables reporting on many standards issues and one magazine article. During the reporting year Ms. Delaney gradually took over full responsibility for the MRA portfolio from a departing officer. Reaching agreement on MRAs is USG's primary policy objectives vis-a-vis the European Union. The issue has the full attention of the Under Secretary for International Trade as well as the Ambassador. Both have already learned to look to Helen for guidance.

Signed Stephen C. Arlinghaus
Minister Counselor

Attachment: XI -- Department of State Overhead Charges (ICASS) for the
NIST Standards Representative in Buenos Aires,
Argentina

Department of State - ICASS Specific Expenses		
Main Budget Fiscal Year 1997		
Agency: Commerce - NIST		
Post: Buenos Aires		
		U.S. \$
Personnel Services		
	American Personnel Services	595
	Locally Engaged Staff Services	
Financial Management Services		
	Prepare Budgets and Finance Plans	57
	Accounts and Records	1203
	Pay rolling	
	Vouchering	1692
	Cashiering	1564
General Services		
	Vehicle Maintenance	
	Administrative Supply Services	488
	Procurement Services	1334
	Reproduction services	
	Shipment and Customs Services	493
	Non-Expendable Property Management	1504
	Direct Vehicle Operation	
	Leasing Services	1564
	Travel Services	108
	GO/LTL Residential Buildings Operation	
	GO/LTL Non-Residential Buildings Operation	1869
	STL Residential Buildings Operation	446
	STL Non-Residential Buildings Operation	34
Information Management		
	Pouching Services	189
	Mail & Messenger Service	724
	Reception and Switchboard Service	697
Other Cost Centers		
	Basic Package	1890
	Information Systems	
	Health Services	1176
	Local Guard Program	1172
	Security Services	
	Community Liaison Office	280
	Overhead	912
Distribution Summary of ICASS		
	ICASS Redistribution	8596
Total ICASS Charge		28587

