

## INTRODUCTION

Standards have become one of the most important benchmarks for competitiveness and integration of a country in the world trading system. Standards are important for exports, imports and for the domestic economy as a whole. The private sector, which now shoulders the primary responsibility for enhancing Egypt's economic profile and promoting its trade, will not only have to understand and work with all kinds of standards, but it should also be ready to provide its input in the formulation of standards. The issue of standards has been an international trade priority since the WTO Uruguay rounds that resulted in two full-fledged standard agreements: the Agreement on the Application of Sanitary and Phytosanitary Measures (SPS) and the Agreement on Technical Barriers to Trade (TBT). These two agreements oblige their signatory parties to adopt international standards through transparent processes and strict notification procedures. Though Egypt is a member of the WTO and complies with these agreements, much more needs to be done on the ground.

Last October, the Trade Related Assistance Center organized a video conference with the purpose of introducing the Egyptian and American standardization processes. The American Chamber in Egypt through TRAC was keen to spearhead the follow-up on that conference and its recommendations. Therefore, since then TRAC has worked closely with key players in Egypt and the U.S. to help advance the process and pave the way for a regular and structured dialogue between the two sides. We believe that the conference on the relationship between competition and privatization was not only timely but also very pertinent to AmCham members in order to raise the awareness of the Egyptian private sector on U.S. quality standards. Standardization is a multifaceted issue that has important ramifications for the Egyptian economy, especially in view of the potential it offers to attract increased foreign direct investment. The Egyptian private sector needs to acquaint itself thoroughly with these standards thereby enabling it to boost its exports to the U.S. The importance of this cannot be overstressed given that the U.S. is Egypt's largest bilateral trading partner, accounting for more than one-eighth of all Egyptian exports.

Dr. Mahmoud Eisa, President of the Egyptian Organization for Standardization and Quality (EOS) and Mr. Joe Bhatia, President of American National Standards Institute (ANSI)<sup>1</sup> delivered the opening remarks.

Dr. Mahmoud Eisa observed that "the strategic relationship between Egypt and the U.S. reflect strategic understanding and co-operation between Egyptian and American organizations and departments." In spite of the fact that ANSI and EOS have not yet signed a Memorandum of Understanding (MOU), Dr. Eisa was assured that relationship between the two organizations was already in excellent shape in terms of both technical

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and policy issues. At the same time he felt that EOS and ANSI the MOU would enable the two countries to focus more closely on the benefits of standardization and conformity assessment. Exchange of information, publications and training seminars, conferences and workshops will be of vital importance for Egyptian and American beneficiaries. He felt confident that AmCham's involvement would help spread awareness on this issue among Egyptian importers, exporters and manufacturers. He also took the opportunity to observe that the presence of the U.S. Ambassador at the confidence was an encouraging sign of the U.S. government's full support for a MOU between the two entities.

ANSI President Joe Bhatia was happy to announce that America's trade relationship with Egypt was healthy and growing. One merely had to look at the numbers in bilateral trade in merchandized goods to realize that the volume has increased exponentially. U.S. exports to Egypt have grown 250% and Egypt exports to U.S. grew by more than 500% in 2007 alone. Today, Egyptian exports to US totaled \$2.5 billion and U.S. exports to Egypt totaled \$5 billion.

In the fast paced global economy, he said, there is no question that standardization and trade are linked. Dozens of studies from the U.S. Department of Commerce, Egyptian Ministry of Trade and Industry and the World Trade Organization back up this fact. Those who understand how to effectively address standardization have the greatest success. Eighty percent of global commodity trade, approximately \$12 trillion, is affected by standards and conformity assessment. U.S. Standards Strategy supports the concept of a universally accepted concept of "one standard-one test" and, indeed, this is the aim of industry across the world today. Companies, nations and regions must work together to expand awareness of international standardization.

Mr. Bhatia stressed how important successful cooperation in standardization and conformity assessment was for Egypt and the U.S. Egypt and the U.S need to be on the same page to avoid duplicated efforts and unnecessary costs, he said. He therefore pledged to facilitate dialogue between the standardization bodies and to encourage and support industry activities initiatives in Egypt and the U.S. aimed at increasing transparency in and mutual understanding on approaches to standards and conformity assessment. He looked forward to seeing the two countries' technical regulations move closer together, incorporating the best practices in both. One of the greatest strengths of ANSI is its large private sector influence and good relationships with government representatives, bringing resources from both worlds to achieve shared objectives.

Egypt and the U.S. also have a shared focus on safety of consumer products and the integrity of the global supply chain. ANSI is working in cooperation with federal task forces to make sure only safe goods can be found on the shelves. Trade and economic development, consumer protection and safety are just a few examples of where Egyptian and American interests align. Overall, Mr. Bhatia was quite excited to see the various and multifaceted ways that Egypt and the U.S. could work together to harmonize standards and conformity assessment and facilitate bilateral trade.

## **COMPLIANCE WITH STANDARDS FURTHER COMPETITIVENESS**

TRAC Director Dr. Magda Shahin, the next to speak, recalled that in October 2007 the Center sponsored a very successful video conference on U.S. Industrial Standards, Inspection and Certification. She reminded the audience of the main recommendations

that emanated from that conference, prime among which was the establishment of a joint committee between ANSI and EOS that would regularly meet and review the standardization and conformity assessment mechanisms, technical assistance and ANSI-sponsored capacity-building training programs to Egyptian companies. The most recent discussion and the signing of the MOU were direct results of this Video Conference and mark the beginning of a regular and substantive dialogue between Egypt and the U.S. on the issues of standards, quality management and conformity assessment.

Although standards are generally not mandatory, Dr. Shahin observed that compliance with standards is becoming increasingly important in a globalized world economy because of the ability of compliance to facilitate trade and attract investment. On the other hand, she cautioned, standards can also inhibit trade and create additional barriers. Standardization systems are generally quite complex and the Egyptian and the U.S. systems are no exceptions to this rule. Clearly, the more aware the Egyptian private sector is of the different standards and conformity assessment, the more it will be able to boost its exports to the U.S. and vice versa.

In Egypt, it seems that some 1,000 standards are issued a year. Egypt currently has around 8,500 of its own standards. Although less than 7 per cent of these are mandatory (those related to health, food products and food safety), this by no means diminishes the value of the remaining 93 per cent. In accordance with EOS strategy, more than half of Egypt's standards have already been harmonized with international standards by 2006. Among these are around 2,000 Egyptian standards for food, all of which have been harmonized with CODEX.

The U.S. standard system is more complicated. The U.S. applies a 'bottom-up approach', thus allowing the standards users to drive their own standardization activities according to what best suits their needs. Although such an approach makes the system highly efficient, responsive and flexible, it can nevertheless complicate life for exporters to the U.S. All the more relevant and useful, therefore, to the private sectors in both Egypt and the US is a regular, open and transparent dialogue between their standardization bodies.

It is with the need for clarity in mind that both Egypt and the U.S. have prioritized international standards. Egypt has set seven international standards on par as priority standards: the American, British, European, German, ISO, Japanese and, for food, the CODEX standards. Though some claim that U.S. firms feel disadvantaged by the fact that many of the standards applied in many overseas markets tend to be more based on European standards than U.S. ones, large multinational companies, at least, do not share this feeling. They are more concerned with potential exclusivity, as would be the case if an individual company in the Middle East adopted solely an EU standard without allowing for the possibility of using other standards. In all events, follow-up studies have shown that when this type of problem has arisen, it tended to stem from an educational issue: the companies concerned were simply not aware of the existence of the American standards or what they entailed. The follow-up also usually resolved the problem. Moreover, such confusion could be pre-empted through closer coordination in funding programs for raising awareness on standardization, conformity assessment and technical regulations.

## **1. Understanding the Egyptian System**

Dr. Eisa gave an overview of the Egyptian Standardization System. He noted that the mission of the Egyptian Organization for Standardization and Quality (EOS) was to establish Egyptian standards as a single basic and common solution for all stakeholders, thereby promoting industry, trade and the economy, enhancing the competitiveness of Egyptian products globally, and realizing welfare goals of the people. EOS also seeks to be an active player in an international standardization scene grounded in strong mutually beneficial bilateral and multilateral cooperative relationships with corresponding international organizations. Finally, EOS seeks to be recognized as the gateway for facilitating international trade, since 80 per cent of such trade is supported by standards.

### *(i) Background and history of the EOS*

The EOS, Egypt's national standards body, functions under the Ministry of Trade and Industry and is responsible for standardization, quality and related activities in Egypt. It represents Egypt in the international and regional corresponding organizations by supervising the harmonization of standards, technical regulations and conformity assessment procedures. EOS was established in 1957 at which time it became a member of the International Organization for Standardization (ISO). In 1979 EOS was expanded to cover the new activities of testing and calibration. In 2004 the Egyptian Standard Harmonization Project started and in 2005, the EOS was renamed to "The Egyptian Organization for Standardization and Quality" to reflect its new mission as the focal national body responsible for standards and quality-related activities.

Today, EOS main activities involve providing information services related to standards and quality activities; providing training services on all activities of standards and quality, international relations, consumer protection activities; and operating the EOS/World Trade Organization /Technical Barriers to Trade (WTO/TBT) Enquiry Point, which is responsible for notifying the WTO/TBT secretariat of proposed Egyptian technical regulations and conformity assessment procedures that may affect international trade. EOS is governed by a council, headed by a president, the members of which direct such activities as legal affairs, technical relations, finance and public relations. Under the council there are two main central departments: one for laboratories and the other for standardization and quality. Under the Central Department for Laboratories, metrology and testing labs test products in all sectors of the economy. The Central Department for Standardization and Quality incorporates the Quality Control Department, Measurements Department and Standards Department.

### *(ii) EOS and standards formulation*

Standards formulated by EOS are primarily voluntary in nature and out of the more than 8,500 standards formulated so far, less than 7 per cent are mandatory. In general, the international standards relevant parts are used in Egyptian standards setting. However, in the event of fundamental technical/ geographical/ climatic problems, standards are set as per national requirements. As the national standards body EOS takes part in the development of international standards relevant to national needs and in the development of unified Arab Standards. Consensus, transparency and openness are EOS's three

guiding standards formulation principles. All standards are widely circulated at draft stage and the comment period is generally not less than 60 days. All comments are duly considered by the appropriate bodies and the program of work is published in printed form and on the EOS website ([www.eos.org.eg](http://www.eos.org.eg))/E-mail: [moi@idsc.net.eg](mailto:moi@idsc.net.eg)) which is periodically updated.

As previously mentioned, there are now more than 8,500 Egyptian standards, all of which are now harmonized. The Egyptian standards catalogue can be viewed on the EOS website and standards can be obtained via the website by electronic payment. Twenty-five industrial and service sectors are covered including engineering, chemical, textile, metrology, documentation and information, food and transport. The standardization process is becoming increasingly automated so as to facilitate the activities of 115 National Technical Committees, 1,750 experts representing all concerned parties, more than 2,000 committee meetings annually and more than 30,000 circular letters per year for commenting and voting on Egyptian standards. At every phase of this process there is a genuine commitment to consensus, impartiality and transparency.

(iii) *Areas of EOS activities*

Traditionally EOS concentrated on standards in chemicals, food, mechanical issues, electrical issues, metrology, petroleum, documentation, metallurgy, textiles and construction materials. But such has been the dynamic growth of the Egyptian economy that there is a constant need to develop new standards in new areas of concern. Now, standards govern items of interest to consumers (ads and commercials), services (tourism, maintenance, transportation, and smart cards), new products (organic food, genetically modified organisms), medical appliances, information technology, occupational health and safety, and social responsibility and management systems.

The EOS also engages in a number of conformity assessment activities, such as product certification, testing and industrial calibration. Under the banner of product certification, the EOS gives the Egyptian Quality Mark for all types of products, the Conformity Mark for safety products and the Halal Mark for food products. It also issues pattern approvals for engineering product batches and offers technical advice on arbitration of technical disputes. The product certification schemes are based on ISO Guide 28 and include type testing and assessment of factory quality control, post-approval surveillance that includes audits of factory quality control, and testing of samples from both the factory and the open market.

The EOS tests products in order to assess their conformity to standards for purposes of EOS Product Certification Schemes and Market Surveillance Authorities. EOS also provides training to EOS personnel and industry and provides technical consultancy to industrial firms and clients. In its calibration laboratories, the EOS calibrates measurement and testing equipments for both EOS and industrial firms, provides training services on measurements and calibrations and technical consultancy in the field of measurements and calibration. Within the system of industrial calibration there are three fields: electrical, physical and mechanical.

In addition to these activities, the EOS boasts an active Information Center that is responsible for setting up and updating data bases. It also has a robust Consumer Protection Unit ([www.consumer.eos.org.eg](http://www.consumer.eos.org.eg)) that is dedicated to solving consumer

complaints, promoting awareness and guidance to the consumer, and participating in the publication of the EOS Bulletin “The Consumer.”

(iv) Harmonization of Egyptian standards

The EOS initiative for harmonization of Egyptian Standards is important in its own right. The objectives of harmonization are to promote and increase Egyptian exports, to facilitate trade through the removal of technical barriers to trade, to guarantee the quality of products and technology transferred, and to ensure that the harmonization practice is embedded in the Egyptian standard setting process. Harmonization is implemented in five parallel directions. First, all already existing Egyptian standards must be revised to be brought into harmony with international, European, or selected foreign standards. Second, some International/ European standards must be adopted. Third, the adopted standards must be translated into Arabic and fourth, mandatory Egyptian standards must be translated into English. Lastly, new standards must be elaborated in harmony with international standards.

The harmonization project is co-sponsored by the EU and the Egyptian Industrial Modernisation Centre (IMC). The first phase of the project ended in May 2006 with the harmonization of more than 3,400 Egyptian standards. With the recent completion of phase II, all standards in the Egyptian standards catalogue have been harmonized. There are, thus, more than 5,300 harmonized standards, covering such sectors as food, engineering, chemicals and textile industries. Another important deliverable of this project is that health and safety requirements have become the only mandatory items in Egyptian standards.

Historically, the EOS has already participated in some harmonization of standards activities with the U.S. In 2002, a Memorandum of Understanding was signed between EOS & the American Society for Testing and Materials (ASTM). Still in effect, this memorandum provided for joint sponsorship of training programs, the possibility to participate in ASTM technical committees and an updated catalogue of ASTM standards. There have also been various training courses in the U.S. sponsored by the Commercial Law Development Program (CLDP) and drawing increasing numbers of participants each year. Many Egyptian industries are based on American standards and many Egyptian standards are already harmonized with American standards in various fields such as metrology, occupational health and safety, as well as petroleum products.

As considerable as such inroads are, Dr. Eisa said, there remain a number of challenges, foremost among which is insufficient awareness in Egypt of American standards and technical regulations, especially as regards areas of common economic interests, and of the need to promote the use of such standards in the Egyptian industry. Other major challenges include the need to support the participation of EOS technical committee members in the activities of American/ international mirror committees, the need to train EOS technical staff and committee members on the automation of standards development processes, and the provision of technical support to the EOS TBT/enquiry point. A chief aspect of this latter challenge involves not only the development and use of relevant software but, before that, finding the optimum way to transfer the technology that would most efficiently help automate the Egyptian standards development process. The U.S. can also provide assistance in developing new tools for income generation

similar to methods used in the U.S. standardization bodies (member subscription, etc) as well as assistance in marketing and promoting standards and in attracting broader participation from the private sector.

## **2. Understanding the American System**

This section addresses the three major players in the U.S. standardization and standards setting system:

- the American National Standards Institute (ANSI)
- the American Society for Testing and Materials (ASTM)
- the National Institute of Standards and Technology (NIST)

### **A. The American National Standards Institute (ANSI)**

According to Joe Bhatia, President of ANSI, standards have become such an integral part of modern existence that most people take them for granted. But in reality, standards and the related compliance programs are more essential today than ever before. Voluntary consensus standards are at the foundation of the U.S. economy and the standards system is imperative to competitiveness and the success of fair and free trade. If you want to sell an item in the U.S. you need to show compliance with the relevant standard.

In view of their increasing influence on trade, it is clear that standards are vital to a sound national economy and to facilitating global commerce. Yet, as important as they are, they must not become an obstacle to trade. One of the guiding principles of the U.S. Standards System is that standards and their related compliance criteria should meet societal and market needs and should not be developed to act as barriers to trade.

Whereas in most countries the standardization system follows a top-down approach whereby a single standards body drives all national standardization activities, the U.S. standards and conformity assessment system is a bottom-up, user driven system that emphasizes private-sector standards solutions to facilitate trade, improve quality and promote worker and consumer health and safety. Standards users drive standardization activities in the American market-driven, private sector-led system. This system has led to more than 95,000 recognized standards in the U.S. alone. Most of these standards are developed and used on a voluntary basis and the majority is developed by technical committees formed within the private sector, very often with government participation. Government and industry representatives participate as “equal partners” in technical committees. Costs are borne by the participants, not the standards developing organization.

#### **(i) Standards versus Standardization**

Standards are advantageous to all segments of business and industry, government and consumers. They help to keep people safe by minimizing the chances of harm and protecting key environmental resources. Mr. Bhatia defined a standard, itself, as a market-driven specification for a project, services, person, process, or system. According to the World Trade Organization (WTO) definition, compliance with standards is voluntary. Technical regulations, in contrast, are mandatory specifications that may

include or make reference to particular standards or conformity assessment procedures. In the U.S. once a standard is adopted by a federal or state body it becomes mandatory. In fact, when we talk about standardization, we are actually discussing a broad range of activities and ideas – from the actual development of a standard to its promulgation, acceptance and implementation. Standardization also includes the methods of evaluating whether products, processes, systems, services and personnel comply with a standard. This evaluation is known as conformity assessment. Standards development and assessing conformity to standards go hand-in-hand.

Mr. Bhatia stressed that the global standardization community is diverse and multi-faceted. In addition to the activities of standards developers and conformity assessment bodies, private and public sector interests come together in partnership to develop globally relevant standards. Ideally, the goal for all concerned parties (business, industry, and consumers, regulators and legislators) is: one standard—one test, accepted everywhere. When designing standards and compliance programs, they must meet the needs of stakeholders around the world and there must be a consistent and sustainable way of verifying that these standards are being met. The scope of the effect of standards is actually phenomenal. The U.S. Commerce Department estimates that standards impact roughly 80% of all commodity trade in the world.

The U.S. also endorses the globally accepted standardization principles outlined in the WTO/TBT Agreement. The first of these principles is transparency, meaning that essential information regarding standardization activities is accessible to all interested parties. Other principles are openness to participation to all affected parties, impartiality, effectiveness and relevance, consensus among those affected, and coherence in order to avoid overlapping and conflicting standards. Standards should also be performance based (specifying essential characteristics rather than detailed designs) where possible and standard development should be performed in accordance with due process so as to ensure that all views are considered and appeals are possible. Lastly, technical assistance should be offered to developing countries in the formulation and application of standards.

(ii) *U.S. standards strategy*

The United States Standards Strategy (USSS) provides a vision, purpose and common framework that can be used by American stakeholders to achieve their respective standardization goals. The standards system should be market driven, flexible and sector based and, most importantly industry led and government supported. Rather than mandating a “one-size fits all” solution, the U.S. standardization system allows players to find the tools and solutions that best fit their needs. It takes into account that approaches, philosophies and positions often vary across industry sectors and that such variations are beneficial and are promoted in the United States Standards Strategy.

Mr. Bhatia stressed how important it is to realize that standards are only one side of the coin, the other side being conformity assessment. The ANSI document, “The National Conformity Assessment Principles for the United States (NCAP),” helps stakeholders to understand conformity assessment and the importance of compliance and testing activities. It emphasizes private sector standards solutions, relies on private sector compliance verification and provides greater authority to standards users and stakeholders. The document articulates principles for U.S. conformity assessment

activities that promote confidence among consumers, buyers, sellers, regulators and other parties, without creating unnecessary barriers to trade. The NCAP can be applied to all types of conformity assessment activities, including accreditation, certification, inspection, registration, testing, and supplier's declaration of conformity. Particular consideration is given to approaches that facilitate trade, provide regulatory confidence, and protect public safety.

(iii) *The role of ANSI*

ANSI has always worked to build a strong partnership between the private and public sectors, and one of the best examples of this partnership is the National Technology Transfer and Advancement Act (NTTAA). This law directs federal agencies to use, wherever possible, technical standards that have been developed or adopted by voluntary consensus standards bodies. This is in lieu of developing government-unique standards. The NTTAA also makes it clear that government should participate as a partner in private-sector led standards development activities. Since the law was passed in the mid-1990s, standards have helped the government by increasing operational efficiency, reducing regulatory compliance and procurement costs, and enabling the government to take advantage of private sector technology and expertise in establishing standards and compliance programs that serve national needs.

In this complex and elaborate system, ANSI's role is to coordinate and facilitate voluntary consensus standards, conformity assessment and related activities in the United States. ANSI is an independent non-profit non-governmental agency. Nor is it subject to government oversight. Domestically, ANSI's mandate is to accredit U.S. standards developers, U.S. technical advisory groups and conformity assessment programs; approve American national standards; ensure the integrity of the U.S. voluntary consensus standards system; offer a neutral policy forum; and provide a central resource for information and education on standards, conformity assessment and related activities. Internationally, ANSI provides regional and international access and representation; is the U.S. member body to ISO (similar to EOS's role in this regard); is the U.S. representative to other non-treaty international organizations; and conducts international outreach on standards-related issues for the U.S.

ANSI accredits standards developers and conformity assessment regulators in dozens of industries. There are more than 200 ANSI-accredited standards developers. Accreditation confirms an organization's commitment to adhere to commonly accepted principles such as openness, balance, due process, transparency and consensus. Standardization continues to evolve and is influenced by advances in technology. Stakeholders are no longer willing in all cases to operate within the boundaries of the formal standards system and they continue to explore new ways to develop standards that will meet their needs. Consortia and other forums have become more clearly recognized and embraced as an integral part of the global standards system. ANSI hosts an annual Open Forum for Standards Developers to bring these communities together for information sharing and collaboration.

Standards users (including both companies and government agencies) are really the center of ANSI's activities. They voluntarily participate in the development of standards and related policies. In ANSI's experience, allowing companies and other users to drive

standardization activities contributes significantly to U.S. competitiveness, innovation and economic development. Standards developers are completely independent organizations within the U.S. system – each developer has complete freedom to set its own policies, to choose whether to receive ANSI accreditation and approval, and to choose which standards it develops. Unlike many other national standards bodies, ANSI does not have the authority to assign specific developers to develop specific standards. Instead each developer identifies and reacts to market needs as it sees fit.

Agencies such as the Environmental Protection Agency, the Department of Defense, the Consumer Product Safety Commission, provide significant technical information for the development of a wide array of voluntary standards in areas critical to the health, safety and well being of standards users. Overall, ANSI can be seen as a coordinator of the U.S. standards system, ensuring that all players can operate effectively. Given the variety of players, however, it is important to realize that standards are little more than good ideas unless products, processes, systems and personnel conform to them. Conformity assessment activities form a vital link between standards and products, services, processes, systems, personnel qualifications, and organizations. As in its standards system, the US national approach to conformity assessment activities is not centrally organized. Rather, each market sector determines which types of conformity assessment activities will best meet the needs of suppliers and acceptance authorities while facilitating trade, providing regulatory confidence, and protecting public safety.

(iv) *U.S. Conformity Assessment System*

Overall conformity assessment activities in the United States rely upon private-sector mechanisms to achieve both non-regulatory and regulatory conformity. Accreditation, certification and inspection are the three main mechanisms of any conformity assessment system. Accreditation refers to third-party attestation that a conformity assessment/certification body has demonstrated its competence to carry out specific conformity assessment tasks. Certification is third-party attestation that products, processes, or persons have met certain specified requirements. Inspection is the examination of a product design, product, process or installation and determination of its conformity with specific requirements or, on the basis of professional judgment, with general requirements. Other important mechanisms are registration, supplier's declaration and testing.

ANSI's role in the complicated U.S. conformity assessment system is as an accreditor of certification bodies. ANSI accreditation ensures that auditing organizations – or certification bodies – are legal entities, independent and free of conflicts of interest, employ qualified people, and have proper oversight. Reliance upon ANSI accreditation programs ensures best industry practices, reduces the need for government agencies to individually monitor credentialing organizations, and strengthens consumer confidence in products and services. Accreditation by ANSI signifies that the procedures used by the standards body in connection with the development of American National Standards meet the essential requirements for openness, balance, consensus and due process.

To sum up, the United States standardization community is strongly committed to a cooperative process involving all stakeholders for the development of technically superior and unified standards that promote and strengthen U.S. global competitiveness.

ANSI works to eliminate redundancy and overlap, to enable the public and private sector management to recognize the value of standardization at national and global levels, and to provide adequate resources and stable funding mechanisms to support such efforts. In Mr. Bhatia's opinion, governments should rely on voluntary consensus standards as much as possible in regulation and procurement rather than creating additional regulatory requirements. The global standards system is diverse and inclusive and supports flexible standards solutions. Consortia and forums are illustrative of that flexibility and are an integral part of the global standards system. The U.S. is committed to standardization that meets global needs. Standards activities are conducted by industry sectors in venues selected for their ability to meet those needs. ANSI believes that electronic tools must be used effectively for the optimized production of global standards and to facilitate their dissemination throughout a global economy.

## **B. The American Society for Testing and Materials (ASTM)**

In her presentation, Ms. Teresa J. Cendrowska, Vice President of Global Cooperation at the American Society for Testing and Materials (ASTM), gave a brief overview of her organization, its history and its role in the standardization process. ASTM International is an international standards development organization established in 1898. It is a non-governmental, non-profit organization that represents the private sector. Though it is one of the largest and oldest U.S.-based developers of international voluntary consensus standards, unlike ANSI, it does not provide certification or accreditation services. To develop those standards, ASTM relies on 34,300 members from around the world who represent consumer interests, government interests, academia, laboratories, producers and users. Despite this large number of organizations, only about 10 to 15 organizations actually produce 80% of the standards. This is not to say that the others are not important, as these members participate in 138 technical committees, developing standards for over 90 industry sectors and representing 133 countries. Each sector has a matching organization that develops the standards that are pertinent to its interest.

As Mr. Bhatia mentioned earlier, the WTO/TBT international standards agreements are governed by a number of principles, including: transparency, openness, impartiality and consensus, effectiveness and relevance, coherence and consideration of developing nations. ASTM shares the exact same principles, which allow it to be considered as a Standard Developing Organization (SDO) by the WTO/TBT annex. As mentioned before ASTM standards are developed by experts from around the world and used by industries and governments worldwide. ASTM supports industry's need to choose the best standards regardless of the source.

### **(i) ASTM and the Memorandums of Understanding with Egypt**

Though the conference marked EOS's signing of a Memorandum of Understanding with ANSI, ASTM's Memorandum of Understanding Program was already initiated in 2001. Through this self-funded program, ASTM signs with National Standards Bodies (like EOS) or regional standardization organizations memorandums of understanding. These have currently reached fifty-nine, including two regional MOU, one with the Gulf

Cooperation Council's Standardization Organization and the other with the Southern African Development Community – Cooperation in Standards (SADCSTAN).

The objectives of such MOU are to promote communication, avoid duplication of work efforts in standardization, promote knowledge of the standards development activities of each partner, utilize ASTM standards/resources to benefit the national standards system of developing nations, promote participation to enhance international input and multi-dimensional content into ASTM standards, and enhance the worldwide acceptance and use of ASTM International standards. The first and foremost benefit is ASTM technical assistance training. In this program, the National Standards Body (NSB) selects the topic and provides local technical experts with deeper knowledge of the content and implementation of ASTM standards. Twenty such programs are being conducted in 2008 with ASTM covering the majority of the costs and the relevant National Standards Bodies providing the meeting venue, managing the registration process, and facilitating instructors' local travel. A second key MOU benefit is the Standards Expert Exchange Program. This ASTM funded Program annually invites three signatories to send a standards expert to ASTM for one month in order to enhance his/her knowledge of standards systems. It also aims to promote a closer relationship. It includes visits to ASTM committees and Washington DC-based agencies and organizations where standards experts present to ASTM their respective standardization systems.

In the Egyptian case, the MOU was signed in October 2002. Accordingly, Egypt was required to adopt ASTM standards as the basis of Egyptian National Standards and reference ASTM standards in Egyptian National Standards with recognition of ASTM's copyright. This was supported by Ministerial Decree 291/2003, in which Ministry of Industry and Technological Development stipulated that, "...producers of commodities and products should abide by producing in conformity with international standards including ASTM." In the event that there is no Egyptian standard for a product, it states that an ASTM standard, among others, may be used and that the whole product or commodity must be subject to one standard only in all its items. The MOU also provides for a number of key benefits.

Since the MOU was signed between EOS and ASTM in 2002, ASTM standards have been used as the basis of Egyptian national standards or as a normative reference. The number of standards has grown from 68 in 2003 to 160 in 2007 and represents sectors across the board from petroleum to nanotechnology to textiles. Egypt has also seen an increase in participation in ASTM technical committees. Sixty-eight Egyptians currently participate in 38 different ASTM technical committees pertaining to diverse sectors such as water, plastics and cement. As part of the MOU, ASTM is to provide a technical assistance program, due to begin in Cairo in late October. Two courses will be taught including, "Statistics in Standards and Standards Development: Test Method Development and Validation" and "Statistics in Standards and Standards Development: Getting to Precision and Bias." Overall the MOU is successful and growing and ASTM looks forward to continuing the beneficial relationship.

### **3. The National Institute of Standards and Technology (NIST)**

In her presentation Dr. Carmiña Londoño gave the governmental perspective on the National Institute of Standards and Technology (NIST) and its role in the standardization

process. In her view, NIST is more comparable to EOS in that it is a governmental organization that deals with standards. While the U.S. Standards System is voluntary, market driven and private sector led and works through co-operation and communication among stakeholders in standards organizations, industry and government, the U.S. Standardization system consists of a unique and dynamic co-operation between the federal government and the private-sector. This relationship is important to emphasize because it is instrumental in promoting technical innovation in the U.S., encouraging the development of globally relevant standards and adapting U.S. policy to the needs of industry and consumers, thus reinforcing economic competitiveness.

(i) *The role of the government*

In this unique system, the government plays a dynamic and distinctive role. During the standards development process, it actually acts like a normal standards user in product purchases and through incorporation into regulation. It is a participant in standards development through the voluntary process and receives no special treatment or privileges for participation. It contributes to the technical underpinning for standards and is an advocate of the U.S. national interest. Overall, the government's goal is to protect health, safety and the environment while avoiding the creation of unnecessary barriers to trade.

More than 3,200 government agency staff participate in private sector standards development activities. Government agencies seek out relevant voluntary standards development venues to support regulatory needs, enable efficient procurement and create solutions to support emerging national priorities. NIST plays a role in supporting technical efficacy by contributing measurement expertise to the development of test methods and product, system, and process specifications. It also participates in data collection efforts in support of the development of test methods and provides measurement standards needed to calibrate instruments used in test methods. For example, NIST is actively involved in nanotechnology standards development activities. NIST's emphasis in this process is on developing relevant standards to enable reliable measurement and characterization. NIST experts provide technical expertise in highly accurate measurement and provide the measurement standards (reference materials) that underlie documentary standards.

Apart from playing a supportive role, the government also stands to benefit from a functioning voluntary bottom-up standards system. This system eliminates the cost of developing standards that meet government requirements, decreases the cost of goods purchased, promotes efficiency and economic competition, and furthers the policy of reliance on the private sector to supply goods and services that meet government needs.

(ii) *The Legal Framework*

Generally speaking, U.S. law (the aforementioned National Technology Transfer and Advancement Act of 1995) and policy (OMB Circular A-119 – Federal Participation in the Development and Use of Voluntary Consensus Standards and in Conformity

Assessment Activities)<sup>2</sup> require Federal agencies to use voluntary consensus standards to the extent practicable, report development of agency-unique standards and participate in the development of voluntary consensus standards relevant to their needs. Within this framework, encouraging the trend toward Federal agency reliance on non-government standards is an important part of the U.S. Standards Strategy.

The NTTAA directs federal agencies to use “technical standards developed or adopted by voluntary consensus standards bodies.” Under the law, all Federal agencies should use consensus technical standards in lieu of agency unique standards and federal agencies should participate in standards developing activities. The NIST is identified by the law as the coordinator of Federal standards and conformity assessment activities with those of the private sector. The policies of OMB Circular A-119 work in a similar vein, encouraging federal agencies to benefit from the expertise of the private sector and reducing reliance on government unique standards where private sector standards suffice.

This legal background brings to the fore several key points regarding the government’s use of standards. First of all, the government should maximize use of private sector standards, where appropriate, in regulation and in procurement and policy activities. Government agencies should also retain authority to choose the standard that best meets their needs and the voluntary consensus process is specifically cited as the one that offers the best choices. The government uses standards to a great extent in regulation and NIST has identified 9,622 citations of standards incorporated by reference; of these more than 6,500 are non-government standards. NIST has also identified 10,559 standards incorporated by reference by agencies for procurement purposes.

The government gets its standards from a number of sources including ASTM, the American Society of Mechanical Engineers (ASME), and the American Petroleum Institute. Dr. Londoño gave some examples of government agencies that use standards. The Department of Defense, she said, has significantly reduced its costs and optimized its procurement and research and development budget through its adoption of private standards whenever practical and using commercial, off-the-shelf products wherever available and feasible, rather than creating government-unique product lines.

Additionally, the Consumer Product Safety Commission (CPSC) has taken a governmental approach and found that using consensus standards is faster and less costly. Over the past fifteen years, CPSC has only issued 35 “mandatory standards”, with a ratio of nine consensus standards for every “mandatory standard.” When “mandatory standards” are necessary, CPSC favors performance rather than design standards so as to give manufacturers greater flexibility.

Since the introduction of the NTTAA in 1996 requiring federal agencies to use voluntary standards wherever possible, the Environmental Protection Agency (EPA) has benefited from:

- greater ease in meeting regulatory obligations, with voluntary standards meeting the technical requirements of about half of the 600-900 EPA rules written each year;

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<sup>2</sup> \*Public Law 104-113 (1996), also referred to as the National Technology Transfer and Advancement Act (NTTAA) of 1995 (<http://ts.nist.gov/ts/htdocs/210/nttaa/nttaa-ga.htm>)

\*\*OMB Circular A-119 – Federal Participation in the Development and Use of Voluntary Consensus Standards and in Conformity Assessment Activities

- increased collaboration between government and private sector technical experts on the environment;
- Open lines of communication with industry to advance the environmental objectives.

In conclusion, the federal government and the private sector work very closely in standards. Individual federal agencies make effective use of private sector standards in many applications. At last count, more than 6,500 private sector standards were incorporated by reference into federal regulations. Despite this large number, greater use of standards with global acceptance facilitates least burdensome regulatory approaches and trade.

As regards the Memorandum of Understanding between the Egyptian Organization for Standardization and Quality (EOS) and the American National Standards Institute (ANSI), it marks a major step towards the harmonization of Egyptian and American standards and will prove an invaluable instrument for facilitating trade between the countries. The panel discussion that followed the signing of the MOU provided an excellent opportunity for Egyptians and Americans to become better aware of each other's standards-setting and standardization systems. Armed with knowledge and understanding, the two sides can look forward to a productive and growing trade relationship.