

THE USAGE OF INFORMATION AND COMMUNICATION TECHNOLOGIES IN CYPRUS

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Cyprus in order to meet the objectives of the Europe 2005 Action Plan, has proceeded to implement Council Regulation 5197/03 where a defined set of benchmarking indicators using statistical information to be provided through the European Statistical System.

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In this connection, the Statistical Service of Cyprus, has conducted two surveys:

- Survey on Information and Communication Technologies Usage in Households and by Individuals 2004;

(with reference period: the first quarter of 2004)

- E- Commerce Survey 2004.

(with reference period : the end of January 2004)

In this brief exposition, I shall present these surveys and the main findings which has just been released on the Internet by the Statistical Service of Cyprus. A more detailed set of data from the Surveys are presented in the Appendix.

Survey on Information and Communication Usage in Households and by Individuals 2004.

The aim of the Survey was to collect data on the access to selected Information and Communication (IC) technologies, the use of computers (location, frequency of use, activities), the use of the Internet and Internet commerce.

The data collected referred to:

- the composition of the households (gender, month and year of birth, education level, employment and place of work, for each member of the household)
- access to selected IC technologies (internet enabled mobile phone / communication, other mobile phone, TV, games console, personal computer, handheld computer(palmtop); access to world wide web - internet at home; devices of accessing internet at home; types of internet connection used; reasons for not having access to the internet at home for persons aged 16-74.
- Use of computers location, frequency of use and activities.

- Use of the internet (frequency, location, type of activities used)
- Internet commerce (activities and barriers)

The Survey was conducted using a random sample stratified into urban and rural areas by district. The households were allocated in each stratum proportionally by size, on the basis of the 2001 Census of Population. The sample covered 1495 households consisting of 3485 individuals.

The main findings of the Survey were(taking into account that multiple answers were possible in each question):

- ❖ of the households 29.4% had access to internet mobile phone / communicator, 76.8% other mobile phone, 99.7% T.V, 11.9% satellite dish, 20.5% games console, 47.2% personal computer and 2.2% handheld computer (palmtop)
- ❖ Households having technical ability of accessing Internet at home accounted for 52.8%. Personal computer was the main device, 65.2% of accessing the Internet, followed by mobile phone 6.5%.
- ❖ The connection used by households to access Internet was 63.6% by modem, 6.8% by ISDN, 4.5% broadband and 6.8% wireless.
- ❖ The frequency of use of computers by individuals was 73.0% daily, 18.8% weekly, 6.6% monthly and 1.7% less than once a month. The use of computers was mainly at work 72.4% compared to 54.5% at home, 21.0% at place of education, 21.2% other places(e.g hotels, airports , etc) , 18.8% other people's homes and 8.0% at Internet cafes. .
- ❖ The use of internet by individuals in the last 12 months was 31.9% in the first quarter of 2004, and the frequency of use 56.8% daily, 29.9% weekly, 11.1% monthly, and 2.3% less than once a month.
The places that Internet was accessed were at home 69.6%, place of work 45.0%, place of education 17.7% and other places 20.8%.
- ❖ The activities on the internet used by individuals for private use was mainly for communication 75.4% (sending and receiving e-mails, finding information about goods and services 67.1%, playing or downloading games, images or music 55.1%, reading newspapers and magazine 53.8%, services related to travel and accommodation 35.7%, listening to web radio/television 36.2%, obtaining information from

public authorities 32.5%, training and education 30.2%. Internet banking is still in the initial stages with 12.8%, and purchasing goods 8.6% .

- ❖ Internet commerce by individuals for private use accounted for only 4.3% of the orders of goods and services bought during the last 12 months. These orders were mainly 40.7% for books /magazines/newspapers/e-learning material, followed by films and music with 20.0%, cloths and sports goods with 17.8%, computer hardware 14.2% and travel and holiday accommodation with 11.6%.

E-Commerce Survey 2004

The aim of the Survey was to collect data on computers use and specifically on electronic commerce in enterprises.

The data collected pertained to

- General information on Information and Communication Technologies (ICT) systems in the enterprises
- Use of internet by enterprises with ICT
- E-Commerce via internet for enterprises with internet access (orders and sales via internet)
- E-Commerce via EDI or networks other than internet for enterprises with ICT
- Confidence building practices for internet – commerce
- Barriers to internet sales
- General information about the enterprises (activity, employment, and turnover)

The Survey covered enterprises with 10 or more employees in the following sectors (NACE Rev. 1):

- D: Manufacturing
- F : Construction
- G: Wholesale and Retail Trade, repair of motor-vehicles motor-cycles and personal goods
- H: Hotels and restaurants

- I: Transport, storage and communication
- K: Real Estate, renting and business activities
- 92: Recreational and sporting activities.

The Survey was conducted on the basis of a stratified random sample of 1329 enterprises, classified into groups and 3 sizes (small enterprises employing 10-49 persons, medium enterprises with 50-249 employees and large enterprises with 250 or more employees).

The main findings were:

- 93.5% of the enterprises employing 10 or more persons were using computers (92.4% of small enterprises, 99.7% of medium and 100.0% of large enterprises).
- Of the enterprises using computers, 88.1% (86.1% for small, 98.7% for medium and 100.0% of large) had access to Internet.
- The purpose of using the Internet was mainly, 70.0% for market monitoring, 58.9% for training and education, 54.5% for banking and financial services and 42.9% for interaction with public authorities.
- Enterprises having a website accounted for 54.3% of the enterprises having access to Internet. This rises with the size of enterprise (49.5% for small, 71.5% for medium, 93.2% for large).
- The use of the website by enterprises was mainly for marketing the enterprises products, 94.6% and for facilitating access to product catalogues and price lists, 50.8%.
- E-commerce via Internet was conducted by 32.4% of the enterprises having access to Internet (30.2% by small, enterprises, 41.7% by medium and 50.0% by large).
- Of these orders 46.7% accounted for less than 1% of orders, 28.8% for 1%-9% of orders and only 16.8% for more than 25%.
- Sales via Internet are relatively small and only 8.6% of enterprises having access to the Internet, received orders via Internet. These sales, in most cases 74.4%, accounted for 1-2% of the turnover of the enterprises.

APPENDIX

Table 1: ICT USAGE IN HOUSEHOLDS AND BY INDIVIDUALS IN CYPRUS FOR 2004

<u>HOUSEHOLDS</u>	%
Households with access to selected Information and Communication Technologies (multiple answers possible)	
Internet enabled mobile phone / "Communicator" type device	29.4
Other mobile phone	76.8
TV	99.7
Satellite dish	11.9
Games console	20.5
Personal computer	47.2
Handheld computer (palmtop)	2.2
Households having technical ability accessing Internet at home (regardless of whether it is used)	52.8
Devices on which households accessed Internet at home (% on households having technical ability) (multiple answers possible)	
Mobile phone (WAP. GPRS)	6.5
TV set with specific Internet device	0.1
Games console	0.6
Personal computer	65.2
Handheld computer	1.3
Devices that are used by households as a unique way of accessing the Internet (% on households having technical ability)	
Only mobile phone (WAP. GPRS)	0.4
Only personal computer	58.1
Types of Internet connection used by households to access Internet (% on households having technical ability) (multiple answers possible)	
Modem (dial-up access over normal telephone line)	63.8
ISDN connection	6.8
Broadband connection	4.5
DSL (xDSL. ADSL. SDSL. etc.) \geq 2 Mb/sec	0.3
DSL (xDSL. ADSL. SDSL. etc.) $<$ 2 Mb/sec	4.2
Wireless connection (e.g. satellite. mobile phone)	6.8

Notes

- Data refers to the first quarter of 2004. unless otherwise stated

* Data refers to period April 2003-March 2004

INDIVIDUALS: USE OF COMPUTERS

%

Usage of computers by individuals within the first quarter of 2004 42.0

Frequency of use of computers by individuals (% on usage of computers)

Daily 73.0

Weekly 18.8

Monthly 6.6

Less than once a month 1.7

**Places where computer was used (% on usage of computers)
(multiple answers possible)**

At home 72.4

At place of work (other than home) 54.5

At place of education 21.0

At other places (eg airport. hotel. etc) 21.2

At other people's houses 18.8

At internet café 8.0

At place of work but not at home 21.7

At place of education but not at home 3.7

INDIVIDUALS: USE OF INTERNET

Individuals used Internet in the first quarter of 2004 31.9

Individuals used Internet in the last 12 months* 33.8

**Frequency of use of Internet by individuals
(% on individuals used Internet in the first quarter of 2004)**

Daily 56.8

Weekly 29.9

Monthly 11.1

Less than once a month 2.3

**Places where Internet was accessed (% on individuals used Internet in the first
quarter of 2004)
(multiple answers possible)**

At home 69.6

At place of work (other than home) 45.0

At place of education	17.7
At other places (eg airport. hotel. etc)	20.8
Public library	1.0
Public office. town hall. government agency	0.3
Community or voluntary organisation	0.5
Internet Café	9.7
Neighbour. friend or relative's house	18.2
Only at home	28.2
Only at place of work (other than home)	17.6
Only at place of education	3.3
Only at other places	5.5
Only at neighbour. friend or relative's house	2.6
Only at Internet Café	0.5

**Security precautions taken (% on individuals used Internet in the first quarter of 2004)
(multiple answers possible)**

Installed a virus checking program	27.9
Updated a virus checking program (including manual updating)	77.0
Used online authentication (such as a password. PIN. or a digital signature) on the Internet	38.5
Installed or upgraded a hardware or software firewall	9.9

INDIVIDUALS: PURPOSE AND NATURE OF ACTIVITIES ON THE INTERNET

%

**Internet activities by individuals for private use (% on individuals used Internet in the first quarter of 2004)
(multiple answers possible)**

Communication

Sending / receiving e-mails	75.4
Telephoning over the Internet / Videoconferencing	8.9
Other (use of chat sites etc.)	28.2

Information search and on-line services

Finding information about goods and services	67.1
Use of services related to travel and accommodation	35.7
Listening to Web radios / watching Web television	36.2

Playing or downloading games, images or music	55.1
Reading / downloading online newspapers / news magazines	53.8
Looking for a job or sending a job application	8.8
Ordering and selling of goods and services, banking	
Internet banking	12.8
Other financial services (e.g. shares purchasing)	2.1
Purchases / orders of goods or services (excl. shares / financial services)	8.6
Sales of goods and services (e.g. via auctions)	0.6
Interaction with public authorities	
Obtaining of information from public authorities web sites	32.5
Downloading official forms	10.9
Send filled in forms	4.3
Training and education	
Formalised educational activities (school, university, etc.)	30.2
Post educational courses	15.5
Other educational courses related specifically to employment	8.4
Use of Internet for work related activities carried out outside the work premises (% on individuals used Internet in the first quarter of 2004)	23.3
Work related activities (% on individuals used internet for work related activities) (multiple answers possible)	
Finding information relating to the work or business	90.4
Accessing the employer's IT server	45.8
Communication (exchanging and accessing e-mails)	65.9
Security problems encountered through the use of Internet * (% on individuals used internet in the last 12 months) (multiple answers possible)	
Computer virus resulting in loss of information or time	27.0
Fraudulent payment (credit or debit) card use	0.9
Abuse of personal information sent on the Internet	4.0
"Spam" - unsolicited emails received	42.5
<u>INDIVIDUALS: INTERNET COMMERCE</u>	
Orders of goods and services by individuals over the Internet for private use in the last 12 months (excluding financial investments) * (% on all individuals)	4.3

Types of goods and services ordered by individuals over the Internet for private use*
(% on orders of goods and services by individuals over the Internet for private use in
the last 12 months)
(multiple answers possible)

Food/Groceries	2.8
Films. Music	20.0
Books / Magazines / Newspapers / e-Learning material	40.7
Clothes. sports goods	17.8
Computer software (incl.Video games)	11.2
Computer hardware	14.2
Electronic equipment (incl. cameras)	12.7
Share purchases / Financial services / Insurance	2.4
Travel and holiday accommodation	11.6
Tickets for events	5.2
Lotteries or betting	1.7

Payments for goods and services by individuals over the Internet by giving details
on payment card (credit/debit) * 78.0
(% on orders of goods and services by individuals over the Internet for private use in
the last 12 months)

Notes

- Data refers to the first quarter of 2004., unless otherwise stated
- * Data refers to period April 2003-March 2004

Table 2: ICT USAGE AND E-COMMERCE IN ENTERPRISES IN CYPRUS FOR 2004

	<u>TOTAL</u>	<u>SMALL</u>	<u>MEDIUM</u>	<u>LARGE</u>
	10+	(10-49)	(50-249)	(250+)
	%	%	%	%
<u>INFORMATION AND COMMUNICATION TECHNOLOGIES (ICT) SYSTEMS</u>				
Enterprises using computers	93.5	92.4	99.7	100.0
Enterprises having employed persons who regularly work part of their time (half a day per week or more) away from your premises and who use electronic networks to communicate with the enterprise's IT systems (proportion on enterprises using computers)	17.0	14.6	25.9	54.5
Enterprises using specific ICT (proportion on enterprises using computers)				
Intranet	35.7	31.9	52.5	72.7
LAN	69.9	65.6	90.8	100.0
Wireless LAN	7.5	5.8	14.2	34.1
Extranet	9.7	8.0	17.1	25.0
Enterprises having dedicated IT systems for managing orders or purchases (proportion on enterprises using computers)	37.2	34.2	53.2	52.3
<u>USE OF INTERNET</u>				
Enterprises having access to Internet (proportion on enterprises using computers)	88.1	86.0	98.7	100.0
Type of external connection to the Internet (proportion on enterprises having access to the Internet)				
Modem (dial-up access over normal telephone line)	58.4	61.0	48.1	31.8
ISDN connection	37.8	35.8	48.7	31.8
DSL (xDSL. ADSL. SDSL etc.) < 2Mb/sec	28.5	26.9	31.1	68.2
Fixed broadband	17.1	14.7	26.9	36.4
of which:				
DSL (xDSL. ADSL. SDSL etc.) >= 2Mb/sec	11.2	9.6	17.9	20.5
Other broadband connection	7.6	6.3	12.8	15.9
Wireless connection (e. g. satellite. mobile phone)	4.0	3.1	7.4	15.9

Purpose of using the Internet (as consumer of Internet services)

(proportion on enterprises having access to the Internet)

Banking and financial services	54.5	51.7	65.4	77.3
Training and education	58.9	58.9	57.4	70.5
Market monitoring (e.g. prices)	70.0	68.5	76.3	81.8
Receiving digital products	23.0	21.5	27.9	43.2
Obtaining after sales services	22.6	21.4	24.7	47.7

Usage of the Internet for interaction with public authorities

(proportion on enterprises having access to the Internet)

of which:

Obtaining information	42.2	39.1	55.1	63.6
Obtaining forms. e. g. tax forms	29.5	26.6	41.7	52.3
Returning filled in forms. e. g. provision of statistical information to public authorities	13.3	11.6	19.2	31.8
Full electronic case handling. e. g. return filled tax form and include electronic payment	7.0	6.3	9.9	11.4

Enterprises having a Web site

(proportion on enterprises having access to the Internet)

54.3	49.9	71.5	93.2
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Facilities of the website of enterprises**(enterprises as providers of Internet services)**

(proportion on enterprises having a web site or a homepage)

Marketing the enterprise's products	94.6	93.5	98.7	95.1
Facilitating access to product catalogues and price lists	50.8	48.9	55.2	61.0
Customised page for repeat clients	19.4	18.9	18.8	31.7
Delivering digital products	11.3	11.4	8.5	24.4
Providing after sales support	19.5	20.5	15.2	24.4
Providing mobile Internet services	5.7	6.5	1.3	12.2

Security facilities used by enterprises

(proportion on enterprises having access to the Internet)

Virus checking or protection software	97.8	97.8	98.1	97.7
Firewalls	37.7	33.2	54.2	84.1
Secure servers	27.7	25.2	37.8	45.5

Off-site data backup	53.8	51.6	63.5	63.6
Electronic digital signature as customer's authentication mechanism	6.3	5.4	8.7	22.7
Other authentication mechanism (e.g. PIN code)	28.6	26.9	34.6	52.3
Data encryption for confidentiality	10.7	8.4	17.6	47.7
Updating any of the security facilities (e.g. virus protection software) in the last 3 months (includes automatic updates) (proportion on enterprises having access to the Internet)	80.5	78.9	87.2	95.5
Enterprises encountered ICT related security problems in the last 12 months (proportion on enterprises having access to the Internet)	33.8	33.5	34.9	36.4

Enterprises encountered ICT related security problems

(proportion on enterprises encountered ICT related security problems in the last 12 months)

Computer virus attack resulting in loss of information or working time	99.1	99.3	99.1	100.0
Unauthorised access to enterprise computer systems or data	5.9	6.1	5.5	0.0
Blackmail or threats to the enterprise data or software	0.3	0.0	1.8	0.0

E-COMMERCE VIA INTERNET

ORDERS VIA INTERNET

Enterprises ordered products/services via the Internet during 2003 (proportion on enterprises having access to the Internet)	32.4	30.2	41.7	50.0
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Enterprises having ordered via the Internet during 2003: proportion of total orders

< 1 % of orders	46.7	41.7	61.5	68.2
>= 1% and < 10% of orders	28.8	29.8	25.4	27.3
>= 10% and < 25% of orders	7.5	8.7	3.8	0.0
> 25% of orders	16.8	19.8	8.5	0.0

Enterprises paid on-line for any products/ services orderd on the Internet in 2003 (proportion on enterprises having ordered products/services via the Internet during 2003)	51.3	49.0	56.9	63.6
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Enterprises ordered products via specialised B2B Internet market places in 2003 (proportion on enterprises having ordered products/services via the Internet during 2003)	38.2	36.2	42.3	59.1
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SALES VIA INTERNET

Enterprises received orders via the Internet in 2003 (excluding manually typed e-mails) 8.6 7.0 15.1 22.7
(proportion on enterprises having access to the Internet)

Enterprises having sold via Internet during 2003: proportion of turnover

(proportion on enterprises having received orders via the Internet in 2003 (excluding manually typed e-mails))

1+ % In-turnover	100.0	100.0	100.0	100.0
2+ % In-turnover	74.4	75.9	76.6	40.0
5+ % In-turnover	57.1	58.0	61.7	20.0
10+ % In-turnover	37.5	43.8	27.7	10.0
25+ % In-turnover	11.9	14.3	6.4	0.0
50+ % In-turnover	0.0	0.0	0.0	0.0

Enterprises received on-line payments for Internet orders in 2003 24.4 22.3 21.3 70.0
(proportion on enterprises having received orders via the Internet in 2003 (excluding manually typed e-mails))

Enterprises sold products to other enterprises via a presence on specialised Internet market places in 2003 20.2 22.3 17.0 10.0
(proportion on enterprises having received orders via the Internet in 2003 (excluding manually typed e-mails))

Usage of confidence building practices and provision of relevant information on website

(proportion on enterprises using computers)

Trustmarks	3.3	2.9	3.8	13.6
Alternative dispute resolution mechanisms (resolution via an impartial outsider)	1.2	1.0	0.9	9.1
Customer service/ complaints mechanisms	8.0	6.7	12.3	34.1

Note:

Data refers to the end of January 2004 ,unless otherwise stated