



STRATEGIC BUSINESS PLAN (SBP)

IEC/TC or SC TC 25	Secretariat Italy	Date January 2013
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Please ensure this form is annexed to the Report to the Standardization Management Board if it has been prepared during a meeting, or sent to the Central Office promptly after its contents have been agreed by the committee.

TC 25 Quantities and units

A Background

TC 25 “Quantities and units” is a committee established in 1935. Its scope is to prepare International Standards on quantities and units to be used generally in electrical technology and to review the use of quantities and units in other IEC standards. All of these other standards shall follow relevant provisions of existing basic International Standards, particularly those concerned with quantities, units, symbols, and signs, as specified in the ISO/IEC Directives, Part 2, 6.6.8. These basic standards include IEC 60027, Letter symbols to be used in electrical technology and ISO/IEC 80000, Quantities and units. TC 25 standards may relate to definitions, names, letter symbols and their use; to the relations in which these quantities and units appear; and to the signs and symbols used in relations.

Standards developed by TC 25 are relevant to all other TCs and SCs.

Close cooperation is maintained with TC 1, Terminology, especially concerning IEV Parts 101, 102, 111, 121, 131, 141 and with ISO/TC 12, Quantities and units.

One important issue for the committee at present is the recently completed harmonization between parts of IEC 60027 and ISO 31. Recently, TC 25 showed its interest in Physiological quantities and their units or, more generally speaking, about Quantities for e-health. This will lead to new harmonized standards on the subject, i.e. ISO/IEC 80003, Quantities for e-health (originally called Quantities and their units to be used in physiology).

B Business Environment

B.1 General

The expansion of applications of electromagnetic and optical technologies to communications, and information technology, especially data transmission, processing, and storage, requires the timely development of standards for the associated quantities and units. At present, the needs of such technologies in telecommunications and information technology have the highest priority together with the growing field related to e-health. Also power technology has great priority. This implies that teachers and students, especially in electrical engineering and physics, constitute an important target group.

B.2 Market demand

IEC 60027 and especially its Part 1 has had and is having a large impact on the market and on other International, Regional and National Standards, as well as on regulations. Electric equipment could not be traded without specifications in terms of units as given in IEC 60027, e.g. reactive power (symbol: Q) in vars (symbol: var). To solve the confusion in information technology, a set of prefixes for binary multiples is standardized, e.g. kibi (symbol: Ki), corresponding to the factor 2 to the power 10 equal to 1 024 to be distinguished from the prefix kilo (symbol k) corresponding to the factor 10 to the power three equal to 1 000. The symbols for quantities and units are absolutely necessary for designing and constructing every kind of equipment, and virtually all IEC standards use such symbols. The impact of IEC 60027 on other International Standards is underlined by the fact that IEC 60027 is given as the first normative reference in the ISO/IEC Directives, Part 2, Clause 2. See also subclause 6.6.8. The ongoing project to harmonize parts of IEC 60027 and ISO 31 to produce a single series of double-logo International Standards will make these standards even more widely acceptable and facilitate their application at regional and national levels.

B.3 Trends in technology

The above-mentioned technologies are necessary for industry and science; standards on quantities and units are needed to facilitate and to ensure effective communication between laboratories and industrial partners to foster research and development within the multinational world wide scientific and technical community.

B.4 Market trends

In order to facilitate international trade, to guarantee an optimal efficiency of the technologies at a world wide level for industry and science and to foster multinational businesses, the standards on quantities and units are essential.

B.5 Ecological environment

Quantities and units are used to express and evaluate phenomena of ecological significance and fundamental public safety issues.

C System approach aspects

The current status of the Programme of Work for TC 25 can be found in the IEC database. The more specialized topics in electrical technology should remain as pure IEC standards.. All projects are conducted in cooperation with IEC/TC 1, especially WG 100, Fundamental concepts, to improve the consistency with the IEV.

IEC 60375, Conventions concerning electric and magnetic circuits will be revised soon.

Key emphasis in all of the projects is to improve consistency with the International Electrotechnical Vocabulary (IEV) and the work in ISO/TC 12.

D Objectives and strategies (3 to 5 years)

IEC/TC 25 shall complete IEC 80003, Quantities and their units, to be used in physiology, 4 parts, and ISO 80003, Quantities for e-health, 2 parts. 5 years old parts of IEC 60027, Letter symbols to be used in electrical technology, will be reviewed and revised with respect to the harmonization between IEC 60027 and ISO 31, Quantities and units. IEC 60375 will also be reviewed. IEC/TC 25 consider these objectives as achievable. An Advisory Group is activated (with the participation on TC 25 Chairman and WG Convenors, with the aim to assure an efficient coordination of WG activities.

E Action plan

The action plan is to encourage IEC/TC 25 WG 5 and 6 to complete all CDs of ISO/IEC 80003 during 2013. Two parts of ISO/CD 80003 series, namely Part 2 (Physics) and Part 3 (Chemistry), are already completed and commented on. The review of IEC 60027 will be carried out as outlined above.

Other International Standards will be reviewed when they become 5 years old.

F Useful links to IEC web site

[IEC/TC 25 dashboard](#) and IEC Collaboration Tool give access to Membership, TC/SC Officers, Scope, Liaisons, WG/MT/PT structure, Publications issued along with their stability dates, Work Programme and similar information for WGs.

Name or signature of the secretary

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