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Working Party on Indicators for the Information Society

**INFORMATION ECONOMY – SECTOR DEFINITIONS BASED ON THE INTERNATIONAL
STANDARD INDUSTRY CLASSIFICATION (ISIC 4)**

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FOREWORD

At its May 2006 meeting, the Working Party on Indicators for the Information Society (WPIIS) invited volunteers to join an Expert Group to assist with development work on the ICT classifications, including the sector definitions addressed in this paper.

The Expert Group was chaired by Daniel April (Canada), vice-chair of the WPIIS. The members were: Marc Aufrant (France), Yves Froidevaux (Switzerland), Troels Burchall Henningsen (Denmark), Jeong-Eon Kim (South Korea), Martin Mana (OECD), Ron McKenzie (New Zealand), John Burns Murphy (United States), Lea Parjo (Finland), Sheridan Roberts and Sid De (Australia).

This document reflects the agreement of the Expert Group on the list of economic activities (industries) for the information economy (ICT sector and Content and media sector definitions) based on the UN International Standard Industrial Classification of all Economic Activities (ISIC Rev. 4). In its deliberations, the Group considered comments received from WPIIS delegates and Eurostat. In total, 28 member countries provided input.

Under the procedure agreed at its October 2006 meeting, the Committee for Information, Computer and Communications Policy (ICCP) was invited to declassify the document under the written procedure. This was completed on 8 February 2007.

The document is published under the responsibility of the Secretary-General of the OECD.

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INFORMATION ECONOMY – SECTOR DEFINITIONS BASED ON THE INTERNATIONAL STANDARD INDUSTRY CLASSIFICATION (ISIC 4)

Background

The development of standards is an important element of the mandate of the Working Party on Indicators for the Information Society (WPIIS). The first paragraph of its terms of reference reads: "...The Working Party will ensure the continued improvement of the methodology for the collection of internationally comparable data for measuring the supply of, and demand for, information and communication technologies (ICTs). This will include developing and maintaining standards for measurement of the ICT sector, ICT goods and services, electronic business including electronic commerce, IT security, digital content and diffusion of ICT to organisations and individuals".¹

The first achievement of the WPIIS² in that role came in 1998 when delegates agreed on an industry-based definition of the ICT sector. The sector combined manufacturing and services industries whose products capture, transmit or display data and information electronically. In order to foster international comparability of statistics and expedite the compilation of relevant data, the definition was based on the international standard of the day, the International Standard Industrial Classification of All Economic Activities, Revision 3.1 (ISIC Rev. 3.1).

The sector definition was complemented by the ICT goods definition in 2003 and the ICT services definition in 2006. The first is based on the 2002 version of the Harmonized System (HS) used for trade statistics and the latter on the latest version of the United Nation's Central Product Classification (CPC).

The ICT sector and ICT goods definitions have provided the OECD a framework to profile the ICT sector and to support basic economic analysis. For instance, some of the key indicators³ published in the OECD's *Information Technology Outlook; Science, Technology and Industry Scoreboard; Measuring the ICT Sector; and The Economic Impact of ICT* are based on those definitions. The definitions have also been used for national data releases and analytical studies of interest to policy analysts. The initial goal of promoting international comparability of relevant industrial and product statistics was achieved to a large extent. This allowed the WPIIS to fulfil another part of its mandate, to "assist in developing and interpreting statistical indicators which aid formulation of ICT and related policies".

Useful as these statistical standards may be, it is necessary and important to revisit them from time to time. Delegates agreed at the outset that a periodic review of the definitions would allow the Working Party to re-assess the conceptual foundation of its standards, take account of the lessons learned with their implementation and make good use of improvements in the underlying classification systems.

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1. Excerpt from Working Party on Indicators for the Information Society (WPIIS) Terms of reference, [internal working document: DSTI/ICCP/M(2006)1].
 2. At that time an *Ad Hoc* Meeting on Indicators for the Information Society of the ICCP Statistical Panel.
 3. For example capital expenditure, employment, number of enterprises, production, research and development expenses, value added, wages and salaries, share of business sector value added and trade in ICT goods.

This is an opportune time for such a review. The revision of the ISIC and CPC was effectively completed in 2006. These classifications are the foundation for the existing definitions and the OECD was an active participant in the revision process. Both classifications embed changes that will lead to improved ICT related statistics.

The United Nations Statistical Division (UNSD) also agreed to integrate the OECD's proposed sector and product definitions in their classifications as alternative analytical aggregates. This presents an opportunity to encourage the use of these standards outside the boundaries of the OECD, a goal supported by the Committee for Information, Computer and Communication Policy (ICCP). This is also very much in line with the outreach strategy embraced at the World Summits on the Information Society (2003 and 2005).

This paper describes the revision process and its outcome for the sector (industry) definitions. A chapter on ICT goods will be added as soon as possible. A paper addressing ICT services was recently declassified by the ICCP Committee.

There is no attempt made in this paper to fully describe the history, purpose or concepts underlying the proposed definitions; those topics are well documented in the *Guide to Measuring the Information Society*.⁴ These themes will be discussed here to the extent necessary to explain the rationale that lies beneath the proposals.

The revision process

The revision and development of industry and product definitions were on the agenda of the May 2006 meeting of the WPIIS. Several proposals were outlined in the following documents:

- ICT Goods Classification Review 2006 [internal working document: DSTI/ICCP/IIS(2006)1].
- Information and Communication Technology Services [internal working document: DSTI/ICCP/IIS(2006)11].
- The OECD Sector Definition Review – Revision based on ISIC Rev. 4 [internal working document: DSTI/ICCP/IIS(2006)2]. This paper outlined proposals for the ICT sector and for the Content and media sector definitions.

The work on ICT services had been discussed at previous meetings and delegates already had given support to a proposal embedding a number of changes to the CPC. This having been done in large part, the delegates agreed to forward the document on ICT Services Classification [internal working document: DSTI/ICCP/IIS(2006)11] to the ICCP's October 2006 meeting with a recommendation for declassification. The document has since been declassified.

The 2006 meeting of WPIIS was the first opportunity for delegates to discuss the revision of the ICT goods and ICT sector definitions. The Working Party was not in a position to finalise a proposal but agreed on a process to fast track such an outcome. Delegates were given a month to send in their comments and suggestions. A group of volunteer experts was given the mandate to resolve any outstanding issues and finalise a proposal for the sector and goods definitions by year end.

4. [internal working document: DSTI/ICCP/IIS(2005)6], Chapter 2 (ICT products), Chapter 4 (ICT supply) and Chapter 7 (Content) plus relevant annexes.

The expert group was chaired by Daniel April (Canada), vice chair of WPIIS. The members were: Marc Aufrant (France), Yves Froidevaux (Switzerland), Troels Burchall Henningsen (Denmark), Jeong-Eon Kim (South Korea), Martin Mana (OECD), Ron McKenzie (New Zealand), John Burns Murphy (United States), Lea Parjo (Finland), Sheridan Roberts and Sid De (Australia). In its deliberations, the group considered comments received from WPIIS delegates and Eurostat following the May 2006 meeting. Eurostat submitted its conclusion based on deliberations of its Working Group on ICT sector statistics and on a wide consultation of European countries. In total, 28 member countries provided input.

Result of the consultation phase concerning the ICT sector definition

As expected, there was no consensus on the list of industries that define the ICT sector. By and large, the delegations that replied directly to the OECD supported a narrower list of industries, but the proposed scope varied from one delegation to the next. The majority of European countries consulted preferred a broader definition, but here again the scope varied somewhat by country.

The debate essentially concerned the suitability of the conceptual basis for the definition, the so-called guiding principles, and the interpretation of these principles.

In the case of goods producing industries, the most basic questions were:

- Should the scope of the definition be limited to industries producing products (technologies) intended to fulfil the functions of information processing and communication OR should the definition be extended to include industries producing products (technologies) that use electronic processing to detect, measure, record or control a physical process?
- If a choice was made for the more inclusive approach, how could the scope of the definition be rationalised given that more and more technologies use electronic processing to perform some detection, recording or control process?

In the case of services producing industries, the debate concerned the interpretation of the guideline more than the guideline itself. The existing guideline reads “The products of a candidate industry must be intended to enable the function of information processing and communication by electronic means.” The determination of what constitutes an “enabling” service or technology represented the main challenge.

In addition to conceptual issues, participants in the consultation process raised a number of pragmatic concerns including time series continuity, the clarity of message to users, and the availability and confidentiality of relevant statistics.

The issues brought up in this most recent round of discussions, conceptual and pragmatic, were not new. In fact, most of these questions were at the centre of discussions that led to the adoption of the existing ICT sector definition in 1998. At that time, compromise was necessary to reach a consensus.

Though the issues raised are not easily resolved, differences of opinions concern a relatively small number of cases.

The expert group

WPIIS delegates, Eurostat and the UNSD all agreed to accept the conclusions of the expert group. Members of the expert group settled on an approach to choose among a number of options that emerged during the consultation phase.

The next sections present the proposals, the issues discussed and the choices made by the expert group. The discussion is organised into the main industrial components of the ICT sector. The proposed classification structure in its entirety is outlined in Annex 1.

ICT manufacturing industries

The starting point for the expert group's discussion was a proposal presented at the WPIIS meeting [document DSTI/ICCP/IIS(2006)2] and comments that followed. In the case of ICT manufacturing industries, the proposal submitted for discussion at the meeting included the following industries:

Manufacture of computers and related components		
Group	Class	Title
261	2610	Manufacture of electronic components
262	2620	Manufacture of computers and peripheral equipment
Manufacture of communication equipment and related components		
263	2630	Manufacture of communication equipment
	2731	Manufacture of fibre optic cables
Manufacture of consumer electronics and related media		
264	2640	Manufacture of consumer electronics
268	2680	Manufacture of magnetic and optical media
Manufacture of ICT scientific and medical devices		
	2651	Manufacture of measuring, testing, navigating and control equipment
266	2660	Manufacture of irradiation, electromedical and electrotherapeutic equipment

There was broad support for the inclusion of the following industries of ISIC 4:

Group	Class	Title
261	2610	Manufacture of electronic components
262	2620	Manufacture of computers and peripheral equipment
263	2630	Manufacture of communication equipment
264	2640	Manufacture of consumer electronics
268	2680	Manufacture of magnetic and optical media

and the exclusion of the following industry:

266	2660	Manufacture of irradiation, electromedical and electrotherapeutic equipment
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The most fundamental issue discussed was that of industry 2651 – Manufacture of measuring, testing, navigating and control equipment (see page 6). Similar industries (ISIC 3312 – Manufacture of instruments and appliances for measuring, checking, testing, navigating and other purposes, except industrial process control equipment and 3313 – Manufacture of industrial process control equipment) are included in the existing definition by virtue of producing goods that “use electronic processing to detect, measure and/or record physical phenomena or to control a physical process”.

On one side of the debate there are those who question how to rationalise the inclusion of this industry while excluding others that also use electronic processing to perform some detection, recording or control process. In their view, it will become increasingly more difficult to distinguish industries that do so in a significant way from those that do so in an incidental way given that ICTs are embedded into a growing number of products produced by a variety of industries.

On the other side of the debate were those concerned that excluding these industries represents a significant departure from the existing definition, one that could be difficult to explain to users and that will change the message given by statistical indicators.

The expert group chose to exclude this industry from the definition. By doing so it is revising the guiding principle for inclusion of industries agreed to in 1998. The guiding principle currently reads:

“For manufacturing industries, the products of a candidate industry must be intended to fulfil the function of information processing and communication including transmission and display, OR must use electronic processing to detect, measure and/or record physical phenomena or to control a physical process.”

The revised version excludes the second element and reads:

“For manufacturing industries, the products of a candidate industry must primarily be intended to fulfil the function of information processing and communication by electronic means including transmission and display.”

In taking its decision, the expert group noted that ISIC Rev. 4 significantly restructures some of the industries of ISIC Rev. 3.1 (3312 and 3313 in particular) that are included in the ICT sector definition. The restructuring will make it very difficult to produce consistent time series when ISIC Rev. 4 is implemented. In that context, the argument for maintaining time series continuity is not as strong as it may appear. The group also noted that the narrower definition will lead to a clearer message, and therefore more useful analysis.

There was also a debate concerning the inclusion of ISIC 2731 – Manufacture of fibre optic cable. Those in favour of including this industry in the definition claimed that fibre optic cables are an integral part of telecommunication networks. Others argued that while cables do transport information in electronic format, they are passive components which do not fulfil any electronic processing of information. This functionality is made possible by network equipment.

Furthermore, some participants expressed concern about the availability of statistics for this industry, others about the existence of such an industry.

The case was presented that if a choice was made to include manufacturers of fibre optic cable (ISIC 2731) in the ICT sector, it should also include manufacturers of other electronic and electric wires and cables (ISIC 2732) for two reasons: these products perform the same or a similar function and the producers of cable often produce more than one type.

The expert group accepted the arguments to exclude ISIC 2731 from the ICT sector definition.

ICT repair industries

The proposal submitted for discussion in document DSTI/ICCP/IIS(2006)2 included the following industries:

Group	Class	Title
951		Repair of computers and communication equipment
	9511	Repair of computers and peripheral equipment
	9512	Repair of communication equipment
	9521	Repair of consumer electronics
	3313	Repair of electronic and optical equipment

There is broad support for the inclusion of relevant repair activities in the ICT sector. Repair is seen as an activity that enables the function of information processing and communication by electronic means. However, many have expressed concerns about the availability of statistics for these industries, especially those subsumed within industry groups (3-digit categories). For that reason, there is more reluctance for the inclusion of ISIC 9521 – Repair of consumer electronics (one of several industries within industry group 952 – Repair of personal and household goods). There was little support for the inclusion of ISIC 3313 – Repair of electronic and optical equipment. The industries manufacturing these goods are not included in the ICT sector.

The options that emerged for the expert group to consider were:

- Option 1 – Industries 9511 and 9512.
- Option 2 – Industries outlined in option 1 plus 9521.

Although the repair of consumer electronics should logically be included in an ICT repair aggregate (consumer electronics manufacturing is included), the expert group noted the concern of many countries regarding data availability and chose to exclude that industry from the ICT sector.

ICT trade industries

The proposal submitted for discussion in document DSTI/ICCP/IIS(2006)2 included the following industries:

Group	Class	Title
ICT wholesale		
	4651	Wholesale of computers, computer peripheral equipment and software
	4652	Wholesale of electronic and telecommunications equipment and parts
	4659	Wholesale of other machinery and equipment
ICT retail trade		
	4741	Retail sale of computers, peripheral units, software and telecomm. equipment in special stores
	4742	Retail sale of audio and video equipment in specialised stores

There is broad support for the inclusion of relevant wholesale industries in the definition. The rationale for including ICT wholesale in the current definition was that organisations manufacturing ICTs in some OECD countries are often distributors of ICTs in other countries. The argument was that a business such as IBM should be included in the ICT sector in all countries, no matter the relative importance of its various ICT related activities (manufacturing, software development, IT infrastructure

service or IT distribution services). This argument explains the continued support for the inclusion of relevant wholesale activities. There is however little support for the inclusion of class 4659. It is seen as too broadly defined to be a useful component of the definition.

There is no similar argument for ICT retail industries, nor the same level of support for the inclusion of retail activities in the ICT sector. Those that argue for inclusion generally do so for the purpose of consistency. Those against inclusion tend to argue that specialty stores' low share of the total ICT retail market means that statistics are incomplete and therefore somewhat misleading.

The options that emerged for the expert group to consider were:

- Option 1 – Industries 4651 and 4652
- Option 2 – Industries outlined in option 1 plus 4741
- Option 3 – Industries outlined in option 2 plus 4742

The expert group accepted the arguments to exclude specialty retail activities from the ICT sector definition and chose the first option.

ICT services industries

The proposal submitted for discussion in document DSTI/ICCP/IIS(2006)2 included the following industries:

Group	Class	Title
582	5820	Software publishing (only systems software and relevant application software)
Group	Class	ICT PRODUCING SERVICES
DIVISIONS 60		BROADCASTING AND PROGRAMMING ACTIVITIES
	6010	Radio broadcasting
602		Television broadcasting and subscription programming ⁵
	6021	Television broadcasting
	6022	Cable, satellite and other subscription programming
DIVISIONS 61		TELECOMMUNICATIONS
611	6110	Wired telecommunications activities
612	6120	Wireless telecommunications activities
613	6130	Satellite telecommunications activities
619	6190	Other telecommunications activities
DIVISIONS 62		INFORMATION TECHNOLOGY SERVICE ACTIVITIES
	6201	Computer programming activities
	6202	Information technology consultancy activities and computer facilities management activities
	6209	Other information technology service activities
Information service activities		
631		Web portals, data processing, hosting and related activities
	6311	Data processing, hosting and related activities
	6312	Web portals

The inclusion of telecommunications (Division 61), information technology service activities and information service activities (industry group 631) was not questioned. It is widely accepted that the

5. ISIC Rev. 4 has since been modified. Classes 6021 and 6022 have been merged into a single industry.

products of those industries are intended to enable the function of information processing and communication by electronic means.

The discussion focused on software publishing and broadcasting industries, in particular whether these industries, or components thereof, should be classified in the ICT services grouping or in the content and media grouping discussed in the next section.

On different occasions during the ISIC and CPC revision consultation processes, WPIIS and a few national delegations made the point that software publishing (ISIC 5820) comprises at least two distinct components – the publishing of productivity software and the publishing of multimedia software. Ideally the publishing of multimedia software would be classified in the content and media sector. This type of software is designed to inform, educate or entertain. It has more in common with other types of “content products” such as newspapers, television programmes, films or musical recordings. Productivity software on the other hand is designed to facilitate information processing and seems more appropriately classified with technology-centric services such as telecommunications or hosting services.

At this point in time, however, the option to make that distinction is not available because ISIC recognises only one software publishing industry that produces both types of software. Given this constraint, the expert group recommends the inclusion of this industry in ICT services.

The discussion on broadcasting was essentially about its defining characteristic. Broadcasting results from a set of activities including the development of channels and programming (scheduling, commissioning and production) and the transmission of those programmes. Those activities are sometimes vertically integrated. The transmission aspect of broadcasting clearly enables the processing and communication of information, like other activities classified in the ICT services grouping. The development and programming aspects of broadcasting are of a very different nature and have more in common with those of other content industries such as publishing or film production.

The expert group and the majority of delegations consulted are of the opinion that the development of channels and programming is the defining characteristic of establishments classified in ISIC Division 60, Broadcasting and programming activities. This Division is therefore assigned to the content and media sector.

The changing nature of broadcasting, in particular the transmission aspect of broadcasting, and the potential impact of these changes on industry classification was also discussed. The case of IPTV in particular was brought up.

IPTV is a system where a digital television signal is delivered using the Internet protocol. It can take various forms and can be delivered over different types of networks, but it is most commonly commercially supplied over closed network architectures (DSL or VDSL television by telecom operators and digital television by cable operators). Those establishments are typically classified in ISIC Division 61 – Telecommunications. These establishments do not usually engage in the development of channels and programming, only in the transmission of channels and programming developed by others.

The incidental classification of IPTV in ICT services is coherent with the principle of the proposed classification since it is essentially a transmission activity. The same observation applies to mobile TV, another new mode of broadcasting.

However new modes of broadcasting are at an early stage of development. The clear distinction seen today between the transmission activity and the content development activity may well blur in the future, and establishments classified in other industries could join the IPTV market. If and when these changes

materialise, it will be important for statisticians to develop the tools (including classifications) to track the phenomenon.

Content and media sector

The ICT sector is comprised of ICT manufacturing industries, ICT repair industries, ICT trade industries and ICT services industries.

It has been generally accepted that ICT industries thus defined were not the only ones that mattered for industrial policy analysis related to the “information economy”.⁶ Very early on, the WPIIS considered the broader concept of “information economy”, a concept it defined as the combination of the ICT sector and the Content Sector.

The interest in the “content sector” originated in the belief that the rapid transformation and diffusion of information and communication technologies would have a significant impact on industries that create and distribute content (*e.g.* text, audio, video), particularly those that create and distribute content to a wide audience. The structural changes seen since then in the distribution of news, music and video are good examples of those impacts.

As well, the North American Industry Classification System (NAICS) had just introduced an information sector within its structure. That represented a significant departure from the tradition in that it brought together industries that were previously seen as belonging to different sectors of the economy: publishing, motion picture and sound recording, broadcasting and telecommunications, information services and data processing. The common thread between those industries is that they all include establishments primarily engaged in the creation and dissemination (except by wholesale or retail methods) of information and cultural products, or in providing the means to process and disseminate those products.

Despite the strong interest, the WPIIS had debated, but not agreed to, a definition of the content sector.

The situation has evolved since. While the initial version of the North American Industry Classification System used to be the only classification to recognise an information sector, it is now an integral part of the latest ISIC and NACE as well as national classifications (*e.g.* the Japanese classification and, the Australian-New Zealand classification).⁷ Thus there is a growing recognition of the close tie between industries that create and disseminate mass market information and cultural products in their various forms (content industries) and the industries that provide the means to disseminate those products (ICT industries).

6. It was also understood that industry statistics were not sufficient to support the many analytical needs. The group also developed product-based definitions to complement the industry-based definition on the supply-side of the equation and a number of definitions to support indicator development related to the use of ICTs. For a complete discussion of all relevant standards, please see *Guide to Measuring the Information Society* [internal working document: DSTI/ICCP/IIS(2005)6].

7. Although the sector is not identical from one classification to the other, the underlying principles are very similar.

A proposal was submitted for discussion in document DSTI/ICCP/IIS(2006)2. It included the following ISIC Rev. 4 industries:

Group	Class	CONTENT PRINTING AND REPRODUCTION SECTOR
DIVISIONS 18		PRINTING AND REPRODUCTION OF RECORDED MEDIA
181		Printing and service activities related to printing
	1811	Printing
	1812	Service activities related to printing
182	1820	Reproduction of recorded media
Group	Class	PUBLISHING
DIVISIONS 58		PUBLISHING ACTIVITIES
581		Publishing of books, periodicals and other publishing activities
	5811	Book publishing
	5812	Publishing of directories and mailing lists
	5813	Publishing of newspapers, journals and periodicals
	5819	Other publishing activities
582	5820	Software publishing
Group	Class	CONTENT RETAIL SALE AND RENTING SECTOR
CONTENT RETAIL TRADE		
	4761	Retail sale of books, newspapers and stationery
	4762	Retail sale of music and video recordings
CONTENT RENTING		
	7722	Renting of video tapes and disks
Group	Class	AUDIO-VISUAL (MEDIA) SECTOR
DIVISION 59		MOTION PICTURE, VIDEO AND TELEVISION PROGRAMME PRODUCTION
591		Motion picture, video and television programme activities
	5911	Motion picture, video and television programme production activities
	5912	Motion picture, video and television programme post-production activities
	5913	Motion picture, video and television programme distribution activities
	5914	Motion picture projection activities
592	5920	Sound recording and music publishing activities

Though this particular proposal was not retained, there was near unanimous support for the adoption of a content and media sector definition. There is also broad support for a definition that includes all industries of Division J of ISIC (Information and communication) except those that are already included in the ICT sector definition. This results in the following definition:

581		Publishing of books, periodicals and other publishing activities
	5811	Book publishing
	5812	Publishing of directories and mailing lists
	5813	Publishing of newspapers, journals and periodicals
	5819	Other publishing activities
DIVISION 59		MOTION PICTURE, VIDEO AND TELEVISION PROGRAMME PRODUCTION
591		Motion picture, video and television programme activities
	5911	Motion picture, video and television programme production activities
	5912	Motion picture, video and television programme post-production activities
	5913	Motion picture, video and television programme distribution activities
	5914	Motion picture projection activities
592	5920	Sound recording and music publishing activities
DIVISION 60		BROADCASTING AND PROGRAMING ACTIVITIES
	6010	Radio broadcasting
602		Television broadcasting and subscription programming
	6021	Television broadcasting
	6022	Cable, satellite and other subscription programming
632		Other information service activities
	6321	News agency activities
	6329	Other information service activities n.e.c.

The expert group agrees with the adoption of the above definition.

Recommendation

With this paper, the WPIIS recommends that:

- The ICCP Committee approve by written procedure the proposed ICT sector and Content and media sector definitions based on ISIC Rev. 4. It is expected that the adoption of these definitions will stimulate statistical activity and thus provide a source of feedback for ongoing revision.
- The OECD forwards the proposal to the UNSD for inclusion as a special aggregation in the print and soft versions of the next ISIC publication, due for release in 2007.

Implementation

If the proposed definitions are accepted, it will not be possible to implement them immediately. It is likely to take a few years before the collection and publishing of statistics on the basis of ISIC Rev. 4 is widespread.

In order to promote the use of the standard, it is recommended that the OECD initiate the gathering of ICT industry statistics on the basis of ISIC Rev.4 as soon as practicable and that, where possible, statistics for earlier years be restated on the basis of the revised standard.

ANNEX 1

ICT SECTOR DEFINITION

The following general principle (definition) is used to identify ICT economic activities (industries):

“The production (goods and services) of a candidate industry must primarily be intended to fulfil or enable the function of information processing and communication by electronic means, including transmission and display”.

The list of ICT industries (ISIC Rev. 4) that meet this condition is provided in the table below.

ICT manufacturing industries	
2610	Manufacture of electronic components and boards
2620	Manufacture of computers and peripheral equipment
2630	Manufacture of communication equipment
2640	Manufacture of consumer electronics
2680	Manufacture of magnetic and optical media
ICT trade industries	
4651	Wholesale of computers, computer peripheral equipment and software
4652	Wholesale of electronic and telecommunications equipment and parts
ICT services industries	
5820	Software publishing
61	Telecommunications
6110	Wired telecommunications activities
6120	Wireless telecommunications activities
6130	Satellite telecommunications activities
6190	Other telecommunications activities
62	Computer programming, consultancy and related activities
6201	Computer programming activities
6202	Computer consultancy and computer facilities management activities
6209	Other information technology and computer service activities
631	Data processing, hosting and related activities; web portals
6311	Data processing, hosting and related activities
6312	Web portals
951	Repair of computers and communication equipment
9511	Repair of computers and peripheral equipment
9512	Repair of communication equipment

Note: The codes and titles above are those found on the UNSD web site (<http://unstats.un.org/unsd/cr/registry/isic-4.asp>) on 20 November 2006 plus editing corrections known at 25 January 2007. In case of further changes to ISIC, the final official titles will prevail. Differences in titles or codes from those presented earlier in the paper reflect changes from earlier drafts of ISIC Rev. 4.

CONTENT AND MEDIA SECTOR DEFINITION

Content and media industries are engaged in the production, publishing and/or the electronic distribution of content products.

The following general principle (definition) is used for the identification of content or media products:

“Content corresponds to an organised message intended for human beings published in mass communication media and related media activities. The value of such a product to the consumer does not lie in its tangible qualities but in its information, educational, cultural or entertainment content”.

The list of industries (ISIC Rev. 4) that meet this condition is provided in the table below.

581	Publishing of books, periodicals and other publishing activities
5811	Book publishing
5812	Publishing of directories and mailing lists
5813	Publishing of newspapers, journals and periodicals
5819	Other publishing activities
591	Motion picture, video and television programme activities
5911	Motion picture, video and television programme production activities
5912	Motion picture, video and television programme post-production activities
5913	Motion picture, video and television programme distribution activities
5914	Motion picture projection activities
592	Sound recording and music publishing activities
60	Programming and broadcasting activities
601	Radio broadcasting
602	Television programming and broadcasting activities
639	Other information service activities
6391	News agency activities
6399	Other information service activities n.e.c.

Note: The codes and titles above are those found on the UNSD web site (<http://unstats.un.org/unsd/cr/registry/isic-4.asp>) on 20 November 2006 plus editing corrections known at 25 January 2007. In case of further changes to ISIC, the final official titles will prevail. Differences in titles or codes from those presented earlier in the paper reflect changes from earlier drafts of ISIC Rev. 4.