



# Terminology Standardization and Harmonization

ISO/TC 37 "Terminology and other language and content resources"  
<http://www.iso.org/tc37>

| Contents/Sommaire  | Page     |
|--|----------|
| <b>Related Standardization Activities/<br/>Activités de normalisation connexes</b> | <b>2</b> |

#### IMPRESSUM

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#### Offenlegung nach § 24 Mediengesetz:

Terminology Standardization and Harmonization (TSH) ist ein vierteljährlich erscheinendes Informationsblatt des Sekretariats des Technischen Komitees ISO/TC 37 "Terminology and other language and content resources" der Internationalen Normungsorganisation (ISO) und des Internationalen Informationszentrums für Terminologie (Infoterm). TSH enthält Informationen und Nachrichten über Ereignisse, Tätigkeiten und Projekte aus dem Bereich der Terminologienormung auf nationaler, regionaler und internationaler Ebene und verfolgt dabei keine parteilichen oder ideologischen Zielsetzungen. Ziel dieser Publikation ist es, alle terminologisch tätigen und interessierten Organisationen und Personen über die laufenden Aktivitäten auf dem Gebiet der Terminologienormung zu informieren, aktuelle Informationen und Hilfestellung für ihre berufliche Tätigkeit zu liefern sowie ihre Zusammenarbeit zu fördern. TSH is a joint publication of the Secretariat of ISO/TC 37 and Infoterm. It has been created in 1989 with the objective to foster communication and cooperation among organizations and individuals involved in terminology standardization and harmonization. It provides information on terminology standardization, especially within the framework of technical Committees, as well as on the results of their activities. TSH est publié conjointement par le Secrétariat de l'ISO/TC 37 et Infoterm. TSH fut fondé en 1989 afin de stimuler et d'encourager la communication et la coopération entre les organismes et les personnes engagés dans le domaine de la normalisation de la terminologie. Il renseigne sur les activités de normalisation de la terminologie au niveau international ainsi que sur celles au sein des comités techniques.



## A common language for a common understanding

*by Roberto Paoluzzi, Chair of ISO/TC 127, Earth-moving machinery, SC 4, Commercial nomenclature, classification and rating Having a coherent and uniform standards terminology is crucial in today's fast-changing world.*

Technical committees need to avoid having the same term mean different things in different standards. In this article, I intend to describe how ISO technical committee ISO/TC 127 has addressed this problem in the context of earth-moving machinery (EMM) and what implications this has for standardization terminology as a whole.

The need for harmonizing terminology has arisen from the internal contradictions within existing standards and increasingly fast-paced market changes. The market requires consistency in order to avoid poor comprehension of standards and their application, and the confusion arising from the multiplicity of definitions, even by the same TC, in different standards.

ISO/TC 127 is aware that since the rate of application of its standards by industry is extremely high and more than 90 percent of them are referenced by harmonized European standards, its projects must be grounded in a sound terminology structure.

A peculiar request from the association of insurance companies asking for a more descriptive and usable document to be quoted as a “reference” by all claims involving earth-moving machines, generally identified in many documents with a misleading colloquial name of “caterpillars” (one of the cases when a brand name is used to indicate a full category of machines), led to action by the working group and will be published using one of the new types of documents made available by the new ISO/IEC Directives. The speed of technological change and need for continuous updates has stimulated a need for a common, internationally recognized language in the field of earth-moving machinery.

Originally the definition of earth-moving machinery was not considered a challenging task by ISO/TC 127, since in the early 1970s it mainly addressed one type of machinery – the agricultural tractor, which could be modified to different functions in land reclamation.

### Increasing complexity in a fast-changing world

At first, only a limited number of machines needed more detailed description. The problem was that differences between national terminology variants had grown over the years, spurring a market need for a common internationally recognizable language. The existence of a market leader spurred the decision to establish a subcommittee whose aim was to facilitate exchange of technical documentation and commercial information.

The structure of the standards in their first development by subcommittee SC 4, Commercial nomenclature, classification and rating, of ISO/TC 127 is exposed in Figure 1. This reflected the general perception that because only a few machines needed a synthetic description of their function, it was sufficient to have a generic standard describing the different parts of a machine complemented by a series of specific terminology and performance rating (where needed) standards for each machine type described in the general standard.

This method was supposed to ensure the common use of terms in technical documentation, and a comparability of figures reported in catalogues. It sounded easy.

The initial structure of the standards developed by SC 4 reflected this straightforward approach : ISO 6165 describing the machine types (just six of them were recognized at the time), ISO 6746 describing the name of parts of a tractor-derived base machine (part 1) and its attachment (part 2), plus six more standards on specific terms used in the six machine types defined.

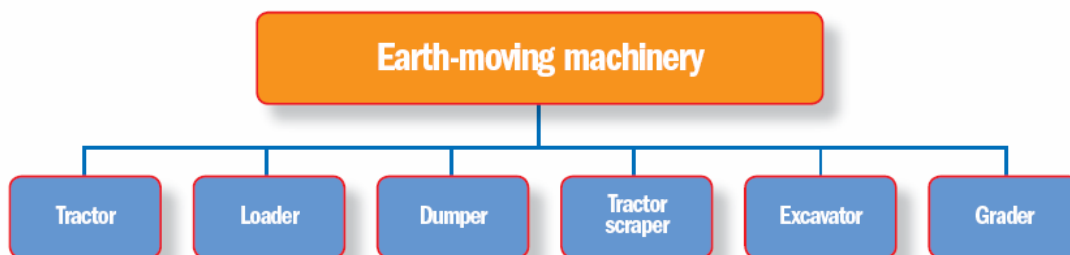


Figure 1 - Structure of ISO 6165:1978.

Although this structure met the initial needs of the sector, the speed of technological change and the progressive diversification of EMM from their agricultural parents exposed weak points in this approach.

First of all, the structure of the root standard (ISO 6165) is not detailed enough to allow the identification of specific machines in other standards developed by other subcommittees. This problem has to be solved with continuous updating, which started with the second edition in 1987 and is still in progress, at an ever-increasing pace.

The second problem was the internal consistency of terms used in standardization within a technical committee.

In order to respond to the demand for highly specialized standards and stay abreast with a changing technological environment, working groups and subcommittees tend to develop their own definitions, perfectly suited for the specific purpose of a standard, but sometimes generalized or conflicting with already given definitions of the same term in other documents – this problem is much more difficult to solve, since it must compromise between the conflicting needs of a special definition in “application” standards and of a generally applicable unique term.

### Example of a ground clearance machine

A trivial example is ground clearance by a tracked machine: in operation, the track shoe grousers penetrate the ground, clearing ground from the lower part of the machine body. The problem is that if we need to define the same term for testing purposes, it may be necessary to define a testing condition in which the grouser does not penetrate the ground, as in the case of a concrete surface.

In the past, this problem was simply ignored, and new definitions had to be introduced. This resulted in different standards, by the same TC, defining the same term in different ways. Which one is the definition to be adopted by end-users when they apply the full set of standards?

### A systematic approach

At the beginning of the 1990s, ISO/TC 127/SC 4 recognized the need for a systematic approach to the problem, acknowledging that :

- terminology is a key issue in standardization as it impacts market communication as well as the technical application of the standards and standardization work in itself ;
- the misuse of terms or different uses of the same term in different contexts may lead to the wrong perception of the technical level of standards and their distorted application ;
- the development of new standards could benefit from the availability of a thesaurus of terms already defined, and whose application is likely to span different fields ;
- the extension of a harmonized terminology to a multilingual list may help international trade and foster global acceptance of the standard.

Terminology in earth-moving machinery may represent a particular case, but the principle is of general validity. Standardization must start from a common understanding, the identification of the object being dealt with, and the description of requirements must follow.

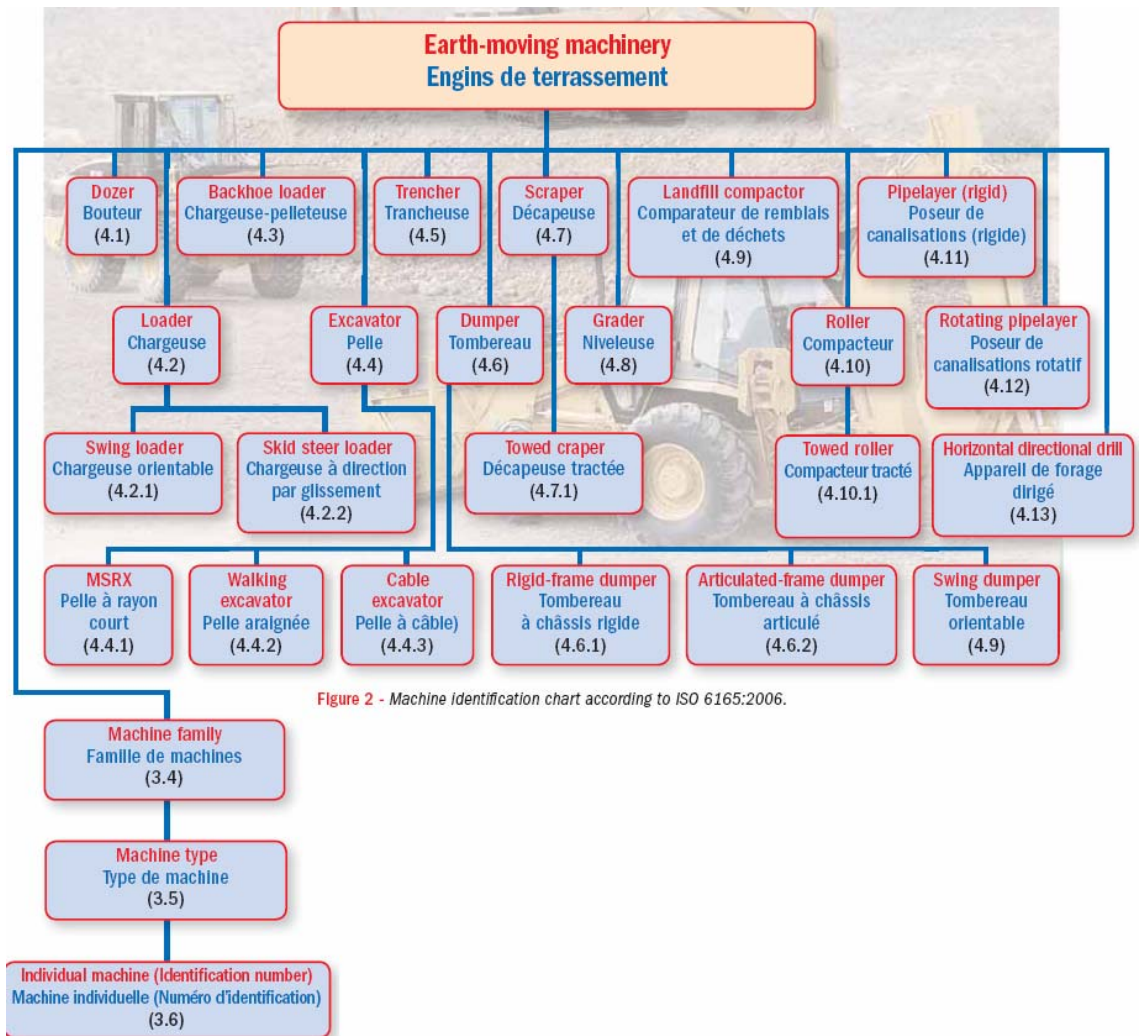


Figure 2 - Machine identification chart according to ISO 6165:2006.

Starting ten years ago, the application of this principle led to the definition of a priority list for the subcommittee's terminology activities, substantial revision of ISO 6165, followed by parts 1 and 2 of ISO 6747 for general and third-level machine-specific standards.

This work is nearly accomplished, and the final EMM identification tree is shown in Figure 2. This effective process allows standardization to stay abreast of everchanging market conditions by : (1) defining a machine, (2) developing its specific terminology, commercial specifications and performance terms, (3) starting the standardization of testing and safety aspects, or amending existing relevant standards.

It allowed the full set of TC 127 standards to maintain a basically good, yet improvable, internal consistency. Successful examples of the application of the terminology revision concept include the definition of the compact dumper (which is still in progress), the walking excavator and, more recently, horizontal directional drills and rotating pipe layers. This renewed commitment to the consistent use of standards terminology, significantly boosted by ISO and the European Committee for Standardization's (CEN) strong interaction on safety standards, will be addressed by project leaders and working group conveners during the next ISO/TC 127/SC 4 meeting in Sydney.

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## Step by step to workable solutions

### 2nd eBIF Conference on Interoperability By Henry Ryan, Conference Rapporteur, Lios Geal Consultants

A step-by-step approach to e-business interoperability, widely understood as the automated sharing of information within and between companies irrespective of their industry sectors and company size, was discussed at the 2nd eBIF Conference, held in Utrecht on 11-12 December 2006. Among the assertions from the meeting is that “Technology will become a commodity, and Information will be the differentiator”. This observation from the KPMG presentation is further underpinned by the Microsoft Keynote which noted that “people are the best examples of interoperability, and software is just there to help”.

The conference participants reviewed the achievements and challenges in relation to tandardization, practical research criteria and plans for FP7, collaboration with and between SMEs, cross functional standardization services such as OASIS and the EIC (Enterprise Interoperability Centre), e-business standards developments in China, etc., and concluded with an open panel discussion. Copies of the presentations can be downloaded from:

[http://www.cen.eu/cenorm/businessdomains/businessdomains/iss/activity/ebif\\_conf\\_programme.asp](http://www.cen.eu/cenorm/businessdomains/businessdomains/iss/activity/ebif_conf_programme.asp)

Two major essential steps to workable solutions emerged from the presentations and panel discussion and will be further developed in the full report to be made available early in 2007 from the EQUENS and the CEN/ISSS web sites. These steps which represent areas on which eBIF, in collaboration with partners, will expand and build are:

- Better information about successful standards implementations
- Reduction in fragmentation and elimination of gaps in end-to-end standards developments and standards based e-business implementations

Interoperability is key to the revised Lisbon strategy and central to the survival and growth of Small and Medium-sized Enterprises. Nonetheless interoperability remains an area to be tackled at various levels; there are business, non technical and technical challenges. The main problems to be tackled were the need for better understanding of interoperability needs by business leaders, improved internal interoperability in large companies, SME participation in problem definition and the search for solutions, and the need for a clear and harmonized legal framework.

eBIF is convinced that the way forward is strengthening partnerships with other organizations active in e-business. eBIF is already collaborating with many fora and activities at international level. In Utrecht, eBIF and the Enterprise Interoperability Centre (EIC) announced discussions concerning a mutual collaboration arrangement.



Henry Ryan, Conference Rapporteur

## Localization Industry Standard for Terminology submitted for adoption by ISO TC37/SC3

The Localization Industry Standards Association (LISA) (<http://www.lisa.org>) announced that it had entered into a licensing agreement with the International Organization for Standardization (ISO) to submit its Term-Base eXchange (TBX) standard (<http://www.lisa.org/standards/tbx/>) for adoption as an ISO standard under ISO fast-track ballot procedures. This process should result in official adoption of TBX by ISO in the third quarter of 2007. After adoption, TBX will be maintained by a committee consisting of members of LISA's OSCAR standard body and ISO Technical Committee 37 and will be available from either body.

"Organizations are increasingly aware that terminology is a key asset that impacts product quality, customer satisfaction and support costs. By moving to the ISO framework, governments, NGOs and other large organizations that are required to use only ISO standards will be able to implement TBX to help improve their terminology and countries will be able to adopt it as a national standard as well," says Arle Lommel, acting chair of LISA's OSCAR standards group. "Adoption of TBX by ISO will result in improved management of terminology resources around the world."

Kara Warburton, chair of LISA's terminology special interest group, which represents corporate and institutional users of terminology management technologies, agrees: "The globalization industry needs an XML-based standard to enable terminology to be processed by any software, at any stage in the content management process. Through the ISO review process, the capability of TBX to meet this need will be established by global stakeholders, and industry adoption will subsequently increase."

"TBX has already found wide-spread support from developers of tools used in product globalization, companies like Heartsome, IBM, Idiom, Scriptware, SDL, and XML Intl, as well as major governmental bodies and content developers," says Michael Anobile, managing director of LISA. "The submission of TBX to ISO is vital for the globalization industry because it will promote adoption of TBX in vertical industries whose companies are increasingly realizing the strategic value of terminology and the need to manage it better. Developers in any industry will benefit from TBX."

After adoption by ISO, LISA will continue to make TBX available free of charge through its website (<http://www.lisa.org/standards/tbx/>), while ISO will sell copies of the standard to organizations that are required to purchase them. The results will be greater exposure for and adoption of the standard and increased awareness of the need to manage terminology effectively.

For more information on TBX, please visit the following sites: the OSCAR homepage (<http://www.lisa.org/sigs/oscar/>), the TBX specification page (<http://www.lisa.org/standards/tbx/>), and the LISA Terminology Special Interest Group (<http://www.lisa.org/sigs/terminology/>), or contact Arle Lommel at [arle@lisa.org](mailto:arle@lisa.org).

Contact: Arle Lommel, OSCAR Chair  
Localization Industry Standards Association  
<http://www.lisa.org>  
E-mail: [arle@lisa.org](mailto:arle@lisa.org)

## European Conference on Innovation and Market Access through Standards - 27 March 2007, Berlin

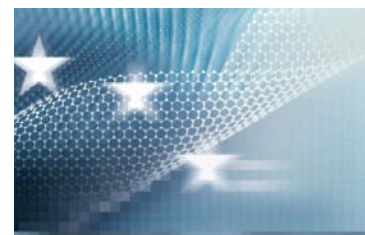
The Conference is being organized by the [German Federal Ministry of Economics and Technology](#) in cooperation with DIN, the [German Institute for Standardization](#). The aim of the conference is to highlight the crucial role of standardization in the development and dissemination of innovative products and services. The conference combines presentations on aspects of economic strategy from leading national and European politicians and from prominent figures in science and industry with individual best practice examples showing how standards can be used to advantage in innovative contexts. Following a panel-lead discussion, a high-ranking public figure will round up the results of the conference and present the conclusions.

On **26 March 2007**, conference participants are invited to attend a reception, starting at 6 pm.

Participation is by invitation only and free of charge.

Venue: Maritim proArte Hotel Berlin  
Friedrichstraße 151  
10117 Berlin

For further information, please contact:  
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Tel.: +49 30 2601 2216.



## ISO/TMB/AHG/SAD/TF 2 "Identification"

On 11 December 2006, the first meeting of Task Force 2 "Identification" (identity management) of the ISO/TMB/AHG "Standards as databases" met at ISO/HQ in Geneva. Some 10 experts of ISO/CS, national standards bodies and ISO/TCs discussed the "object identification" scheme of the future ISO/CDB (ISO Concept Database). It was recognized that multiple identification schemes are unavoidable, even necessary.

- for the general user a URL could point to the database, where s/he can find one or some entries of interest,
- this URL could be extended by "terms" or other kinds of representations, every representation is linked to a "document" URN,
- each document URN can be linked to information on the TC/SC and other kinds of reference data.

This means that:

- to the general user the ID at the user interface can be kept simple (in the form of the well accustomed URLs extended by an explicit object/item); e.g. [www.iso.int/.../?ISO.CDB:fastener](http://www.iso.int/.../?ISO.CDB:fastener).
- every "content item" has a unique ID composed of ISO (the code allocator). CDB (concept database)  $\leftrightarrow$  comp. to STD = standards). random number for the (concept) representation; e.g. "ISO.CDB123456789012345..."
- all other IDs can be concatenated ...
- 

Some parallel development of DOI/URI/URN/...-schemes even within the ISO framework have to be checked in-depth for complementarity or obsolescence. At last time-honored proposals of ISO/TC 37 to ISO for establishing a „Central ISO Terminology Database“ will be implemented in line with the requirements of web-based content collections and services.

## ISO/TC 37 and SC Annual Meetings 2007

ISO/TC 37 Terminology and other language and content resources and its Subcommittees SC 1-4 will have their annual meeting week 2007 in the United States.



Delegates from national member bodies and other experts from ISO internal and external liaison members will gather from 11-19 August in the beautiful surroundings of Provo, Utah, to work together on TC 37 standards and discuss (and reach consensus) on other issues concerning the ISO technical committee.

The meetings will be hosted by the Brigham Young University in conjunction with the US Mirror Committee to ISO/TC 37 at ANSI (American National Standardization Institute).

In addition to the meetings, a conference on pragmatic applications of ISO/TC 37 standards will take place on Monday, 13 August 2007.

Further information about ISO/TC 37 can be found on the ISO Website <http://www.iso.org> or directly at the TC 37 work area <http://www.iso.org/tc37>

If you have any specific questions, please feel free to contact the ISO/TC 37 Secretariat: [Infopoint@infoterm.org](mailto:Infopoint@infoterm.org)



## ISO 639-6 standard announced

At the Language Standards for Global Business Summit, which took place in Vienna, Austria, on 14-15 December, 2006, it was announced that the base data researched for potential inclusion to the ISO 639-6 standard will be made available for discussion in the OmegaWiki, thereby contributing to the final verification and validation to be made by the World Language Documentation Centre. The ISO 639-6 standard will uniquely identify all additional linguistic entities, putting them in a hierarchical context and thus increasing the effectiveness of software applications. The elements that were distilled during the conference were placed on the WikiforStandards in real-time and can now be seen and edited.

In a parallel ISO Task Group meeting it was proposed, discussed and agreed upon that an overview of the ISO 639-6 standard will be made available on the WikiforStandards at the same time as the Draft International Standard is issued for public comment. All interested parties may express thoughts about the framework of this standard. Upon availing themselves of a copy of the draft, interested parties can discuss what is important for the understanding of languages and dialects, written, spoken or signed and other linguistic entities.

## Bücher: Die ISBN ist jetzt 13-stellig

**Wachsende Zahl an Verlegern und Publikationen machte eine Erweiterung des Systems notwendig.**

Wien (ON prm) Mit 1. Jänner 2007 wurde die bisher 10-stellige ISBN (International Standard Book Number) durch die neue, 13-stellige ISBN vollständig ersetzt (parallele Nummerierungen waren seit 2005 möglich).

Die ISBN ist die Grundlage dafür, Bücher aus aller Welt in Katalogen und Datenbanken rasch und einfach zu finden. Diese auf nahezu allen Monographien zu findende Kennzeichnung basiert



auf der Internationalen Norm ISO 2108 „Information and documentation - International Standard Book Number (ISBN)“.

Der Nummernraum der ISBN war bislang 9-stellig, die zehnte Ziffer war eine Prüfziffer. Als Resultat der weltweit wachsenden Anzahl von Verlegern und Veröffentlichungen wurden die Nummern viel schneller verbraucht, als ursprünglich bei der Einführung des ISBN-Systems für gedruckte Bücher in den späten 1960er Jahren angenommen.

Die neue, 13-stellige Identifizierungsnummer für Bücher und andere Verlagsprodukte wird erzeugt, indem der 10-stelligen ISBN die Zahl 978 vorgesetzt wird. Die Prüfziffer wird anschließend neu berechnet.



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#### Linktipps

<http://www.isbn.co.at>

<http://www.isbn-international.org>

<http://www.iso.org/iso/en/commcentre/pdf/isbn0512.pdf>



## New e-Business W@tch Sector Studies

The European Commission's "e-Business W@tch" has published 10 new e-Business Sector Studies. They can be downloaded for free from the website at <http://www.ebusiness-watch.org/>. Reports are available on e-business in the following sectors:

- Sector study 01/2006: Food & beverages  
<http://www.ebusiness-watch.org/resources/food/food.htm>
- Sector study 02/2006: Footwear  
[http://www.ebusiness-watch.org/resources/textile\\_footwear/textile\\_footwear.htm](http://www.ebusiness-watch.org/resources/textile_footwear/textile_footwear.htm)
- Sector study 03/2006: Pulp, paper & paper products  
<http://www.ebusiness-watch.org/resources/paper/paper.htm>
- Sector study 04/2006: ICT manufacturing  
[http://www.ebusiness-watch.org/resources/electronics\\_ict/electronics\\_ict.htm](http://www.ebusiness-watch.org/resources/electronics_ict/electronics_ict.htm)
- Sector study 05/2006: Consumer electronics  
[http://www.ebusiness-watch.org/resources/electronics\\_consumer/electronics\\_consumer.html](http://www.ebusiness-watch.org/resources/electronics_consumer/electronics_consumer.html)
- Sector study 06/2006: Shipbuilding & repair  
[http://www.ebusiness-watch.org/resources/transport\\_ship/transport\\_ship.html](http://www.ebusiness-watch.org/resources/transport_ship/transport_ship.html)
- Sector study 07/2006: Construction  
<http://www.ebusiness-watch.org/resources/construction/construction.htm>
- Sector study 08/2006: Tourism  
<http://www.ebusiness-watch.org/resources/tourism/tourism.htm>
- Sector study 09/2006: Telecommunication services  
[http://www.ebusiness-watch.org/resources/ict\\_telecommunication/ict\\_telecommunication.html](http://www.ebusiness-watch.org/resources/ict_telecommunication/ict_telecommunication.html)
- Sector study 10/2006: Hospital activities  
[http://www.ebusiness-watch.org/resources/health\\_hospital/health\\_hospital.html](http://www.ebusiness-watch.org/resources/health_hospital/health_hospital.html)

The results of some of these studies will be discussed with policy and industry representatives and other stakeholders at the forthcoming e-Business W@tch Conference 2006/07, taking place on 30 Jan. 2007 in Brussels. May we use the opportunity to invite a representative of your company or organisation to participate in this event. Participation is free of cost, online registration is available at the website.

[http://www.ebusiness-watch.org/events/Annual-Event\\_2006.htm](http://www.ebusiness-watch.org/events/Annual-Event_2006.htm)