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DIRECTORATE FOR SCIENCE, TECHNOLOGY AND INDUSTRY
COMMITTEE FOR INFORMATION, COMPUTER AND COMMUNICATIONS POLICY

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Working Party on Indicators for the Information Society

A PROPOSED CLASSIFICATION OF ICT GOODS

This paper proposes a classification for information and communication technology (ICT) goods.

Discussions by the Working Party on Indicators for the Information Society (WPIIS) on the topic of an ICT goods classification began in 1998 and have involved a number of national delegations and organisations. A near final proposal was tabled by Canada at the 2003 WPIIS meeting. That proposal was subsequently revised on the basis of inputs from a group of WPIIS reviewers, including Denmark, Finland, France, Sweden, the United Kingdom, the United States and Eurostat. At the 2003 meeting, WPIIS agreed to recommend that the ICCP Committee declassify the ICT goods classification, subject to written comments after the meeting. The proposed classification takes into account those comments as well as the discussion in the Working Party.

The draft has been provided to other interested groups and individuals for information and comment. These include the Statistical Working Party of the Committee on Industry and Business Environment, and the OECD's Statistics Directorate.

The ICCP Committee is invited to declassify this document under the written procedure. Written comments should be sent to the contacts named below by 15 December 2003.

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Introduction

1. The main reason to have a classification of information and communication technology (ICT) goods is to facilitate the construction of internationally comparable indicators on ICT trade and ICT production. Such a classification would also provide a basis to develop internationally comparable indicators for ICT consumption and investment.

2. Another motivation for this work is to provide a basis for refining the definition of the OECD ICT sector as agreed on in 1998 (see Box 1 below). The definition was considered to be a first step in obtaining measurements of the ICT sector [see DSTI/ICCP/IIS(2002)2]. The approach taken by the Working Party on Indicators for the Information Society (WPIIS) was to first define the activities, and subsequently work on a list of ICT goods and services which could complement and help to further refine the activity-based definition.

3. The difficulties in establishing a list of ICT products have been recognised by WPIIS since 1998. These difficulties were related to the rapidly changing character of ICT goods and services, and the dated nature of current standard classifications. The approach taken by WPIIS was to develop a classification of ICT goods first and separately from that of ICT services.[1] This paper summarises the work done on the ICT goods classification, and presents a proposal (see the Annex) for approval and declassification under a written procedure.

Box 1. The current OECD ICT sector definition (originally approved in 1998 and amended slightly in 2002 to reflect ISIC Rev 3.1 changes to Wholesale): ISIC industries included in the ICT sector

Manufacturing:
- 3000 Office, accounting and computing machinery
- 3130 Insulated wire and cable
- 3210 Electronic valves and tubes and other electronic components
- 3220 Television and radio transmitters and apparatus for line telephony and line telegraphy
- 3230 Television and radio receivers, sound or video recording or reproducing apparatus, and associated goods
- 3312 Instruments and appliances for measuring, checking, testing, navigating and other purposes except industrial process equipment
- 3313 Industrial process equipment

Services:
- 5151 Wholesale of computers, computer peripheral equipment and software
- 5152 Wholesale of electronic and telecommunications parts and equipment
- 6420 Telecommunications
- 7123 Renting of office machinery and equipment (including computers)
- 72 Computer and related activities

1. The proposal presented in this paper covers ICT goods only. Ideally the classification should cover both goods and services. This two-stage approach is a matter of pragmatism as the development of a detailed classification of services is not sufficiently advanced to be included here. See DSTI/ICCP/IIS(2000)3; DSTI/ICCP/IIS(2001)3 and DSTI/ICCP/IIS(2002)6 for work on the development of an ICT services classification.

History

4. WPIIS work on an ICT goods classification started in 1998. Several papers were written on this topic by Eurostat and discussed over the 1998-2000 period at meetings of the OECD, as well as at meetings of the UN Voorburg Group on Services Statistics, and Eurostat's Working Group on Statistics for the Information Society. At the 2000 WPIIS meeting, it was agreed to adopt the broad general structure for ICT goods as outlined in the paper presented by Eurostat.[2] The following year, the WPIIS Secretariat[3] built on the Eurostat proposal by considering the contribution to exports of various ICT products. At the 2002 meeting, Canada reacted in writing to the OECD 2002 proposal by suggesting some modifications.[4] At its meeting on 5-6 May 2003, WPIIS discussed a revised list of ICT goods again presented by Canada [DSTI/ICCP/IIS(2003)1]. Comments made at the meeting, as well as written comments received after the meeting from Denmark, Finland, France, Sweden, the United Kingdom, the United States and Eurostat, have been taken into consideration in drafting this final list.[5] The latter was sent to all WPIIS members in October 2003 for final comments but none were received.

Need for an ICT commodity classification

5. Commodity (goods and services) classifications and commodity statistics play an important role in basic economic analysis. The measurement of consumption, domestic production, market size, investments and international trade could all potentially make use of an ICT goods classification which is equivalent to, or broadly concordable with, the classification proposed in this paper. Many requests related to ICT commodities concern one of the following types of data:

- Household expenditures on ICT goods and services.
- Business and government current and capital expenditures on ICT goods and services.
- International trade in ICT goods and services.
- Domestic supply of, and apparent domestic demand for, ICT goods and services.

6. Several OECD publications currently cover some of these topics (*e.g. Measuring the Information Economy 2002* and the *Science, Technology and Industry Scoreboard 2003*) without the benefit of a recognised standard.

The guiding principles

7. The guiding principles elaborated to develop the ICT sector industry-based definition are used here also. This seems appropriate given that these principles emphasise the intended use or functionality of products. The guiding principle for the delineation of the ICT sector leads us to a definition of ICT goods as follows "ICT goods must either be intended to fulfil the function of information processing and

2. DSTI/ICCP/IIS(2000)2.

3. DSTI/ICCP/IIS/RD(2001)4.

4. DSTI/ICCP/IIS/RD(2002)17.

5. The draft list discussed at the May 2003 WPIIS meeting was expressed in terms of the Harmonized System (HS) 1996 classification. The final list as contained in the Annex has been expressed in terms of HS 2002. Only a small number of categories are affected by the change. These are noted in the Annex.

communication by electronic means, including transmission and display, OR use electronic processing to detect, measure and/or record physical phenomena, or to control a physical process".[6]

8. Another guiding principle was to use existing classification systems in order to take advantage of existing data sets and therefore ensure the immediate use of the proposed standard. In this case, the underlying system is the Harmonized System (HS). The HS is the only commodity classification system used on a sufficiently wide basis to support international data comparison. A large number of countries use it to classify export and import of goods, and many countries use it (or a classification derived from or linked to it) to categorise domestic outputs. For that reason, WPIIS supports the proposal to use the HS as the basis of this exercise.

9. The application of the ICT product definition to selection of in-scope HS categories is a somewhat subjective exercise. The fact that the HS is not built on the basis of the functionality of products makes it much more difficult. The distinction between products which fulfil those functions and products that simply embody electronics but fundamentally fulfil other functions is not always obvious.

10. It is possible to adopt a narrow or broad interpretation of the guideline. Here we have chosen a broader interpretation, an approach which is consistent with that adopted to develop the industry definition.

Relationship to other classifications of ICT goods

11. The proposed classification was compared with the World Trade Organization's Information Technology Agreement (ITA) list of information technology products. The Information Technology Agreement was concluded in 1996 and is a tariff-cutting mechanism designed to eliminate duties on those IT products covered by the Agreement.[7] The goal of the Agreement is to enhance market access opportunities for information technology products and so facilitate the development of information industries. There are a number of differences between the ITA list and the proposed classification presented in this paper. These reflect the different purposes of the two lists and can be summarised as follows:

- The ITA list includes products which are not consistent with the OECD definition of an ICT product, for instance goods used to manufacture ICT products, non-electronic equivalents of ICT products, pre-packaged software (see below) and various items of electrical equipment.

- Consistent with the definition of an ICT product, the proposed ICT goods classification includes products not on the ITA list such as various audio and video products, and scientific equipment.

12. It is known that some National Statistical Offices (NSO) have a classification of ICT goods based on the HS. Input from NSOs to the proposed classification was received directly or via WPIIS delegates. Notwithstanding current differences in national classifications, the consensus view of WPIIS delegates is that it is important to have a single agreed classification to enable international comparisons in some or all of the areas suggested in paragraph 5 above.

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6. For a more detailed discussion of the conceptual issues related to the definition of ICT industries, products and services, see "Towards an Information Society Aggregate in ISIC 2007", Marc Aufrant and Jean-Marie Nivlet, UN Voorburg Group on Service Statistics, 17th meeting, Nantes, September 2002.

7. http://www.wto.org/english/tratop_e/inftec_e/inftec_e.htm

The proposal

13. The Annex contains the proposed six-digit HS categories and groups them into the following broad categories: telecommunications equipment, computer and related equipment, electronic components, audio and video equipment, other ICT goods.

14. The structure plays an important role in the usefulness of the classification. In this case, it is believed that the proposed structure allows:

- Grouping of product data into categories that will likely be publishable by most countries.
- An analysis of the basic differences in consumption, production and trade patterns from country to country.
- The development of narrow and broad concepts of ICT products (for instance, some of the analysis currently available focuses on telecommunications and computer equipment only).

15. The proposed list of ICT goods, based on the broad interpretation of the guiding principles, is generally self-explanatory. However, two major coverage issues arise from the proposal: the treatment of software and the inclusion of some types of medical equipment.

Software

16. Software is only partially covered in the HS, where it is treated as recorded media, much like music or video, and is subsumed within several 6-digit HS categories. At that level of the classification, a distinction is made by type of medium rather than by type of content. The most important category regarding software is 852431 - Discs for laser reading systems for reproducing phenomena other than sound or image.

17. The HS has not been designed to classify intangibles like software, but rather to classify tangible goods as they cross a border. Given that software is a core ICT commodity, it needs to be included in a classification of ICT commodities. WPIIS has agreed that an ICT services classification is the best place to classify all software.

Medical equipment

18. The HS has a number of categories to cover different types of medical equipment and some of this equipment seems to meet the conditions for ICT products; that is, its purpose is to detect, measure and/or record physical phenomena. The modern versions of such equipment typically embody electronics and the rapid development of tele-health applications means that such equipment will be, or has been, integrated into communications networks linking geographically dispersed health practitioners.

19. Inclusion of the following 6-digit HS categories is proposed:

- 901811 - Electro-cardiographs
- 901812 - Ultrasonic scanning apparatus
- 901813 - Magnetic resonance imaging apparatus
- 901814 - Scintigraphic apparatus

- 901819 – Other electro-diagnostic apparatus (including apparatus for functional exploratory examination or for checking physiological parameters)
- 902212 - Computed tomography apparatus
- 902213 – Other apparatus based on the use of X-rays, for dental uses
- 902214 – Other apparatus based on the use of X-rays, for medical, surgical or veterinary uses
- 902219 – Other apparatus based on the use of X-rays, for other uses.

The broad "other ICT goods" category

20. This heading covers office machinery and equipment, medical equipment, industrial process control equipment, and instruments and appliances for measuring, checking, testing and navigating. This is perhaps the most difficult area in which to determine whether commodities have ICT characteristics. Although it is clear that most of these instruments and equipment are used to "detect, measure and/or record physical phenomena, or to control a physical process", it is not always clear that they use electronic processing. The approach taken here is to assume that these instruments and equipment would typically embody some electronics. A more thorough analysis may lead to the exclusion of some categories when the classification is reviewed.

The current proposal and its implications for the OECD activity-based definition of the ICT sector

21. ICT sector statistics provide information about statistical units (in this case, enterprises) which are classified to the industrial classes defined as being part of the ICT sector. These statistical units will often produce ICT goods or services solely, sometimes will produce a mixture of ICT and non-ICT goods and services, and on occasions may not produce any ICT goods or services. It is therefore reasonable that a number of ICT sector products are not on the proposed ICT goods classification (based on a concordance between the 1996 HS and ISIC Rev 3). Those which are not ICT goods may be missing because:

- They do not fulfil the function of information processing and communication (*e.g*. typewriters, which are products of the Office, accounting and computing machinery industry).
- They fulfil such a function but not by electronic means (*e.g*. some calculating machines).
- Or they detect, measure, etc. physical phenomena, or control a physical process, but not using electronic processing (*e.g*. some surveying equipment).

Conversely, ICT products can originate from non-ICT industries and it is useful to highlight instances where this is the case. Box 2 below shows the industry of origin of those ICT goods which are not products of the ICT sector (based on a concordance between the 1996 HS and ISIC Rev 3).

Box 2 - Industry of origin of ICT goods which are not products of the ICT sector		
ICT goods grouping (Annex)	**Description**	**Industry of origin (ISIC Rev 3)**
850431/50/90	Transformers <=1 kVA, other inductors, parts	3110
852311/12/13/20/30/90	Prepared unrecorded media for sound recording or similar etc	2429
852460	Cards incorporating a magnetic stripe (recorded)	2213
853110	Burglar or fire alarms and similar apparatus	3190
901041/42/49	Apparatus for the projection or drawing of circuit patterns on sensitised semiconductor materials	3320
901811/12/13/14/19	Electro-diagnostic apparatus (including apparatus for functional exploratory examination or for checking physiological parameters)	3311
902212/13/14/19	Apparatus based on the use of X-rays, whether or not for medical, surgical, dental or veterinary uses, including radiography or radiotherapy apparatus	3311

Conclusion

22. For the reasons outlined in this paper, it is very important to have an internationally agreed upon classification of ICT commodities. This document proposes a classification for ICT goods, with a proposal for an ICT services classification to be put at a later date. It is expected that the current proposal will evolve over time as experiences of member countries provide a better knowledge base for revision. WPIIS recommends that the ICCP Committee approve declassification of the ICT goods classification in its present form, in the expectation that it will stimulate statistical activity and thus provide a source of feedback for ongoing revision.

ANNEX

ICT Goods Classification (by broad category) (1)

HS 2002	HS 1996	Telecommunications equipment	Notes
851711	851711	Line telephone sets with cordless handsets	
851719	851719	Other telephone sets, video phones	
851721	851721	Facsimile machines	
851722	851722	Teleprinters	
851730	851730	Telephonic or telegraphic switching apparatus	
851750	851750	Other apparatus, for carrier-current line systems or for digital line systems	
851780	851780	Other electrical apparatus for line telephony or line telegraphy	
851790	851790	Parts for other electrical apparatus for line telephony or line telegraphy	
852020	852020	Telephone answering machines	
852510	852510	Transmission apparatus for radio-telephony, radio-telegraphy, radio-broadcasting or television not incorporating reception apparatus	
852520	852520	Transmission apparatus for radio-telephony, radio-telegraphy, radio-broadcasting or television incorporating reception apparatus	
852530	852530	Television cameras	
852610	852610	Radar apparatus	
852790	852790	Reception apparatus for radio-telephony, radio-telegraphy or radio-broadcasting, whether or not combined, in the same housing, with sound recording or reproducing apparatus or a clock, n.e.s	
852910	852910	Aerials and aerial reflectors of all kinds; parts suitable for use therewith	
853110	853110	Burglar or fire alarms and similar apparatus	(2)
854420	854420	Co-axial cable and other co-axial electric conductors	
854470	854470	Optical fibre cables	
		Computer and related equipment	
847110	847110	Analogue or hybrid automatic data processing machines	
847130	847130	Portable digital automatic data processing machines, weighing not more than 10 kg, consisting of at least a central processing unit, a keyboard and a display	
847141	847141	Digital automatic data processing machines comprising in the same housing at least a central processing unit and an input and output unit, whether or not combined	
847149	847149	Other digital automatic data processing machines, presented in the form of systems	
847150	847150	Digital processing units other than those of subheadings 8471.41 and 8471.49, whether or not containing in the same housing one or two of the following types of unit : storage units, input units, output units	
847160	847160	Automatic data processing machines, input or output units, whether or not containing storage units in the same housing	
847170	847170	Automatic data processing machines, storage units	
847180	847180	Other units of automatic data processing machines	
847190	847190	Magnetic or optical readers, machines for transcribing data onto data media in coded form and machines for processing such data, not elsewhere specified or included	
847330	847330	Parts and accessories of the machines of heading No. 84.71	

Electronic components

850431	850431	Electrical transformers having a power handling capacity not exceeding 1 kVA	(2)
850450	850450	Inductors	(2)
850490	850490	Parts of: electrical transformers, static converters (for example, rectifiers) and inductors	(2)
852330	852330	Cards incorporating a magnetic stripe, unrecorded	(2)
852460	852460	Cards incorporating a magnetic stripe, recorded	(2)
852990	852990	Parts suitable for use solely or principally with the apparatus of headings Nos. 85.25 to 85.28 except aerials and aerials reflectors	
853221	853221	Capacitors, fixed, tantalum having a reactive power handling capacity of less than 0.5 kvar	
853224	853224	Capacitors, fixed, ceramic dielectric, multilayer having a reactive power handling capacity of less than 0.5 kvar	
853230	853230	Variable or adjustable (pre-set) capacitors	
853310	853310	Fixed carbon resistors, composition or film types	
853321	853321	Electrical resistors, fixed, (including rheostats and potentiometers), other than heating resistors, for a power handling capacity <= 20 W	
853329	853329	Electrical resistors, fixed, (including rheostats and potentiometers), other than heating resistors, n.e.s..	
853331	853331	Wirewound variable resistors, for a power handling capacity <= 20 W	
853339	853339	Wirewound variable resistors, for a power handling capacity <= 20 W	
853340	853340	Other variable resistors, including rheostats and potentiometers	
853390	853390	Parts for electrical resistors (including rheostats and potentiometers), other than heating resistors	
853400	853400	Printed circuits	
854011	854011	Cathode-ray television picture tubes, including video monitor tubes, colour	
854012	854012	Cathode-ray television picture tubes, including video monitor tubes, black and white or other monochrome	
854020	854020	Television camera tubes; image converters and intensifiers; other photo-cathode tubes	
854040	854040	Data/graphic display tubes, colour, with a phosphor dot screen pitch smaller than 0.4 mm	
854050	854050	Data/graphic display tubes, black and white or other monochrome	
854060	854060	Other cathode-ray tubes	
854071	854071	Microwave tubes, magnetrons, excluding grid-controlled tubes	
854072	854072	Microwave tubes - klystrons, excluding grid-controlled tubes	
854079	854079	Microwave tubes, other, excluding grid-controlled tubes	
854081	854081	Receiver or amplifier valves and tubes	
854089	854089	Valve and tubes, n.e.s.	
854091	854091	Parts of cathode-ray tubes	
854099	854099	Parts of thermionic or photo-cathode, valve and tubes, other than cathode-ray tubes	
854110	854110	Diodes, other than photosensitive or light emitting diodes	
854121	854121	Transistors, other than photosensitive, dissipation rate < 1 W	
854129	854129	Transistors, other than photosensitive transistors, n.e.s.	
854130	854130	Thyristors, diacs and triacs, other than photosensitive devices	
854140	854140	Photosensitive semiconductor devices, including photovoltaic cells whether or not assembled in modules or made up into panels; light emitting diodes	
854150	854150	Other semiconductor devices	
854160	854160	Mounted piezo-electric crystals	
854190	854190	Parts for semiconductor devices	

HS 2002	HS 1996	Electronic components (continued)	Notes
854210	854212	Cards incorporating electronic integrated circuits ("smart" cards)	(3)
	854213		
854221	854214	Digital monolitihic integrated circuits	(3)
	854219		
854229	854230	Other monolithic integrated circuits	(3)
854260	854240	Hybrid integrated circuits	(3)
854270	854250	Electronic microassemblies	(3)
854290	854290	Parts for electronic integrated circuits and microassemblies	
		Audio and video equipment	
851810	851810	Microphones and stands therefor	
851821	851821	Single loudspeakers, mounted in their enclosures	
851822	851822	Multiple loudspeakers, mounted in the same enclosure	
851829	851829	Other loudspeakers, n.e.s	
851830	851830	Headphones and earphones, whether or not combined with a microphone, and sets consisting of a microphone and one or more loudspeakers	
851840	851840	Audio-frequency electric amplifiers	
851850	851850	Electric sound amplifier sets	
851890	851890	Parts of microphones, loudspeakers, headphones, earphones, combined microphone/loudspeaker sets, audio-frequency electric amplifiers and electric sound amplifier sets	
851910	851910	Coin- or disc-operated record-players	
851921	851921	Record-players, without loudspeaker	
851929	851929	Record-players, n.e.s.	
851931	851931	Turntables with automatic record changing mechanism	
851939	851939	Turntables, n.e.s.	
851940	851940	Transcribing machines	
851992	851992	Pocket-size cassette-players	
851993	851993	Other sound reproducing apparatus, cassette-type	
851999	851999	Sound reproducing apparatus, not incorporating a sound recording device, n.e.s.	
852010	852010	Dictating machines not capable of operating without an external source of power	
852032	852032	Other magnetic tape recorders incorporating sound reproducing apparatus, Digital audio type	
852033	852033	Other magnetic tape recorders incorporating sound reproducing apparatus, cassette-type	
852039	852039	Other magnetic tape recorders incorporating sound reproducing apparatus	
852090	852090	Magnetic tape recorders and other sound recording apparatus, whether or not incorporating a sound reproducing device, n.e.s.	
852110	852110	Video recording or reproducing apparatus, whether or not incorporating a video tuner - magnetic tape-type	
852190	852190	Video recording or reproducing apparatus, whether or not incorporating a video tuner - other type	
852210	852210	Parts and accessories suitable for use solely or principally with the apparatus of headings Nos. 85.19 to 85.21 - pick-up cartridges	
852290	852290	Parts and accessories suitable for use solely or principally with the apparatus of headings Nos. 85.19 to 85.21 - other	
852311	852311	Magnetic tapes, unrecorded, width <= 4 mm (1/6 in.)	(2)
852312	852312	Magnetic tapes, unrecorded, width > 4 mm (1/6 in.) but <= 6.5 mm (1/4 in.)	(2)

HS 2002	HS 1996	Audio and video equipment (continued)	Notes
852313	852313	Magnetic tapes, unrecorded, width > 6.5 mm (1/4 in.)	(2)
852320	852320	Magnetic discs, unrecorded	(2)
852390	852390	Other prepared unrecorded media for sound recording or similar recording of other phenomena, other than products of Chapter 37	(2)
852540	852540	Still image video cameras and other video camera recorders, digital cameras	
852712	852712	Pocket-size radio cassette-players capable of operating without an external source of power	
852713	852713	Radio-broadcast receivers, capable of operating without an external source of power, combined with sound recording or reproducing apparatus	
852719	852719	Other radio-broadcast receivers, capable of operating without an external source of power, not combined with sound recording or reproducing apparatus	
852721	852721	Radio-broadcast receivers with sound recording or reproducing apparatus, for motor vehicles, requiring external source of power	
852729	852729	Other radio-broadcast receivers for motor vehicles, not combined with sound recording or reproducing apparatus	
852731	852731	Other radio-broadcast receivers, including apparatus capable of receiving also radio-telephony or radio-telegraphy, combined with sound recording or reproducing apparatus	
852732	852732	Other radio-broadcast receivers, including apparatus capable of receiving also radio-telephony or radio-telegraphy, not combined with sound recording or reproducing apparatus but combined with a clock	
852739	852739	Other radio-broadcast receivers, including apparatus capable of receiving radio-telephony or radio-telegraphy, n.e.s.	
852812	852812	Reception apparatus for television, whether or not incorporating radio-broadcast receivers or sound or video recording or reproducing apparatus, colour	
852813	852813	Reception apparatus for television, whether or not incorporating radio-broadcast receivers or sound or video recording or reproducing apparatus, black and white or other monochrome	
852821	852821	Video monitors, colour	
852822	852822	Video monitors, black and white or other monochrome	
852830	852830	Video projectors	
		Other ICT goods	
846911	846911	Word-processing machines	
847010	847010	Electronic calculators capable of operation without an external source of electric power and pocket-size data recording, reproducing and displaying machines with calculating functions	
847021	847021	Other electronic calculating machines incorporating a printing device	
847029	847029	Other electronic calculating machines	
847040	847040	Accounting machines	
847050	847050	Cash registers	
847310	847310	Parts and accessories (other than covers, carrying cases and the like) suitable for use solely or principally with machines of heading No. 84.69	
847321	847321	Parts and accessories of the electronic calculating machines of subheading No. 8470.10, 8470.21 or 8470.29	
847350	847350	Parts and accessories equally suitable for use with machines of two or more of the headings Nos. 84.69 to 84.72	
852691	852691	Radio navigational aid apparatus	
852692	852692	Radio remote control apparatus	
901041	901041	Apparatus for the projection or drawing of circuit patterns on sensitised semiconductor materials - direct write-on-wafer apparatus	(2)
901042	901042	Apparatus for the projection or drawing of circuit patterns on sensitised semiconductor materials - step and repeat aligners	(2)
901049	901049	Apparatus for the projection or drawing of circuit patterns on sensitised semiconductor materials - other	(2)
901410	901410	Direction finding compasses	
901420	901420	Instruments and appliances for aeronautical or space navigation (other than compasses)	
901480	901480	Other navigational instruments and appliances	

HS 2002	HS 1996	Other ICT goods (continued)	Notes
901490	901490	Parts and accessories of direction finding compasses, other navigational instruments and appliances	
901540	901540	Photogrammetrical surveying instruments and appliances	
901580	901580	Other surveying instruments and appliances	
901811	901811	Electro-cardiographs	(2)
901812	901812	Ultrasonic scanning apparatus	(2)
901813	901813	Magnetic resonance imaging apparatus	(2)
901814	901814	Scintigraphic apparatus	(2)
901819	901819	Other electro-diagnostic apparatus (including apparatus for functional exploratory examination or for checking physiological parameters)	(2)
902212	902212	Computed tomography apparatus	(2)
902213	902213	Other apparatus based on the use of X-rays, for dental uses	(2)
902214	902214	Other apparatus based on the use of X-rays, for medical, surgical or veterinary uses	(2)
902219	902219	Other apparatus based on the use of X-rays, for other uses	(2)
902410	902410	Machines and appliances for testing the hardness, strength, compressibility, elasticity or other mechanical properties of materials, metals	
902480	902480	Other machines and appliances for testing the hardness, strength, compressibility, elasticity or other mechanical properties of materials	
902490	902490	Parts and accessories for machines and appliances for testing the hardness, strength, compressibility, elasticity or other mechanical properties of materials	
902620	902620	Instruments and apparatus for measuring or checking the pressure of liquids or gases, excluding instruments and apparatus of heading Nos. 9014, 9015, 9028 or 9032	
902710	902710	Instruments and apparatus for physical or chemical analysis, gas or smoke analysis apparatus	
902730	902730	Spectrometers, spectrophotometers and spectrographs using optical radiations (UV, visible, IR)	
902740	902740	Instruments and apparatus for measuring or checking quantities of heat, sound or light, exposure meters	
902750	902750	Other instruments and apparatus using optical radiations (UV, visible, IR)	
902780	902780	Other instruments and apparatus for physical or chemical analysis	
902810	902810	Gas meters	
902820	902820	Liquid meters	
902830	902830	Electricity meters	
902890	902890	Parts for gas, liquid or electricity supply or production meters, including calibrating meters therefor	
902910	902910	Revolution counters, production counters, taximeters, mileometers, pedometers and the like	
902920	902920	Speed indicators and tachometers; stroboscopes	
902990	902990	Parts and accessories for revolution counters, production counters, taximeters, mileometers, pedometers and the like; speed indicators and tachometers, other than those of heading No. 90.14 or 90.15; stroboscopes	
903010	903010	Instruments and apparatus for measuring or detecting ionising radiations	
903020	903020	Cathode-ray oscilloscopes and cathode-ray oscillographs	
903031	903031	Multimeters without a recording device	
903039	903039	Other instruments and apparatus for measuring or checking voltage, current, etc. without a recording device	
903040	903040	Other instruments and apparatus, specially designed for telecommunications (for example, cross-talk meters, gain measuring instruments, distortion factor meters, psophometers)	
903082	903082	Other instruments for measuring or checking semiconductor wafers or devices	
903083	903083	Other instruments for measuring or checking semiconductor wafers or devices with a recording device	
903110	903110	Measuring or checking instruments, appliances and machines n.e.s, machines for balancing mechanical parts	

HS 2002	HS 1996	Other ICT goods (continued)	Notes
903120	903120	Measuring or checking instruments, appliances and machines n.e.s, test benches	
903130	903130	Measuring or checking instruments, appliances and machines n.e.s, profile projectors	
903141	903141	Other optical instruments and appliances, for inspecting semiconductor wafers or devices or for inspecting photomasks or reticles used in manufacturing semiconductor devices	
903180	903180	Other measuring or checking instruments, appliances and machines, n.e.s.	
903190	903190	Parts and accessories for measuring or checking instruments, appliances and machines, n.e.s.	
903210	903210	Thermostats	
903220	903220	Manostats	
903289	903289	Other automatic regulating or controlling instruments and apparatus, n.e.s.	
903290	903290	Parts and accessories for automatic regulating or controlling instruments and apparatus	

Notes

(1) Titles are according to the 2002 Harmonized System. Some have been changed slightly in the interests of clarity and space.

(2) Industry of origin not in the OECD ICT sector.

(3) HS 1996 and HS 2002 codes differ.