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Measurement of ICT use by households and individuals: proposal for a model questionnaire

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Introduction

1. This paper is provided to member countries for final input prior to recommendation to the Committee for Information, Computer and Communications Policy (ICCP) that the model questionnaire be declassified. The paper is presented in three parts as follows:
 - Part A provides a brief history of the development of the model questionnaire; outlines the principles applying to the questionnaire and its development; and describes discussion of the major outstanding issues at the 2002 meeting of the Working Party on Indicators for the Information Society (WPIIS).
 - Part B describes the statistical standards applying to a model questionnaire of household and individual use of ICT. It covers classifications, scope and coverage, methodology and frequency.
 - Part C presents model questions for households and individual use of ICT.

PART A: HISTORY AND PRINCIPLES

History of the model questionnaire project

2. At the April 2000 and 2001 meetings of the OECD's Working Party on Indicators for the Information Society (WPIIS), Australia presented a model

questionnaire for surveys of household ICT use (DSTI/ICCP/IIS(2000)7 and DSTI/ICCP/IIS(2001)2).

3. A revised proposal was presented to the Voorburg meeting of September 2001. This proposal took into account comments received on the two WPIIS papers. In addition, it accounted for a number of the differing views by suggesting how countries might continue some existing practices in this field of statistics and still produce internationally consistent output.
4. More recently, a version based on the Voorburg paper was presented to the 2002 meeting of the WPIIS. While based on the Voorburg paper, it took into account feedback received at, and subsequent to, that meeting.
5. Discussion at the WPIIS and Voorburg meetings and subsequent correspondence has indicated a diversity of views on the content of a model questionnaire on ICT use. In an attempt to progress this work, the 2002 WPIIS meeting discussed major outstanding issues and reached agreement on these as outlined in paragraphs 11 to 19 below.

General approach to the model ICT use questionnaire

6. Several principles have been incorporated in the model questionnaire (and associated metadata) and are described in the following paragraphs.
7. Length of the questionnaire. The questionnaire is as short as possible. We recognise that most countries would use existing survey vehicles to collect the model questions. Usually those vehicles have restrictions on the space (time) available. We believe, therefore, that it is important that the first agreed version of this model questionnaire be kept reasonably short.
8. Flexibility. The questionnaire is flexible enough to be adapted to individual countries' existing surveys and methodologies. The model questionnaire is flexible in several ways:
 - It is in modular form so that extra modules can be added over time and by individual countries.
 - Countries can add additional questions and can usually add extra categories to questions.
 - With some care, countries can remove categories which do not apply and can split categories into sub-categories.
 - Countries can use more than one survey vehicle if they wish, for instance use a household expenditure survey to collect information on Internet purchases.
 - The primary emphasis is on consistency of output therefore the model questionnaire allows some flexibility in methodologies used and the way questions are asked (for instance, on barriers questions, the 'main reason'

approach may give reasonably equivalent results to the highest ranked 'most important' reason).

9. Simplicity. The questionnaire is simple enough to produce reasonably comparable data across member countries for at least the e-commerce core data items agreed by the April 2000 WPIIS meeting. We have aimed to keep the questions simple in order to promote consistency of output and to reduce respondent burden. For instance, we have not suggested that question items be coded (for instance, according to importance or frequency).
10. Comparability of data and statistical standards to allow comparability of output. Key points are :
 - reasonable comparability of data items and question wording (whilst allowing some flexibility to member countries)
 - comparability of classifications across member countries
 - as far as possible, comparability of scope and coverage, methodology, frequency and reference periods across member countries.

Discussion at the WPIIS April 2002 meeting

11. The 2002 meeting discussed a number of substantive issues, most of which have been raised before and on which there is a diversity of views. Issues not specifically discussed were those which are considered relatively minor or able to be dealt with by individual countries (noting the flexibility of countries to depart from the model in a number of ways). Issues discussed and agreement reached at the meeting are outlined in the following paragraphs.
12. Should the model propose or exclude particular survey techniques? The meeting was reluctant to prescribe particular survey techniques. However, it agreed to a recommendation that postal surveys be excluded (though using mail to make initial contact is acceptable).
13. Recall period was discussed at some length and views were mixed. Ultimately, the meeting agreed to accept a 12 month recall period for general questions. The recall period for detailed Internet purchase questions should be selected by each country such that they can derive a reasonably unbiased estimate of the value of annual purchases of goods and services over the Internet.
14. Should the model include a question on the type of Internet access used by households (e.g. dial up/high speed)? The meeting decided that such a question would be useful and agreed that Australia should develop and include a question in its revised proposal.

15. Should we add additional modules on mobiles and emails (as suggested by Finland)? Whilst seeing value in the suggested modules, the meeting agreed that consideration should be deferred until the first review of the approved model questionnaire.
16. Children's use of ICT. The meeting agreed to leave children's use of ICT out of the current proposal. It might be considered in the future, possibly in different types of survey vehicles, e.g. school surveys. Those countries which already do, or wish to, collect data in respect of children's use of ICT are not constrained by the age limit of 16 recommended by the model questionnaire. In order to achieve international comparability, those countries are asked to produce output in respect of people aged 16 years and over.
17. Internet purchases by location of supplier (international/domestic)? Based on suggestions that the question posed difficulty for respondents, it was agreed to defer consideration of this question until the first review of the model questionnaire.
18. The location of activities and purpose questions. The meeting agreed to change the questionnaire so that these questions (currently comprising Module 4) be reduced in number so that they are asked in respect of "any location" rather than "home" and "other locations" as currently. This reduces the size and complexity of the questionnaire slightly. Individual countries can choose to ask about more than one location as long as they can produce output in respect of "any location" for:
 - purposes of Internet use (work or business, education or study, volunteer or community groups, personal or private)
 - activities for which the Internet was used (see the activities listed in question 17, Part C)
 - the activity most time was spent on.
19. Units. The meeting agreed to retain two units - household and individual. After experience, we could review the applicability of the household questions, especially Q5 (household barriers to Internet access). This should initially be revisited at the first review of the questionnaire.

Future development of the questionnaire

20. It is suggested that additional components of the questionnaire be added over time as technologies, usage practices and policy interests change. The suggested module approach facilitates this form of development. In particular, the 2002 meeting agreed to review the inclusion of several items at the first review of the model questionnaire.

PART B: STATISTICAL STANDARDS FOR A MODEL QUESTIONNAIRE ON HOUSEHOLD AND INDIVIDUAL USE OF ICT

Classificatory variables

21. The metadata associated with the model questionnaire includes a small number of classificatory variables, with relatively few categories in each classification. Many member countries will decide to use extra classificatory variables and/or additional categories. Minimal classifications proposed are:

Household characteristics

- household composition (*couple; couple with children; one parent family; other family; lone person; other non-family*)¹
- household size (number of members)
- annual household income (gross income from all sources for all household members); this variable could be expressed as ranges or percentiles.

Personal characteristics for adults

- age (age is a strong determinant of ICT use so a common age cut-off is important; an age range of 16 years and older is proposed)
- gender
- highest education level received (*primary, secondary, post-secondary (not tertiary), tertiary* per groupings of broad ISCED levels)
- employment status (*full-time employee; part-time employee; self-employed; unemployed; not in the labour force*)
- occupation (use ISCO major groups where possible).

Scope and coverage

22. While there will be differences in scope and coverage between countries, these are likely to be unavoidable because of use of existing survey vehicles. Countries should note any exclusions from scope or areas of poor coverage. Examples might be exclusion or undercoverage of particular sub-populations. Where possible, the effect on aggregate data should be estimated and noted.

¹ *Other family* is a family of related individuals residing in the same household. These individuals do not form a couple or parent-child relationship with any other person in the household and are not attached to a couple or one parent family in the household. If two brothers, for example, are living together and neither is a partner, a lone parent or a child to someone else in the household, then they are classified as an other family. However, if the two brothers share the household with the daughter of one of the brothers and her husband, then both brothers are classified as other related individuals and are attached to the couple family. *Other non-family* is a household consisting of two or more unrelated people where all persons are aged 15 years or over. There are no reported couple relationships, parent-child relationships or other blood relationships in these households.

Methodology

Survey design and conduct

23. Member countries differ in the survey vehicles used. It appears that most use existing surveys such as labour force, household expenditure or general social surveys. Clearly it is not possible to prescribe a survey vehicle though member countries' experiences led to the recommendation to the 2002 WPIIS meeting that postal surveys not be used. This is because of the poor response rates usually achieved with postal collections, resulting in high standard errors and bias if characteristics of the non-responding population differ from those of respondents. However, at least one member country uses mail-out/mail-back surveys to collect household use of ICT data and reports achieving good response rates. For this reason, we prefer not to preclude any particular collection methodology where the underlying data prove to be sound.
24. Member countries should note that different approaches can lead to inconsistencies in output. All countries should therefore aim to reduce sampling and non-sampling error as much as possible by:
 - using well designed samples which are of sufficient size to produce reliable data (that is having low standard errors)
 - careful design and testing of questions and question sequences
 - intensive training and checking of interviewers
 - reducing non-response as far as possible, and
 - minimising data entry, editing and other processing errors.
25. Given the diversity of survey vehicles, the points made above on careful design and testing of questions, training of interviewers and weighting are particularly important when considering a survey vehicle.

Units, selection and weighting

26. Both households and individuals are proposed as statistical units. Information should be sought from a randomly selected adult who responds in respect of the household (Modules 1 and 2) and in respect of him/herself (Modules 3 to 5). Households, and individuals within those households, need to be selected in an unbiased manner.
27. Because the sample of households and individuals selected is unlikely to be perfectly representative of the whole population, it is important to weight responses according to an independent estimated distribution of the total population.

Frequency and reference period/date

28. It is probably unrealistic to expect member countries to conduct surveys more frequently than annually. For some member countries, an annual collection will not be feasible, in which case it is important that those countries align their collection years as far as possible.
29. As some of the information collected is point-in-time data, it would be preferable to also have alignment of reference dates across member countries. However, the dependence of many countries on existing survey vehicles probably makes this an unrealistic expectation.

PART C: MODEL QUESTIONS FOR HOUSEHOLD AND INDIVIDUAL USE OF ICT

Core modules for a model questionnaire on household and individual ICT use

The model questionnaire consists of five core modules as follows:

- I. Household access to computers and the Internet (the statistical unit is the household)
- II. Household barriers to adoption of the Internet (the statistical unit is the household)
- III. Adult use of computers and the Internet: location and frequency of use (the statistical unit is a randomly selected adult)
- IV. Purpose and nature of adult activities on the Internet (the statistical unit is a randomly selected adult)
- V. Internet-commerce details: adult activities and barriers (the statistical unit is a randomly selected adult).

Please note: the model questions presented here do not constitute an **operational questionnaire**, the form of which will vary according to factors which are specific to each survey and country. Because it is not an operational questionnaire, it does not show:

- questions which establish the values of classificatory variables (household and personal characteristics)
- filter questions which have no ICT data content (e.g. whether the respondent is an employee)
- definitions of terms used (e.g. a computer)
- sequencing or other interview instructions (though it does indicate the respondent population for each question)
- how questions are asked (this will vary depending on the collection methodology used, for instance, personal interviewers might use prompt cards for a number of the “list” questions whereas telephone interviewers might use a running prompt i.e. ask each response item as a yes/no question).

Module 1: Household access to computers and the Internet (*Questions are asked of a responsible adult answering for the household. The respondent can be the same randomly chosen person who answers the individual questions in later modules.*)

- 1. (DOES ANY MEMBER OF THIS HOUSEHOLD/DO YOU) HAVE ACCESS TO A COMPUTER AT HOME REGARDLESS OF WHETHER IT IS USED?**

Population: all households

Yes

No

- 2. (DOES ANY MEMBER OF THIS HOUSEHOLD/DO YOU) HAVE ACCESS TO THE INTERNET AT HOME REGARDLESS OF WHETHER IT IS USED?**

Population: all households

Yes

No

- 3. WHAT ARE ALL THE WAYS THE MEMBERS OF THIS HOUSEHOLD ACCESS THE INTERNET AT HOME?**

Population: households with access to the Internet at home

Through a home PC

Through a portable computer

Through a digital television set or set top box

Through a mobile phone

Through a games machine with Internet connection

Using any other means?

Don't know

See Notes 1 and 12 at the end of the questionnaire.

- 4. WHAT TYPES OF SERVICES DO THE MEMBERS OF THIS HOUSEHOLD SUBSCRIBE TO FOR INTERNET ACCESS?**

Population: households with access to the Internet at home

Analog modem (standard phone line)

Cable

ISDN (Integrated Services Digital Network)

DSL (Digital Subscriber Line e.g. ADSL)

Mobile phone with Internet access (e.g. WAP)

Other services (e.g. satellite, microwave)

Don't know

See Notes 1 and 12 at the end of the questionnaire.

Module 2: Household barriers to adoption of the Internet (*Questions are asked of the same adult who answered Module 1 questions.*)

5. WHAT ARE ALL THE REASONS FOR MEMBERS OF THIS HOUSEHOLD NOT HAVING ACCESS TO THE INTERNET AT HOME?

(Not having the means to access the Internet, e.g. no computer or computer too old, is not a valid response.)

Population: households without access to the Internet at home

Costs are too high
Lack of confidence or skills
Not interested
Privacy concerns
Security concerns
Concern that children will access inappropriate sites
Have access to Internet elsewhere
Lack of time to use the Internet
Language barriers
Other
Don't know

See Notes 2, 3 and 12 at the end of the questionnaire.

6. WHAT IS THE MAIN REASON FOR MEMBERS OF THIS HOUSEHOLD NOT HAVING ACCESS TO THE INTERNET AT HOME? (*Not having the means to access the Internet, e.g. no computer or computer too old, is not a valid response.*)

Population: households without access to the Internet at home

Costs are too high
Lack of confidence or skills
Not interested
Privacy concerns
Security concerns
Concern that children will access inappropriate sites
Have access to Internet elsewhere
Lack of time to use the Internet
Language barriers
Other
Don't know

See Notes 2 and 3 at the end of the questionnaire.

Module 3: Adult use of computers and the Internet: location and frequency of use (*Questions are asked of a randomly chosen adult respondent.*)

- 7. IN THE LAST 12 MONTHS, DID YOU USE A COMPUTER AT HOME?**
Population: all persons with access to a computer at home

Yes

No

- 8. IN THE LAST 12 MONTHS, DID YOU ACCESS THE INTERNET AT HOME?**

Population: all persons with access to the Internet at home

Yes, using a mobile access device (e.g. a portable computer connected to a mobile phone, mobile WAP phone)

Yes, using a fixed access device

No

See Note 12 at the end of the questionnaire.

- 9. HOW OFTEN DID YOU USUALLY ACCESS THE INTERNET AT HOME IN THE LAST 12 MONTHS?**

Population: all persons who have accessed the Internet at home in the previous 12 months

At least once a day

At least once a week but not every day

At least once a month but not every week

Less than once a month

Don't know

See Note 4 at the end of the questionnaire.

- 10. IN THE LAST 12 MONTHS, DID YOU USE A COMPUTER AT WORK?**

Population: all persons who did paid or unpaid work in a job or business in the last 12 months

Yes

No

See Note 5 at the end of the questionnaire.

11. IN THE LAST 12 MONTHS, DID YOU ACCESS THE INTERNET AT WORK?

Population: all persons who did paid or unpaid work in a job or business in the last 12 months

Yes, using a mobile access device (e.g. a portable computer connected to a mobile phone, mobile WAP phone)

Yes, using a fixed access device

No

See Notes 5 and 12 at the end of the questionnaire.

12. HOW OFTEN DID YOU USUALLY ACCESS THE INTERNET AT WORK IN THE LAST 12 MONTHS?

Population: all persons who have accessed the Internet at work in the previous 12 months

At least once per working day

At least once a week but not every working day

At least once a month but not every week

Less than once a month

Don't know

See Note 4 at the end of the questionnaire.

13. DID YOU ACCESS THE INTERNET AT PLACES OTHER THAN HOME OR WORK IN THE LAST 12 MONTHS?

Population: all persons

Yes, using a mobile access device (e.g. a portable computer connected to a mobile phone, mobile WAP phone)

Yes, using a fixed access device

No

See Notes 6 and 12 at the end of the questionnaire.

14. IN THE LAST 12 MONTHS, AT WHICH OF THESE PLACES DID YOU ACCESS THE INTERNET?

Population: all persons who have accessed the Internet at places other than home or work, using a fixed access device, in the previous 12 months

School

Tertiary education institution

Public library

Government agency, department or shopfront

Internet or cyber café, or similar

Community or voluntary organisation

Neighbour's, friend's or relative's house
Other

See Notes 2 and 12 at the end of the questionnaire.

15. HOW OFTEN DID YOU USUALLY ACCESS THE INTERNET AT ANY OF THESE PLACES IN THE LAST 12 MONTHS?

Population: all persons who have accessed the Internet at places other than home or work, using a fixed access device, in the previous 12 months

At least once a day
At least once a week but not every day
At least once a month but not every week
Less than once a month
Don't know

See Note 4 at the end of the questionnaire.

Module 4: Purpose and nature of adult activities on the Internet (*Questions are asked of the same randomly chosen adult respondent who answered Module 3.*)

16. FOR WHICH PURPOSES DID YOU USE THE INTERNET IN THE LAST 12 MONTHS?

Population: all persons who have accessed the Internet in the previous 12 months

Paid work or business
Education or study
Voluntary or community work
Personal or private
Don't know

See Notes 7 and 12 at the end of the questionnaire.

17. FOR WHICH ACTIVITIES DID YOU USE THE INTERNET IN THE LAST 12 MONTHS?

Population: all persons who have accessed the Internet in the previous 12 months

Find information
- Find information about goods and services
- Search for employment or find employment related information
- Obtain other information or general browsing
Communication
- Internet email
- Use chat rooms/sites, message boards etc

- Internet telephony
- Commerce
 - Purchase or order goods or services (excluding investment products, shares)
 - Sell goods or services
 - Financial or investment activities (e.g. Internet banking, share purchasing)
- Deal with government
 - submit tax returns
 - apply for benefits
 - other dealings with government
- Entertainment (e.g. playing games, downloading music, gambling)
- Download patches or software
- Other
- Don't know

See Notes 2, 7, 8 and 12 at the end of the questionnaire.

18. ON WHICH ACTIVITY DID YOU SPEND THE MOST TIME?

Population: all persons who reported using the Internet for more than one activity(in Q 17) in the previous 12 months

Module 5: Internet-commerce details: adult activities and barriers (*Questions are asked of the same randomly chosen adult who answered Modules 3 and 4.*)

19. IN THE LAST 12 MONTHS, DID YOU BUY OR ORDER GOODS OR SERVICES FOR PERSONAL OR DOMESTIC USE OVER THE INTERNET?

Population: all persons who have accessed the Internet in the previous 12 months

- Yes, at home
- Yes, at work
- Yes, at other places
- No

See Notes 5 and 12 at the end of the questionnaire.

20. WHAT WERE ALL THE REASONS FOR NOT BUYING ANY GOODS OR SERVICES FOR YOUR OWN PRIVATE USE OVER THE INTERNET IN THE LAST 12 MONTHS?

Population: all persons who have accessed the Internet in the previous 12 months, but have not bought or ordered goods or services over the Internet

- Have no need (but have no objection in principle)
- Prefer to shop in person or like to see the product

Security concerns (worried about giving debit or credit card details over the Internet)
Privacy concerns (worried about giving personal details over the Internet)
Concerned about warranties, receiving or returning goods
Delivery of goods ordered over the Internet is a problem (e.g. takes too long or is logistically difficult)
More expensive than traditional forms of shopping
Speed of connection is too slow
Other

See Notes 2 and 12 at the end of the questionnaire.

21. WHAT WAS THE MAIN REASON FOR NOT BUYING ANY GOODS OR SERVICES FOR YOUR OWN PRIVATE USE OVER THE INTERNET IN THE LAST 12 MONTHS?

Population: all persons who reported more than one reason (in Q 20) for not buying or ordering goods or services over the Internet in the previous 12 months

Have no need (but have no objection in principle)
Prefer to shop in person or like to see the product
Security concerns (worried about giving debit or credit card details over the Internet)
Privacy concerns (worried about giving personal details over the Internet)
Concerned about warranties, receiving or returning goods
Delivery of goods ordered over the Internet is a problem (e.g. takes too long or is logistically difficult)
More expensive than traditional forms of shopping
Speed of connection is too slow
Other

See Note 2 at the end of the questionnaire.

22. HOW OFTEN (DID YOU USUALLY BUY OR ORDER GOODS OR SERVICES FOR PERSONAL OR DOMESTIC USE OVER THE INTERNET IN THE LAST 12 MONTHS)?

Population: all persons who bought or ordered goods or services over the Internet in the previous 12 months

At least once a week
At least once a month but not every week
At least once every three months but not every month
Less than once every three months
Don't know

See Note 4 at the end of the questionnaire.

23. WHAT TYPES OF GOODS AND SERVICES DID YOU BUY OR ORDER OVER THE INTERNET (FOR PERSONAL OR DOMESTIC USE) IN THE LAST <period to be set by individual member countries>?

Population: all persons who bought or ordered goods or services over the Internet in the previous 12 months

- Clothing, accessories, jewellery or shoes
- Food or groceries
- Alcoholic beverages
- Movies and music (e.g. videos, DVDs, CDs, downloaded files)
- Books, magazines or newspapers (including those on-line)
- Computer software (excluding computer games)
- Computer hardware
- Electronic equipment (excluding computer hardware)
- Games or toys (including computer games)
- Travel products (tickets, accommodation, vehicle hire etc)
- Tickets to entertainment events (sporting, theatre, concert etc)
- Motor vehicles, accessories or parts
- Financial products or services (including insurance)
- Gambling, lotteries and betting
- Other

See Notes 2, 9, 10 and 12 at the end of the questionnaire.

24. WHAT WAS THE TOTAL VALUE OF GOODS AND SERVICES YOU BOUGHT OR ORDERED (FOR PERSONAL OR DOMESTIC USE) OVER THE INTERNET IN THE LAST <period to be set by individual member countries>? (This question excludes the value of capital items such as investment products, shares and loans but includes financial services charges such as Internet brokers' fees.)

(This question excludes the value of capital items such as investment products, shares and loans but includes financial services charges such as Internet brokers' fees.)

Population: all persons who bought or ordered goods or services over the Internet in the previous 12 months

- \$0 - 250
- \$251 - 500
- \$501 - 1000
- \$1,001 - 2,000
- \$2,001 - 5,000
- \$5,001 - 10,000
- over \$10,000 (*Specify*)
- Don't know

See Notes 9 and 11 at the end of the questionnaire.

**25. DID YOU PAY FOR ANY OF THOSE GOODS OR SERVICES ON-LINE
(FOR EXAMPLE, BY GIVING YOUR CREDIT OR DEBIT CARD
DETAILS OVER THE INTERNET)?**

*Population: all persons who bought or ordered goods or services over the
Internet in the previous 12 months*

Yes

No

Notes to the questionnaire

Note 1: Possible country variations are: remove categories where items are not available; add or split categories according to technologies available and country data requirements. Care should be taken when adding or splitting categories that statistical bias is not introduced. This could occur if the provision of alternative categories affects response thereby leading to loss of comparability with other countries' data.

Note 2: Possible country variations are: add or split categories according to country data requirements. Please note comments on bias under **Note 1** above.

Note 3: It is possible to ask barriers questions in a variety of ways. They include asking for all reasons, asking respondents to rate the importance of each reason or asking for the main plus a secondary reason. The model questionnaire asks for 'all reasons' and then 'main reason'. This approach is probably one of the least burdensome presentations. If countries do not wish to ask for both 'all reasons' and 'main reason', it is acceptable to simply ask for 'main reason'. Where countries use a different approach altogether to the collection of these data, for the purposes of international comparability, data should be tabulated to show the reason most commonly reported or most commonly selected as the most important reason.

Note 4: Frequency response categories vary slightly across questions depending on the nature of use. For instance, Internet purchasing is a relatively rare event so a response category of three months is included and a daily response category is excluded. Note that countries are able to add additional frequency categories if they wish to obtain finer level information.

Note 5: Where a person's workplace is located at his/her home, then he/she would answer both home and work questions referring to computer and Internet use, and Internet purchasing. Some countries might also like to ask the chosen adult whether he/she works exclusively from home.

Note 6: A response to the second item will direct the respondent to the next two questions. Where the only means of access is mobile, it is not necessary to ask respondents to answer Q14 and Q15.

Note 7: There are alternative ways of asking purposes and activities questions. For instance, each could be rated according to its frequency or intensity of use. The model questionnaire uses a simplified method of presentation which asks respondents for all purposes and all plus main activities. As for barriers, it is presumed that reasonably comparable output can be compiled by those countries taking a different approach.

Note 8: There is a very large amount of Internet activities information which could be collected. This paper proposes a small set of possibilities, recognising that some member countries will wish to collect far more detail. It is envisaged that, as the

model questionnaire evolves, separate modules on activities undertaken using the Internet can be included. Possible modules include:

- communicating using the Internet (e.g. use of email, chat sites, bulletin boards, Internet phone)
- entertainment (e.g. music, gambling, games, radio, video)
- searching for/obtaining information on a wide range of topics (e.g. education, medical/health, employment, goods & services, travel, news, IT etc)
- government dealings (e.g. taxation, voting, government benefits lodgment/information)
- use of particular on-line services such as health and education services.

The determination of additional modules, and questions within those modules, could be an appropriate task for a WPIIS Expert Group.

Note 9: The issue of bias arising from recall error is especially relevant for this question. In respect of Q24, we suggest that countries select a recall period for Internet purchases which would enable calculation of 12 months value. For instance, countries which collect monthly information should collect information in respect of the last month; countries collecting quarterly data, in respect of the last quarter etc. It is suggested that use of value ranges in Q24 may reduce recall bias (and will probably also reduce question non-response). Information on value of Internet purchases could also be collected in a household expenditure survey rather than a use of ICT collection. Whichever method is chosen, it should be able to deliver a reasonably unbiased estimate of total domestic Internet expenditure in respect of the 12 month reference period.

Note 10: Some goods or services may not be available for purchase over the Internet in all countries. For example, gambling over the Internet is illegal in some countries, as is purchasing alcoholic beverages. Countries should omit goods or services which are not relevant.

Note 11: These are the value categories used by Australia in 2002. They are based on responses to the 2000 surveys (about half the responses fell into the lowest range). Other countries should determine currency ranges based on the distribution of responses. The top (open) category should apply to a very small proportion of respondents (in Australia, in 2000, it was fewer than 1 per cent). Alternatively, an exact value can be collected instead of using ranges; this is more likely to be feasible where a shorter recall period is used.

Note 12: Multiple responses are allowed.