

ASTM--AN INTRODUCTION

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I appreciate this opportunity to discuss the American Society for Testing and Materials (ASTM), what it is, what it does, how it does it. First, however, I would like to dispel some myths about ASTM. Many people think that ASTM is a government-affiliated organization. It isn't. Some think that ASTM is a lobbying organization. It isn't. Others charge that ASTM is an industry-dominated organization. ASTM isn't dominated by any interest group. What, then, is ASTM?

ASTM is a non-profit corporation organized in 1898 for one purpose and one purpose only...the development of full voluntary consensus standards...with the emphasis on full consensus. That simply means that in all of our standards work, everyone who has an interest in a standard may have a say in its development.

ASTM is a management system for the development of standards for materials chiefly known for products, systems, and services. It provides a legal, administrative, and publications forum within which all of the interested parties can meet on a common ground to write standards which will best meet the needs of all concerned.

I somehow believe your concept of "Common Conventions" embraces our view of organized standardization. ASTM defines standardization as: "The process of formulating and applying rules for an orderly approach to a specific activity for the benefit and with the cooperation of all concerned."

In the ASTM process, all points of view come to the standards table... producers, users, ultimate consumers, and the general interest representatives of government and academia...all with their own points of view, their own biases clearly labelled. It's frequently an adversary environment and, thus, can be a time-consuming process. We do not believe in unbiased experts...all of the differences and biases are brought into the ASTM forum, presented at the standards meetings, and then eventually consensus is developed. But we truly believe that the standards produced will have the highest credibility and will meet the needs of all concerned, because all concerned have had an opportunity to have their voices heard.

Quite often, people think some magical body of expertise exists in ASTM that writes and develops all of the standard documents. ASTM headquarters has no technical research or testing facilities. Such work is done voluntarily by those who work within the ASTM system--technically qualified members of the society located throughout the world. ASTM headquarters doesn't, however, have the organizational experience and skills to make this work fruitful and rewarding.

ASTM ORGANIZATION

Management of the society is vested in a board of directors. Board committees cover:

- Finance
- Society development (biennial updating LPR, membership, new developmental activities, public relations, promotion)
- Technical committee activities
- Overall voluntary standards system (role of ASTM interface private/governmental and national/international)

Separate standing committees of the society--related more directly to the great universe of the ASTM technical committees ("acronyms are awful").

- COTCO (regulations & committee operations)
- COS (oversee procedural requirements and due process)
- COP
- COT (uniformity and consistency--difficult--liaison)
- Research & technical planning

The core of ASTM is technical committees (TC's). We have a great diversity and encompass a very broad umbrella.

Some of the more common or well-known technical committees include:

- Steel
- Petroleum
- Cement & concrete
- Non-ferrous metals
- Paint
- Nuclear
- Solar
- Space technology
- Water
- Air/atmospheres pollution
- Environment/biological effects
- Resource recovery

Some of the less familiar committees include:

- Sensory evaluation
- Food service equipment
- Meat and poultry
- Forensic sciences
- Fire standards
- Computerized systems

And some of the more surprising include:

- Medical/surgical devices
- Orthotics
- Sports equipment (safety)
- Football helmets
- Skiing
- Amusement rides/devices
- Consumer products (high chair, lighters, tub/shower devices)

The umbrella is unlimited--those involved determine the need for coming into the ASTM management system for standardization.

Policy, of course, set by board, but hierarchically somewhat the reverse of industry. Most organizations inputs for policy and operations come from the TCs to ASTM headquarters for the standing committees consideration, and then to the board. Much less absolute direction from the "top-down" so common in industry!

Currently, ASTM has more than 31,000 members including some 3,000 international members. Since many members serve on more than one committee, total unit participation is well over 80,000.

Being non-profit, how is ASTM financed? What is the cost of writing standards in ASTM? First of all, ASTM does not charge for its services; there are no project costs.

Annual budget - \$14M. Approximately 15% of ASTM's money comes from return on investment and administrative fees (\$50 a year for society membership--belong to any number of technical committees).

Most of this money is returned to the members, however, in the form of a free part of the annual book of ASTM standards, reduced rates on additional parts and on other publications, a subscription to our monthly magazine Standardization News, and an enormous amount of administrative back-up which is provided by the headquarters staff.

The other 85% of ASTM's money comes from the sale of its publications.

- 66--volume annual book of ASTM standards containing over 7,000 standards under copyright by ASTM
- Separate--reprints of individual standards
- Special technical publications (STP's) which result from the 35-40 symposia ASTM committees sponsor each year.
- Journals and compilations
- Scientific data series

This financial picture represents just the "tip of the iceberg" in the costs of writing standards. It is estimated that 10-12 times the \$14M that flows through ASTM headquarters is expended in the overall development of standards. Expenses are incurred, however, for travel and lodging in attending ASTM meetings, members' use of their own laboratories/facilities for testing and research, and most important...the member's time. But the organizations/companies they represents are the ones supporting these expenses.

TYPES OF STANDARDS

Commonly a noun--ASTM is also an adjective in titling ASTM documents

Standard (with designation) has gone through full consensus balloting procedures and met all requirements (proposals)

Six types of standards are listed with a brief/concise differentiation.

1. Standard specifications which define the boundaries or limits on the characteristics of a material, product, system, or service.
2. Standard methods of test which prescribe ways of making given measurements (thus supporting specifications).
3. Standard practices which suggest accepted procedures for performing given tasks.
4. Standard terminology/definitions which create a common language for a given area of knowledge.
5. Standard guides which propose an approach, a series of options or instructions that do not prescribe a definitive/specific course of action.
6. Standard classifications which set up categories in which objects or concepts may be grouped.

I believe efforts such as yours concerning a nutrient data base would make use of practices, guides, classifications and terminology.

A misconception about ASTM standards is that they are mandatory. This is probably based on their widespread use and acceptance throughout the country...as a matter of fact, all over the world. ASTM standards are developed voluntarily and they are used voluntarily. They become mandatory only when referenced by a regulatory agency, such as all levels of government building code authorities. This is not uncommon, but generally speaking, ASTM standards are voluntarily prepared and voluntarily used.

Now, I would like to describe in more depth, TC's and the standards development process.

Presently there are 140 standards-writing committees, about 1,800 subcommittees and thousands of sections and task groups.

Anyone who is knowledgeable in the work of a committee may serve on that committee. ASTM's bylaws preclude the exclusion of any qualified person who wishes to serve. And there is no restriction as to the number of persons who may participate on a committee. Some committees have as few as fifty, while others have a thousand or more. The average committee may have about 200-250 members.

The only restriction ASTM lays on its committees is that they be in balance. This simply means that the number of voting producers/manufacturers/vendors on committees having a commercial interest cannot be greater than the number of users, consumers, and general interest voters. Thus, the producers viewpoint cannot dominate the action when standards are being voted upon. These are known as classified committees. Committees that do not write specifications and have no commercial interest are not required to be classified and balanced. Such determinations are made by the committee itself, subject to approval by the board.

TECHNICAL COMMITTEE MAKE-UP

Main--Accumulated voting interests represented for balloting broad scope of activities.

Subcommittees--separate voting interests for balloting (split up), more definitive scope, specific tech activity, separate entities, specific technical expertise, membership responsible for their own meetings, agendas, minutes, reports, etc.

Technical subcommittees structured--material/product type, type of standards, sequence of testing and data, properties (whatever committee decides).
Technical/service subcommittees support others--edit, statistics/data handling, terminology.

Executive--Executive direction/administration arm for overall committee. Overall same as main, plus subcommittee chairman, or members at large. Executive representative of overall committee organization administrative functions delegated to subcommittees/groups (as illustrated)--LRP, symposia, meetings, recognition/awards, liaison, international, research, education/training, etc.

Sections/task groups--(based on size and extent of study projects)
There are relatively small groups with definitive assignments. They are responsible for the initial drafting and preliminary testing/screening for applicability. They draft a document for subcommittee, which is accompanied by data supporting standard (inter-lab testing, application, precision, research report)

TYPES OF ACTIONS

Listed below are the types of action the committees are involved in:

New standards (of course)--but more than new development

Revision--"Not cast in concrete"--updated, revised as often as necessary, kept abreast of technology/current practice

Reapproval--review yearly, but if no changes in 5 years, action to reapprove (exposure to all members), such actions indicated in designation of standard

Withdrawal--obsolete, replaced by other standard(s)

STANDARDS DEVELOPMENT & BALLOTING PROCESS

- All written letter ballots (mailed to all members of committee roster).
- Comments can accompany affirmative.
- Negative votes accompanied by written explanation.
- Not-persuasive--responding written explanation.
- Ballot tallies and documentation--permanent record file.
- Not uncommon--single negative persuasive, rework, rebalot.

Each ballot iteration creates a greater exposure to more people with the goal to generate inputs and improve the document and make it more viable.

Consensus in ASTM is not unanimity

Appeal mechanisms are set up throughout the organization.

In all of this standards work and the overall committee operations, ASTM headquarters provides the technical committees with administrative support. An ASTM staff manager and administrative assistant is assigned to technical committees. They attend the committee meetings and are responsible to make certain that ASTM procedures are being carefully followed and to insure maximum access by the committee to ASTM support facilities. The goal is to take most of the administrative load off the committee members, thus allowing them maximum time to devote their efforts to the important job of writing standards. ASTM support services include preparation and mailing of ballots, tabulation and summary reports of main committee and society balloting, duplication and mailing of meeting notices/agendas/minutes, meetings arrangements and coordination including securing of meeting rooms and hotel accommodations, a phenomenal editing department (of course), publication of the standards produced by the technical committees, maintenance of membership records, membership recruitment, standards status records, publicity, promotion, etc.

What all of this really provides is continuity--follow-up, towards the ultimate goal of developing standards by those concerned and in need of standardization.

CONCLUSION

If you divide the responsibilities in the ASTM made of standardization, you, the standard writers/developers, are in charge of what is done and the society is somewhat in charge of how it is done--based on the rules and regulations.

You provide the technical expertise/activity and develop the needed type of standards. We help you organize and carry out an efficient, coordinated standards program--utilizing our expertise in management and administrative support.

ASTM has tremendous credibility--including both its published standards and its management skills.

It has been proven time and time again, that ASTM is a management system that lends itself to virtually any standards need.

My goal was to describe standardization, the ASTM way...and for you to determine whether the needs exist, and whether the interests and active participants are there to fulfill those needs.