

The European Marketplace and U.S. Test Labs

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INTRODUCTION

With the establishment of the European Economic Community, the issues of standardization, testing and certification become increasingly important to U.S. electronics manufacturers. This article compares the U.S. and European approaches to the three areas and contrasts their strengths and weaknesses. It concludes with some recommendations for action on the part of the U.S. and the EEC.

STANDARDIZATION

The development of product standards are addressed around the world, and in many areas, represents an industry in itself. This industry is dedicated to providing a basis for commonality among certain aspects of product design to allow for an elementary level of public safety and interchangeability between different manufacturers. On any given day, attendees of at least one meeting are discussing standards that could ultimately affect the design of an electronic product on the drawing board.

In the United States, standardization in many areas is a voluntary effort. The primary coordinating organization for the standards effort in the U.S. is the American National Standards Institute (ANSI). Numerous other standards groups and manufacturing associations contribute to the work of developing standards. Often, ANSI

Both the U.S. and the EEC benefit from parallel standards, testing and certification structures.

adopts standards from other organizations; attributions on the top of standards show ANSI/ASTM, ANSI/IEEE, etc., The second half of the designation indicates the originating standard body.

Similarly in Europe, much of the standards work is accomplished voluntarily. The primary standards organizations of the 12 member countries of the Community and the six European Free Trade Association (EFTA) countries are CEN, CENELEC, and ETSI. CEN is the European Committee on Standardization. CENELEC is the European Committee on Electrotechnical Standardization. ETSI is the European Telecommunications Standards Institute.

The structure of CEN and CENELEC is that of associations of national standards bodies or electrotechnical committees, which have the last word on all questions relating to standardization activity at the European level. ETSI, on the other hand, allows the di-

rect participation of all interested parties in standardization work; it does not require representation through national delegations headed by the national standards body.

In 1990, the three European standardization bodies established a Joint Presidents Group, in which matters of common interest are discussed and cooperative agreements for handling technical work are negotiated.

Thus, the U.S. and Europe have much in common in terms of the voluntary approach to standards development. Also, in both geographical areas, individuals and individual corporations must decide the nature and amount of resources which can be dedicated to the standards development process (Table 1).

TESTING

ISO/IEC Guide 2 (Edition - 1986) defines test to be a "technical operation that consists of the determination of one or more characteristics of a given product, process, or service according to a specified procedure." The characteristics and specified procedure are often described in the voluntary standards described in the first section of this article.

How does one know if the test laboratory is a technically competent laboratory? An ac-

	UNITED STATES	EUROPEAN ECONOMIC COMMUNITY
Standards	<p>Voluntary</p> <p>American National Standards Institute is the principal coordinator.</p> <p>Funded by corporations and standards sales.</p>	<p>Voluntary</p> <p>CEN, CENELEC, and ETSI are the principal coordinators.</p> <p>Funded by corporations and standards sales.</p>
Testing	<p>High quality labs exist in both EMC and Telecom.</p> <p>US Department of Commerce accredits labs in both EMC and Telecom.</p> <p>Internal DoC Requirements.</p>	<p>High quality labs exist in both EMC and Telecom.</p> <p>EOTC has the power to accredit labs in both EMC and Telecom.</p> <p>EN 45000 series.</p>
Certification	<p>ANSI Z34 Committee.</p> <p>Requirements are still being formulated.</p>	<p>EOTC.</p> <p>Requirements are still being formulated.</p>

TABLE 1. U.S. and European Standards Development Process.

credited testing laboratory (ATL) is a lab which has received formal recognition of its competence to carry out specific tests or specific types of tests.

In the United States, the Department of Commerce uses a National Voluntary Laboratory Accreditation Program (NVLAP) to accredit labs in selected areas including telecommunications and electromagnetic compatibility (EMC). The Federal Communications Commission (FCC) also has a registration program for labs that represents a minimum check on the qualifications of the lab to perform electromagnetic emissions testing and telecommunications testing.

Since December, 1989, the European Organization for Testing and Certification

(EOTC), an autonomous European body, has handled the testing and certification in the European Economic Community.

The EOTC uses several European Standards (Europäische Norm or EN) in its operation with respect to testing. These include:

EN 45001

General Criteria for the Operation of Testing Laboratories

EN 45002

General Criteria for the Assessment of Testing Laboratories

EN 45003

General Criteria for Laboratory Accreditation Bodies

Thus, the accreditation bodies for testing laboratories that

appear parallel in scope are the U.S. Department of Commerce's NVLAP organization and the European Economic Community's EOTC organization.

CERTIFICATION

Certification of Conformity is defined by the ISO/IEC Guide 2 to be "action by a third party, demonstrating that adequate confidence is provided that a duly identified product, process, or service is in conformity with a specific standard or other normative document."

Certification in the United States is being handled by Accredited Committee Z34 which is developing standards for the operation of certification. The Z34 Committee is developing a procedure for demonstrating that a product and/or a quality system complies with an applicable standard and that the product and/or quality system continues to comply with that standard.

Certification in Europe is being handled by EOTC. The European Economic Commission considers that CEN and CENELEC should examine their future relations with EOTC and how they can receive and use its results and effectively contribute to its work. EOTC is set up as an experiment and will conclude its work by 31 December 1992, at which time a legal autonomous organization will be formed to continue the testing and certification activities.

Thus, the formal certification process in both Europe and the United States does not seem to be as formally developed as either the standardization or the accredited testing environments.

CONCLUSION

Both the United States and the European Economic Community have much to gain by having parallel standards, testing, and certification structures.

Common standards will enhance the development of competitive products which will be offered to the consumer at reasonable prices. Accredited testing labs will assure governments on both sides of the ocean and the ultimate consumer that the product has been tested in a superior manner in accordance with the mandated safety and

performance requirements. Finally, the certification bodies will assure that the manufactured products comply with the detailed requirements of the conformance markings on the product.

Failure to agree on any of the three aspects of the standards, testing, and certification triangle will relegate both economies to a situation characterized by increasing numbers of non-tariff trade barriers based on standards, testing, and/or certification.

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A member of the BoD of the Electromagnetic Compatibility (EMC) Society of the IEEE, Mr. Hoolihan is the founder and past-chairman of the EMC Chapter in the Twin Cities Section of the IEEE. He is also a member of the U.S. Technical Advisory Group of Subcommittee G of CISPR.

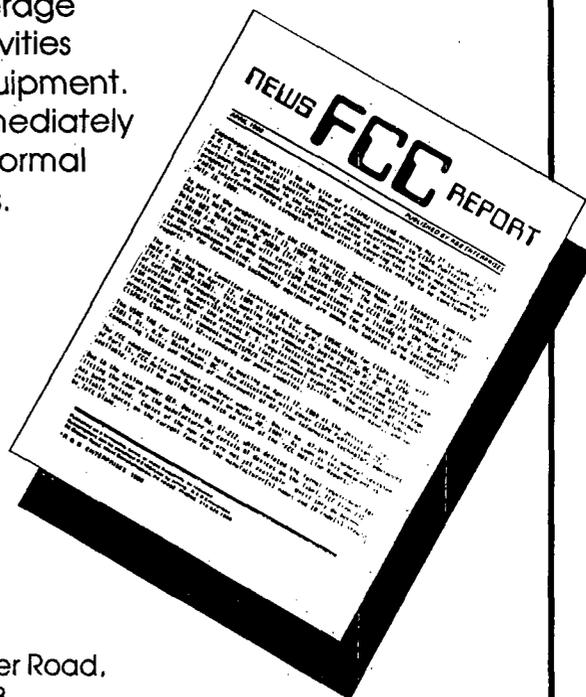
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