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Organisation internationale de normalisation
International Organization for Standardization
Международная Организация по Стандартизации



Our ref. TS/P 209

TO THE ISO MEMBER BODIES

Date 2009-08-04

ISO/TS/P 209 *Mechatronics*

Dear Sir or Madam,

Please find attached a proposal for a new field of technical activity on *Mechatronics* submitted by AFNOR (France).

According to subclause 1.5.6 of Part 1 of the ISO/IEC Directives, you are kindly invited to complete the ballot form ([Form 02](#)) which can be downloaded at www.iso.org/forms and send it (preferably in Word format) to the Secretariat of the ISO Technical Management Board at tmb@iso.org before **4 November 2009**.

Yours faithfully,

A handwritten signature in black ink, appearing to read 'M.A. Smith', with a long horizontal stroke extending to the right.

Michael A. Smith
Secretary of the Technical Management Board

Encl:
TS/P 209



PROPOSAL FOR A NEW FIELD OF TECHNICAL ACTIVITY	
Date of proposal 10 June 2009	Reference number (to be given by Central Secretariat)
Proposer AFNOR	ISO/TS/P 209

A proposal for a new field of technical activity shall be submitted to the Central Secretariat, which will assign it a reference number and process the proposal in accordance with the ISO/IEC Directives (part 1, subclause 1.5). The proposer may be a member body of ISO, a technical committee or subcommittee, the Technical Management Board or a General Assembly committee, the Secretary-General, a body responsible for managing a certification system operating under the auspices of ISO, or another international organization with national body membership. Guidelines for proposing and justifying a new field of technical activity are given in the ISO/IEC Directives (part 1, annex Q).

The proposal (to be completed by the proposer)

<p>Subject (the subject shall be described unambiguously and as concisely as possible)</p> <p>Mechatronics</p>
<p>Scope (the scope shall define precisely the limits of the proposed new field of activity and shall begin with "Standardization of ..." or "Standardization in the field of ...")</p> <p>Standardisation in the field of mechatronics, which is an approach aiming at the synergistic integration of mechanics, electronics, control theory, and computer science within product design and manufacturing, in order, in particular, to improve and/or optimize the functionality of mechanical products.</p> <p>NOTE : The word "mechatronics" was invented in 1969 by Mr Tetsuro Mori, executive officer of the Japanese company « Yaskawa Electric Corporation », manufacturer of automatism systems and components. This word "mechatronics" was built by combination of "mecha" from "mechanism" and "tronics" from electronics. The word was first registered as a trade mark. Due to its large use worldwide, Yaskawa gave up its rights in 1982.</p>
<p>Purpose and justification (the justification shall endeavour to assess the economic and social advantages which would result from the adoption of International Standards in the proposed new field)</p> <p>Mechatronics is rapidly growing, as well at the level of industrial equipment, that at the level of components and production processes. It is a strong element of innovation as it is able to create added value. By abolishing existing borders, mechatronics allows to satisfy supplementary functions, to increase the service to the user, to develop a new offer while lowering the costs. By this approach new solutions can be proposed, which better take into account environmental impacts compare to the traditional solutions (e.g. energy efficiency).</p> <p>In Europe, the mechatronics market was estimated, in 2006, to 32 billion euro with a growth rate of 30 % on a period of 4 years (for comparison, in Europe, the electrical & electronic, mechanical engineering and metalworking sectors accounted for some 1,885 billion euro in 2008)</p> <p>Development of mechatronics implies an adaptation of the organization of the work and imposes to stop the conception by module or by technology for the benefit of a global vision (in a way similar to system engineering). This approach contributes to the performance of the company, which must be capable of getting organized in a new type of process.</p> <p>However the multiplicity of technologies and skills involved represents a difficulty, still increased by the use of concepts which have no same meaning for all.</p> <p>The adoption of International standards in this field would benefit to companies both developing and using mechatronic solutions, and would facilitate the transfer of research results to these companies.</p>

Programme of work (list of principal questions which the proposer wishes to be included within the limits given in the proposed scope, indicating what aspects of the subject should be dealt with, e.g. terminology, test methods, dimensions and tolerances, performance requirements, technical specifications, etc.) It is also possible to attach a detailed programme of work showing proposed work item titles.

- terms and definitions
- design methodology
- requirements for modelling languages and data exchange
- interfaces, ...

Survey of similar work undertaken in other bodies (relevant documents to be considered: national standards or other normative documents)

French standards NF E 01-010 and XP E 01-011

German VDI Guideline 2206

Liaison organizations (list of organizations or external or internal bodies with which cooperation and liaison should be established)

- ISO and IEC technical committees such as ISO/IEC JTC1/SC 7, ISO/TC 4, ISO/TC 20, ISO/TC 22, ISO/TC 115, ISO/TC 131, ISO/TC 184/SC 2, IEC/TC 65.

- IFToMM, the International Federation for the Promotion of Mechanism and Machine Science

Other comments (if any)

The French committee is ready to fulfil the responsibilities as secretariat of the new technical body and is in a position to ensure that adequate resources are available for secretariat work



Signature of the proposer

Comments of the Secretary-General (to be completed by the Central Secretariat)

Signature 