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INQUIRY INTO NATIONAL PRACTICES IN THE MEASUREMENT OF SOFTWARE IN THE NATIONAL ACCOUNTS AND IN INTERNATIONAL TRADE

QUESTIONNAIRE - SOFTWARE

Paper prepared by Statistics Directorate - OECD, France

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INQUIRY INTO NATIONAL PRACTICES IN THE MEASUREMENT OF SOFTWARE IN THE NATIONAL ACCOUNTS AND IN INTERNATIONAL TRADE

NOTE BY THE SECRETARIAT

1. In October the OECD Task Force on Measurement of Software in the National Accounts had its first meeting. A parallel Eurostat Task Force also met a few days later. They agreed to send out to countries a joint questionnaire on measurement practices. The questionnaire, which is attached at Annex 1, was circulated to countries participating¹ in the Task Forces on 30 October.
2. A short trade measurement issues document that was discussed at the Task Force is attached at Annex 2. A broader view of the issues that led to the creation of the Task Force is set out in STD/NA(2001)14 on OLIS.
3. A report of the OECD Task Force's findings is planned for mid-2002 (first draft January 2002).
4. The national accountants concerns about trade was expressed as follows:

“How is the transfer of intellectual property between countries treated?

Is the trade recorded as a sale of a software asset original (exports) in one country and imports of an asset in the other?

Or are royalty payments recorded, as imports and intermediate use of services?

If transactions are between parent companies and subsidiaries, are these flows recorded? Can the use of transfer price taxes help to measure these flows?

Does this mean that each time new (country) intellectual property rights are created a new asset is considered to have been created? Or should the original asset be considered as being valued inclusive of these ‘new’ assets? In which case, should exports of intellectual property be considered as a (part) sale of a pre-existing asset”

5. The attention of delegates is drawn in particular to **Section 3 Part I of the questionnaire, which concerns** international trade in software.
6. **Delegates are invited to consider and discuss this part of the questionnaire, comment on its approach, provide any relevant information on their own country practices, practical measurement issues they face in regards of trade in software and any relevant available data or estimates.**

¹ participating countries are US, Canada, Japan, Netherlands, New Zealand, Norway, UK, France, Greece, Israel, Sweden and Spain

ANNEX 1

QUESTIONNAIRE – SOFTWARE

OECD/Eurostat task forces – OCTOBER 2001

**PLEASE POST RESPONSES ON THE ELECTRONIC DISCUSSION GROUP
OR SEND DIRECTLY TO: nadim.ahmad@oecd.org**

BEFORE NOVEMBER 30

QUESTIONNAIRE ON SOFTWARE

Introduction

1. The latest System of National Accounts (SNA) 1993 introduced a change in the treatment of software from its treatment in the 1968 SNA. It stipulates that software should be treated as an intangible fixed asset if it is to be used in production for more than one year. Prior to this change only software integrated with hardware was included as investment. Incorporating this change into the National Accounts has proven to be difficult, and raised a number of issues relating to concepts and measurement. This point is not merely academic, since empirical evidence suggests that differences in interpretation of concepts and measurement assumptions can impact significantly on software estimates per se. This Questionnaire is designed to determine the extent of differences in interpretation across countries.
2. On receipt of the responses of National Experts, the OECD and Eurostat will produce a first set of tentative recommendations by the end of January 2002.

Background

3. It is clear that countries use different methods to estimate software. These methods can be broadly described as 'Demand' based or 'Supply' based. In practice it is recognised that this is a simplistic definition and that countries may in fact use a combination of the two methods. For example one might consider balancing through a supply-use framework to be a combination of both methods. This questionnaire necessarily simplifies issues so that only 'Supply' or 'Demand' approaches exist. The Supply approach in this instance is strictly defined as an approach which estimates investment on the basis that some products can be defined as investment, and that a pre-determined proportion (which may be 100%) of expenditure by businesses or government on these products is necessarily investment; without using business survey information that explicitly requests investment estimates. Demand based methods in this context only refer to approaches that use directly collected Demand based information from businesses and government and where adjustments are only considered to relate to achieving total product Supply-Use balances. Any adjustments that shift expenditure from intermediate consumption to investment or vice-versa are considered to be relevant to the Supply-method.

Objective

4. Two Task-Forces have been set-up, one by the OECD and one by Eurostat, to investigate the difficulties that software-measurement poses. The objective of both Task Forces is to establish recommended procedures and best practice for software measurement and to provide an answer, and conceptual framework, to the question: What is software investment? Looking at what has become known as the investment-ratio (the ratio of investment to total demand by the corporate and government sectors on CPA product 72, the main output of ISIC72, NACE 72) it is clear that there is

no consistent definition on measurement or concepts. The ratio differs considerably across countries, and certainly by too much to be explained by real economic differences. Looked at in this way the final outcome of both Task Forces might be described as producing solutions, or recommendations, that in practice bring these ratios closer together, in so far as they can be explained by real differences in economic activity.

5. The objective of the questionnaire is threefold:
 - 1) To obtain your views on the exact definition of investment in software (Section 1)
 - 2) To obtain two sets of estimates: one using a supply method and the other a demand method (Section 2)
 - 3) To obtain additional information on related issues (deflation, external trade, etc) (Section 3)
6. The Questionnaire is an attempt to cover all important measurement and conceptual issues. However it cannot claim to be exhaustive. Respondents are asked to provide all supplementary comments or remarks on additional sheets of paper with the respective question/ issue and table clearly marked.

SECTION 1: WHAT IS SOFTWARE-INVESTMENT?

SOFTWARE IN THE SNA/ESA

SNA93 (par 10.92-10.93) states that computer software and large databases to be used in production for more than one year are recorded as intangible fixed assets (AN1122).

SNA (p.307) defines the produced, intangible fixed asset computer software (AN1122) as follows: "computer programs, program descriptions and supporting material for both systems and applications software. Included are purchased software and software developed on own account, if the expenditure is large. Large expenditures on the purchase, development or extension of computer databases that are expected to be used for more than one year, whether marketed or not, are also included."

As with all investment however a distinction needs to be made between new investment and maintenance expenditure. SNA/ESA define maintenance in this context as:

SNA (6.157 to 6.162): major renovations, reconstruction or enlargements of existing fixed assets...must be treated as capital formation. They are distinguished by: (1) the decision of investment...is deliberate and not dictated by the condition of the asset; (2) they increase the performance or capacity or extend previously expected service lives.

(ESA95, par 3.107-3.108) Improvement of existing fixed assets that go well beyond the requirements of ordinary maintenance and repairs are included in gross fixed capital formation.

Discussions at the inaugural meeting of the OECD Task Force on software, (Paris 12 October), confirmed the view that of the many problems faced by National Accountants in measuring software, the lack of an explicit definition for software-investment per se is significant. In particular it was recognised that differences in classification systems and nomenclature have a considerable impact on whether software is capitalised or not. The following table attempts to establish how significant these differences are across countries. Included in the first column are examples of software descriptions used in practice across countries. Please indicate with a cross what you consider the most likely treatment of the software description should be, if possible please also include a reference to a 4 or 6 digit product classification group. If you use different software descriptions please also include these in the table below. Assume that no products are embedded or bundled, and that all transactions concern the corporate or government and NPISH sector only.

Table A: Software Investment - Nomenclature			
Type of software		Treatment	
Description	Product Classification Code	Software investment	Intermediate
1: Hardware consultancy			
2: Programming services			
3: Software design services			
4: Software installation inc assistance			
5: Software Training			
6: Advice in designing systems			
7: Software support services			
8: Software documentation			
9: Software Consultancy			
10: Software analysis			
11; Purchases of less than 500 Euros, \$500			
12: Supply of Databases			
13: Construction of new database			
14: Updating of database			
15: Maintenance of Software			
16: Repair of Software			
17: Expenditure on 'Euro' conversion software			
18: Y2K expenditure			

Please provide supplementary information for each section of the table above in the format of the table below as a supplementary sheet, if you feel this would be useful.

TABLE A2: Software Investment - Nomenclature	
Row number	Supplementary notes

In addition it is clear that some conceptual differences exist between countries. In the table below please reply yes 'Y' if you consider the following headings/issues to be investment and no 'N' otherwise, again, only consider purchases by the corporate and government sector.

TABLE B: Conceptual Issues regarding the definition of software investment	Investment Y/N
19: Own account Software produced by non-professional staff	
20: Own account Software produced by professional staff	
21: Unsuccessful own-account expenditure on software	
22: Acquisition of intellectual property rights	
23: Royalty payments for right to reproduce only, and no transfer of intellectual property rights. E.g Purchases by hardware manufacturers for software to be bundled	
24: License payments for use of less than one year	
25: License payments for use of more than one year	
26: Rental of software	
27: Production of games software	
28: Sales of games software	
29: Updates of pre-existing software	
30: Acquisition of data for databases	
31: Own-account production of large databases using publicly available data	

Please provide supplementary information for each row of the table above in the table below, if you feel this would be useful. In particular if any of the issues above can be categorised as investment and intermediate consumption depending on specific conditions, please describe these in detail.

In addition it would be useful to know the answer to the following questions:

32: What is the exact question used on the annual business survey form for purchased software? If separate surveys are used for investment and intermediate consumption please provide an answer for both. If only one survey is used please describe the questions, as appropriate, that distinguish intermediate consumption from investment purchases. Please provide information on non-annual surveys if appropriate Please provide additional similar information on non-annual surveys if the questions differ.

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33: Are any supplementary questions asked on annual business surveys for purchased software to distinguish between purchases of software intended for on-selling (such as bundled software) and software purchases intended for use? Please provide additional similar information on non-annual surveys if the questions differ.

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34: What is the exact Question used in annual production surveys for output regarding the output of software or/and the computer services product? Please provide additional similar information on non-annual surveys if the questions differ.

35: How are estimates of software investment and intermediate consumption by government collected?

A significant difference across countries occurs in the case of licenses. Some countries treat license payments as intermediate consumption, others view license payments as being little different from software acquisition, on the grounds that software depreciates rapidly.

36: Should purchases/sales of license payments be recorded as a separate heading and not software in the national accounts? Please describe below, giving reasons for your answer.

37: Are sales of licenses for software treated as production of software or production of software licenses/royalties (if the latter, how are these recorded, please provide the 4 digit product classification if possible).

38: What is your definition of a database?

39: What conditions need to be satisfied for purchases of a database to be recorded as investment?

SECTION 2

OFFICIAL AND ALTERNATIVE ESTIMATES OF ANNUAL CURRENT PRICE DATA

This section is divided into five parts. The object of the first is to collect your official and actual estimates of software-investment. Following sections are designed to obtain alternative estimates of investment using the Supply or Demand method. Please indicate the main difficulties encountered at each step if appropriate.

Part 1: actual official data, and impact of that data on GDP

Report the most detailed official current price data on software for the most recent year where all relevant survey information is available, for each product classification, **using the most detailed classification available** in the accounts (for example giving separate information for all 4 digit CPA codes) if possible distinguishing between pre-packaged, custom and own account software.

EU countries, for example, are asked to produce the table for all 4 digit groups within CPA72 (e.g. CPA72.10 Hardware consultancy; CPA72.20 Software consultancy and supply services etc.), as illustrated below. Whereas the US should provide data for all 4 digit groups within US SIC87 737 (e.g. 7371 Computer programming services, 7372 software publishers etc). Other countries are asked to use similar detailed classifications that cover the entirety of the computer services product.

Table C

Actual Official Commodity flow Data for Computer related services (e.g. CPA72 (*))

Year:..... Current prices, Unit:..... (millions of ????)

Supply and Demand of Product	Total computer services product	Of Which (*)					
		CPA72.1	CPA72.2	CPA72.3	CPA72.4	CPA72.5	CPA72.6
Domestic production							
Imports							
Margins and taxes							
Total supply							
Intermediate consumption							
Household expenditure							
GFCF							
Exports							
Change to Inventories, including work-in progress							
Other							
<i>Investment of which (*)</i>							
<i>Pre-recorded software</i>							
<i>Customised software</i>							
<i>Own-account software</i>							

(*) use your own detailed classification, if not relevant

Estimate the change made to the level of GDP. (This should take into account the impact of changes made to other parts of the accounts if relevant, for example, any adjustments to correct for software already capitalised, incorrectly, under other investment). The table below describes one approach used to calculate this change based on a table used by European Union Member Countries in the “GNP Committee”. Other methods can be used.

Table D
 Estimation of impact of change to GDP from SNA68 to SNA93

Market producers	
Amount of purchased software previously assigned to intermediate consumption and now assigned to GFCF	
(+) Amount of own account production of software *	
Non market producers	
(+) Amount of consumption of fixed capital related to software	
(+ or -) Other impacts on GDP	
Total impact	
GDP	

* Assuming no intermediate consumption in own-account production.

Part II: “Supply” method: estimate of domestic supply of purchased software

Compile, for the same year, an estimate of domestic production of software from the point of view of all software producers, using for example business turnover statistics originating from computer services producers; excluding all own-account production. Specify if the available data are on a product or an industry basis.

If the information is produced using industry data specify the amount and proportion of production that is allocated to products (100% if no working assumption is used).

For each product identify separately domestic production. Determine for each, the proportion of software that enters final demand, at the same time separately identifying intermediate sales to software producers. **Use the most detailed classification available.**

Table E
 “Supply” method: estimate of domestic supply

Industries related to computer services				
Classification code	Title	Proportion of industry output allocated to product (if appropriate)	Estimate of total /production/ in current prices	Estimate of total production excluding intermediate sales between units classified as software producers
.....	
.....	

Table F below asks you to allocate total available domestic supply of software excluding intermediate sales between software producers (Column 5 in Table E above) to other demand components. Please complete this table for each classification. This is a supply method and so in principle changes in inventories/work-in-progress are assumed to be zero. If this is not the case for your country please include these estimates within GFCF estimates and explain why, and how, estimates for work-in-progress have been calculated.

Table F
Adjustments to supply of domestic software

Total value of domestic production (Total in Table 3 column 5)	
(-) Exclusion of software embedded/bundled with other equipment (intermediate consumption)	
(-) Exclusion of other intermediate consumption	
(-) Estimate of net exports	
(-) Estimate of household consumption	
(+ or -) Other adjustments	
(=) GFCF in software, "supply" method	

40: For each classification, if the proportion of software allocated to GFCF is not 100% of all domestic supply (excluding household consumption and software to be sold-on), in other words if an entry exists for other intermediate consumption, please explain below what information/assumption this allocation has been based on.

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41: Please provide details on the methods/data used to determine those industries that purchase software intended for on-selling as either bundling, or embedding. If possible describe industries using a standard industrial classification.

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Because purchasers of software record a substantial part of purchases as current expenditure, estimate, if relevant the adjustment made (or that would have to be made) to the value of corporate profits obtained through business statistics in the income approach to GDP:

Table G
Income approach: adjustment to corporate profit

National accounts estimate of GFCF in software for all corporated and unincorporated enterprises.	
Business estimate of GFCF in software	
Adjustment to be made to corporate profits in the income approach to GDP	

Part III: "Demand" method: estimation of capitalised software, using reports from business surveys, including government and non-profit making institutions.

Use business survey data or administrative data, if possible covering the same year to derive an estimate of software capitalised by the corporate and government sectors. In principle this estimate should include capitalized own-account software. If possible, separate the latter. In addition it would be desirable if recorded capitalised software could be split into detailed product components, if possible, using standard

product classifications or other product descriptions. For most countries it will not be possible to do this beyond a split that identifies investment as either pre-recorded software or customised software, or indeed just software.

Table H
Demand method: capitalised software

Business sector (corporated and unincorporated enterprises)	Classification/Product description	Value
Reported capitalised software		
Of which, own account software		
Government and non-profit institutions		
Reported capitalised software		
Of which, own account software		

Part IV: estimate of expenditures in software as reported by enterprises and other organizations, including government and non-profit institutions

Use business survey data, if possible covering the same year, to derive an *estimate* of total expenditures in software as reported by the corporate sector and government, again, as above, using the most detailed classifications possible/product descriptions available. Specify if this estimate includes own account software. If possible, estimate it.

Table I
“Demand” method: purchased software

Business sector (corporated and unincorporated enterprises)	Classification/Product description	Value
Reported expenditures in software		
Of which, “expenditures” in own account software		
Government and non-profit institutions		
Reported expenditures in software		
Of which, “expenditures” in own account software		

Part V: macro-estimate of own account software

Evaluate the value of own account software on the basis of costs, estimated at a macro level. The recommended method: number of persons engaged in software production, average compensation, plus estimate of intermediate consumption and consumption of fixed capital, plus adjustments.

Table J
Macro estimate of own account software

Number of person engaged in software production	
* Average compensation	
= Compensation cost of producers of own account software	
(+) Other-costs (intermediate consumption, consumption of fixed capital)	
(-) Adjustment 1: exclude cost of production linked to software sales	
(-) Adjustment 2: exclude costs linked to other activities (repair, management, other...) than software production	
(+ or -) Other adjustments	
Macro estimate of own-account software	

42: Please indicate below the assumptions used to determine how the numbers of 'persons engaged in software production' has been estimated, including, if appropriate, any assumptions/details on the industries in which they can be found (giving details on a 4 or 6 digit classification if possible).

43: Please also state whether any stock-options have been included in compensation of employees, and if so how these are calculated.

44: Please describe in detail the nature of the assumptions used in Adjustment 2.

SECTION 3

Part I: International Trade in Software

1. On the basis of international transaction reporting systems, merchandise trade data, enterprise surveys of international trade in services and any other means **evaluate or estimate**, if possible covering the same year, the following trade items. There is no separate identification of software, particularly for trade in services, and broad estimates would be appreciated for breakdowns beyond the current international classifications, where indicated. A brief explanation of the basis of your estimates would be helpful.

Table L

As above please indicate Year:..... Current prices, Unit:..... (millions of ????)

Goods

International trade in software goods

HS Code 1996	Description	Imports	exports
852431			
852439			
852440			
852491			
852499			
Total of above			

Services

International trade in services

Balance of payments code	Description	Total	Total software	Pre-packaged software	Custom software	Originals
200	Imports of services					
200	Exports of services					
262	Imports of Computer and information services					
262	Exports of Computer and information services					
263	Imports of Computer services					
263	Exports of Computer services					
266	Imports (debits) of royalties and license fees					
266	Exports (credits) of royalties and license fees					

On-line Delivered Software

2. At present there are no agreed international guidelines for recording international transactions in on-line delivered (or use on-line of software) in the balance of payments.

45: Do you have any national guidelines in the recording of such transactions?

46: Do you have any empirical evidence or estimates on the value of such trade for imports and/or exports?

Software Originals

3. It is not clear that the transfer of intellectual property rights is treated consistently across countries. The following questions attempt to establish this.

47: How is the transfer of intellectual property between countries treated? Is the trade recorded as a sale of a software asset original (exports). Are purchases treated as imports of an asset or are royalty payments recorded (as intermediate use of services)?

48: If transactions are between parent companies and subsidiaries, are these flows recorded? What methods e.g. transfer price taxes, are used to measure these flows?

Part II: Deflators

49: Describe in detail how deflators for software are derived. Please provide as much detail as possible describing the level of deflation, and any assumptions used in constructing the deflators. At the very least countries are asked to provide a split according to customised software, pre-recorded software and own-account software. Please state, and describe, any assumptions on productivity.

50: For each deflator, please provide a time-series going back as far as possible.

Part III: Quarterly Estimation and annual estimates not based on comprehensive annual surveys.

51: Please describe below how estimates of other annual and quarterly estimates of investment are derived, both in constant and current prices. Give details, where appropriate, of any assumptions used. For example if constant price growth in investment is proxied by the growth in software engineers, with adjustments for productivity.

Part IV: Capital consumption and Asset lives

Because of the short working-life of software capital consumption estimates are extremely important for GNP. To better understand differences across countries please answer the following questions:

52: Is the perpetual inventory method used to construct capital stock and depreciation measures?

53: What is the assumed service life for software?

54: What form of depreciation pattern is assumed (straight line, one-hoss shay, geometric)?

55: What form of retirement (mortality) function is used to account for the retirement distribution within a cohort?

Part V: Future plans

56: Please describe below any plans you have regarding the measurement of software, for example the initiation of detailed surveys that capture software investment, or planned changes to any assumptions used to estimate software

PLEASE REFER TO ALL QUESTIONS/ISSUES BY THEIR RESPECTIVE NUMBER AND TABLES BY THEIR LETTER.

ANNEX 2

OECD Working Group on the Measurement of Software in National Accounts
Outline Draft paper: Trade Flows - Identifying Imports and Exports of Software
(Goods and Services)

1. Introduction

This paper sets out issues concerning measurement of software transactions in international trade. It relates these to the 1993 SNA recommendations on capitalising software in the National Accounts and to wider measurement issues. It seeks to identify areas where measurement could be improved and makes recommendations on improvements to classifications and reporting practice, in particular on the measurement of digitised products delivered on-line (especially software) and royalty payments for software in trade in services.

It also provides a number of country case studies in their treatment of trade in software, where data are available or can be estimated for services at Annex X.

2. SNA recommendations

What is 'computer software' for the SNA in the context of Gross Fixed Capital Formation (GFCF)?

The SNA 1993 states² that computer software, which an enterprise expects to use in production for more than one year, is to be treated as an intangible fixed asset. Such software may be purchased on the market or produced for own use. Acquisitions of such software are treated as GFCF. Software purchases on the market are valued at purchasers' prices, while software developed in-house is valued at its estimated basic price, or, if that is not possible to estimate, at its cost of production.

GFCF in software also includes the purchase or development of large databases that the enterprise expects to use in production over a period of time of more than one year. These databases are valued in the same way as software.

3. International Trade Measurement Issues

Measuring international trade flows of software is fraught with difficulties. Software may be traded on a variety of media tangible and intangible and by a variety of means. Software is often bundled with hardware or other computer or consultancy services. International trade is for practical reasons, e.g., the administrative apparatus associated with customs tax authorities' interest in imports, partitioned into goods and services more rigidly than production.

Seven cases of trade in software are distinguished (there may be more):

² SNA 10.92-10.93

- i. The most straightforward case is where packaged software is exported with manuals on a physical disk e.g., a CD-ROM, although valuation is sometimes a problem here, if it is based on the medium (the CD-ROMs) rather than the content.
- ii. Software may also be installed on equipment or machinery, e.g., a PC. The software export then may be counted simply as an export of that type of equipment. Both these cases are treated as exports of goods.
- iii. A single (physical or online) copy of some software may be sold to a foreign firm, which pays royalties to make further use of it or to sell further copies within certain (geographical/numerical) limits. The royalty payments are counted in trade in services, but will not identify software in the current international classifications.
- iv. Custom designed software, which is exported, even if sold in physical format, should be counted as trade in computer services.
- v. Software may be exported internationally online (i.e. it is delivered online) and in such a case it will by default not be counted in customs returns, however there is as yet no international agreement on how such trade should be classified, whether as goods or services and if services which one. One OECD country counts these sales as royalties, another as computer services, and a third as a mixture of the two. Most countries are not as yet able to separately identify these sales.
- vi. Customers can subscribe to software services, where the software is frequently updated e.g. anti-virus software or databases and access updates online (possibly downloading all or part).
- vii. Finally software may be sold online internationally from one firm to an affiliated firm within the same multinational. Here there is no guarantee of uniform treatment and although this may be treated as case v) another possibility is that such transactions maybe treated as internal computer services and classified as miscellaneous management charges or trade in services with related enterprises.

Q Can we exclude or narrow down certain of the above transactions as not relevant to the GFCF issue? [e.g. regular subscriptions to anti-virus software or databases?]

4. Classification issues

Q Do we need to and can we define trade in (computer) software for SNA/GFCF purposes and more generally?

Q What changes in the trade classifications for goods and services would impact most on improving trade-in-software statistics?

[HS, Joint OECD-Eurostat Trade in Services classification and the new Extended Balance of Payments Services (EBOPS) classification (Also consider CPC and ISIC).]

Merchandise trade is classified into detailed products in the Harmonised System 1996. Trade in Services is classified into the IMF's BPM5 classification of services, which is disaggregated in the OECD countries according to the Joint OECD-Eurostat classification. Annex 1 lists relevant trade classification categories of software in current use and in 2002 revisions.

There are a number of categories of HS products which may approximately define trade in software goods.

For online delivery of standard (not customised) software or databases no clear classification guidance currently exists. Statisticians have hesitated because of sensitivities in the 'goods or services' debate about digitised products in trade negotiations in the World Trade Organization. If they are counted as goods

market access agreements are much more comprehensive. Statisticians are not necessarily bound to take the same view as trade negotiators.

For software related royalty payments, which are counted in trade in services these are not at present separately identifiable from other royalty and license fee payments.

In order to assess the size of the problem and to provide evidence and justification for any recommendation on amending classifications in trade in services it is proposed to invite countries to estimate i) current levels of international on-line delivery of software in terms of sales and ii) that part of royalties and license fees that are related to software transactions.

It should also be born in mind that Eurostat are in the process of introducing a Balance of Payments regulation which, as formulated at present, would set in law the types of service to be collected in Europe. This uses the new IMF Extended Balance of Payments Services classification as reference. If there is felt to be a probable need to identify software in trade in services that should be communicated to Eurostat Balance of Payments unit before the end of this year (2001).

[Possible solutions would appear to be to separately identify:

- a) i) online delivery of software within “computer services”
- ii) Within royalties ask for a break out into software and other royalties. (Compatible with Irish practice?)
- b) regard all standard software/database transactions online as essentially intellectual property limited license to use/sell agreements and so include them all in royalties asking for a break out into software and other royalties. (Compatible with US practice?)
- c) Allow a mixture of solutions a and b (Compatible with Canadian practice?)]

5. Conclusions and recommendations

[To be completed after discussions and country case studies are provided]

STD

19 October 2001

Appendix 2.1

International Trade Codes for Computer Software

Merchandise Software Trade Codes

HS 1996 (No change for 2002?-to be confirmed)

8524: Records, tapes and other recorded media for sound or other similarly recorded phenomena, including matrices and masters for the production of records but excluding products of chapter 37

852431 discs for laser reading systems for reproducing phenomena other than sound or image

852439 discs for laser reading systems other

852440 magnetic tapes for reproducing phenomena other than sound or image

852491 other for reproducing phenomena other than sound or image

Are there other relevant codes?

Joint OECD-Eurostat Classification of International Trade in Services

International BOP code

263 computer services

EBOPS Description: *Computer services* consists of hardware and software related services and data processing services. Included are hardware and software consultancy and implementation services; maintenance and repair of computers and peripheral equipment; disaster recovery services, provision of advice, and assistance on matters related to the management of computer resources; analysis, design and programming of systems ready to use (including web page development and design), and technical consultancy related to software; development, production, supply and documentation of customised software, including operating systems made on order for specific users; systems maintenance and other support services such as training provided as part of consultancy; data processing services such as data entry, tabulation, and processing on a time-sharing basis; web page hosting services (i.e., the provision of server space on the internet to host clients' web pages); and computer facilities management.

Excluded from *computer services* are the provision of packaged (non-customised) software (classified as goods and therefore not included in EBOPS³) and non-specific computer training courses (included in *other personal, cultural, and recreational services*).

264 information services includes news agency and other information provision services

EBOPS description:

News agency services include the provision of news, photographs, and feature articles to the media. In the GNS/W/120 list of services that was a basis for the GATS commitments in the Uruguay Round, these services are a part of "recreational, cultural and sporting services" rather than *computer and information services* in the case of BPM5. These services are therefore separately identified in the EBOPS classification, thus facilitating a linkage with GNS/W/120.

Other information provision services includes database services—database conception, data storage, and the dissemination of data and databases (including directories and mailing lists), both on-line and through magnetic, optical, or printed media; and web search portals (search engine services that find internet addresses for clients who input keyword queries). Also included are direct, non-bulk subscriptions to newspapers and periodicals, whether by mail, electronic transmission or other means.

266 royalties and license fees

EBOPS description: This *Manual* recommends a disaggregation of the BPM5 component into *franchises and similar rights* and *other royalties and license fees*. *Franchises and similar rights* comprise international payments and receipts of franchising fees and the royalties paid for the use of registered trademarks. *Other royalties and license fees* includes international payments and receipts

³ At the time of publication of this *Manual*, the classification of the provision of software that is downloaded through the internet was under discussion.

for the authorised use of intangible, non-produced, non-financial assets and proprietary rights (such as patents, copyrights, and industrial processes and designs) and with the use, through licensing agreements, of produced originals or prototypes (such as manuscripts, computer programs, and cinematographic works and sound recordings). Payments and receipts for the outright purchase or sale of these assets and rights are excluded (following BPM5, these are recorded as capital account transactions, not as services). Excluded also are distributive rights for audiovisual products for a limited period or a limited area; these are included in *audiovisual and related services*

285 services between affiliated enterprises n.i.e.

EBOPS description: Services between related enterprises, n.i.e., is a residual category. It covers payments between related enterprises for services that cannot be specifically classified to any other component of EBOPS. It includes payments from branches, subsidiaries and associates to their parent enterprise or other related enterprises that represent contributions to the general management costs of the branches, subsidiaries and associates (for planning, organising and controlling) and also reimbursements of expenses settled directly by parent enterprises. Also included are transactions between parent enterprises and their branches, subsidiaries and associates to cover overhead expenses.

N.B. There is as yet no comprehensive and clear guidance for the treatment of online delivery of digitised products including software.

Appendix 2.x National Case Studies of International Trade in Software

a)US

US trade in software information can be found at <http://exportit.ita.doc.gov>

Table 1 US Software Merchandise Trade(\$million)						
	1999	2000				
Total US Imports	550.2	677.2				
Total US Exports	2139.2	2114.0				
N.B. Excludes e.g. customised software, online software and software shipments under \$2500						
Source: International Trade Commission Sept 2001						

- b) Ireland
- c) Canada
- d) France
- e) Others?