B. INFORMATION SOCIETY

***Information society** is a term used in connection with the implementation and development of new information and communication technologies and systems in particular (the Internet, mobile phones, electronic commerce, etc.) in the most various areas of everyday life.*

Statistics on the information society aims at describing the production (supply) of advanced information and communication technologies on the one hand and the spread, degree and forms of use of these technologies and systems in individual sectors of society on the other hand.

***Information and communication technologies** (ICT) generally refer to technologies, systems, activities and processes that participate in imaging, processing, storing and transmitting information and data through an electronic means.*

Notes on tables

*Table **13**-20. **Basic infrastructure of information and communication technologies***

***Public telephone service subscribers, total** – sum of subscribers to publicly available electronic communication services provided through public fixed and public mobile networks.*

***Main telephone lines (MTLs) –** subscriber's connection to the public switched telecommunication network ended by a terminal point of the network designed for access to telephone service and having a clearly specified point of connection in telephone exchange/switchboard equipment. We distinguish public fixed network MTLs in (i) households (residential), (ii) business sector and (iii) public payphones.*

***Residential main fixed telephone lines** – telephone lines installed for personal needs.*

***Business main fixed telephone lines** – telephone lines installed for legal persons, state administration authorities and other institutions, and for natural persons for business purposes.*

***Cable TVR outlets, total** – the number of subscribers to cable TV and radio (CTVR) on the files of operators of television and radio distribution systems.*

***PCs with direct access to the Internet (Internet hosts)** – a host computer is a computer with direct access to the global Internet network (it has its IP address). These computers are identified by two- or three-character codes of countries and the codes generally show the nature of organizations using computers with Internet access. Their number is allocated to countries according to country codes, but it does not necessarily imply that host computers are found in the countries concerned.*

***Internet subscribers** – the total number of clients that use at least one service of the Internet (any Internet access, except for mobile networks, via individual Internet access providers). The client is a natural or legal person connected to a complex global computer network; the person uses Internet access services based on a contract signed with an Internet service provider (ISP). Internet cafés, public information terminals, etc. also belong among the Internet subscribers.*

***Internet subscribers with temporary connection** – the total number of contractual clients on temporary (switched) circuits.*

***Temporary connection** – on-demand connection to the Internet usually made by telephone lines, be that analogue line, digital line or mobile telephone network. It includes dial-up, ISDN and mobile connection via GSM networks.*

***Dial-up** – connection to the Internet via an analogue (traditional) telephone line. The transfer rate is as high as 56 kbit/sec and depends on the quality of the telephone line.*

***ISDN** (Integrated Services Digital Network) – a digital line connected to a digital communication network built and developed on the existing telephone network. It uses the ISDN adapter instead of a modem and the maximum transfer rate is 128 kbit/sec.*

Internet subscribers with permanent connection *– the number of clients connected via a fixed circuit.*

Permanent connection *– always-on-line connection to the Internet. Most frequently it includes a leased data circuit, DSL technology, cable TV connection, satellite connection, etc.*

ADSL *(Asymmetric Digital Subscriber Line) – digital technology operating in a high-bandwidth (in contrast to ISDN); it makes it possible to raise the transfer rate of subscribers' existing connections.*

Internet subscribers with cable TV connection *– the number of clients connected via a cable television distribution system.*

Internet subscribers with other permanent connection *– the number of clients connected via a leased data circuit in particular.*

Leased data circuit *– physical lines along which data are transferred and which form a basis for permanent connection. They are provided (leased) to the user by a specialized telecommunication company. The lines use wire, optical and wireless technologies in particular.*

Internet users *– the total number of users (i.e. not only of subscribers) based on estimates made by Internet access providers.*

Domain *– a basic address on the Internet representing an IP (Internet Protocol) address. It is registered with a registration authority authorized to administer respective highest-level domains. The Czech national domain in zone .cz (ccTLD CZ) is appropriate for entities operating in the Czech Republic only and for www pages written in Czech. The number of registered domains refers to December of the reference year.*

Secure server *(Secure Socket Layer – SSL) – the protocol developed by Netscape to transfer individual data in the Internet environment in a secure manner. The SSL operates on the principle of a private cryptographic key, which makes it possible to code the data transferred within the SSL server. A URL address of a secure server usually starts with https:// instead of http://.*

Table ***13****-21.* ***Computer experts and persons educated in informatics and computer science***

Computer experts *– experts in computer science: both hardware and software (designers and analysts of computing systems, programmers, etc.).*

By Eurostat and OECD definition (the narrow definition), the ISCO-88 (CZ-ISCO-88 in the CR) divides ***computer experts*** *into the two following groups:*

– ***Computing professionals (CZ-ISCO code 213)***

Computer systems designers and analysts

Computer programmers

Computing professionals not elsewhere classified

– ***Computer associate professionals (CZ-ISCO code 312)***

Computer assistants

Computer equipment operators

Industrial robot controllers

Other computer associate professionals, n.e.c.

Persons educated in informatics and computer science are persons aged 15+ who successfully completed ***tertiary education*** *(ISCED 5B, 5A, 6) in the field of study* ***ISCED 48 – Computing*** *(system design, computer programming, data processing, networks, operating systems).*

The data presented in the table (averages of respective years) come from the Labour Force Sample Survey of the CZSO.

*Table **13**-22. **Basic indicators on industries producing information and communication technologies (ICT sector)***

*The **ICT sector** is defined as a combination of manufacturing and services industries that are generally related to electronic capture, processing, storage, transmission, display and providing of data and information. It is divided into two parts:*

- ***ICT manufacturing**: it includes industries producing machinery, apparatus, equipment, etc. which are necessary for work with data and information (handling, processing, transmission, etc.) as well as for measurement of all physical phenomena and processes in an electronic way;*
- ***ICT services**: it includes industries mediating services directly tied with information and communication technologies (sale, lease, telecommunications, databases, software, etc.).*

*In 1998, OECD laid down a list of industries producing **information and communication technologies (ICT sector)**. The list is based on the United Nations International Standard Industrial Classification of All Economic Activities, ISIC, Rev. 3 (CZ-NACE in the CR) and underwent a minor revision in the year 2002. The ICT sector is split into:*

***ICT manufacturing**:*

- *Manufacture of office machinery and computers*
- *Manufacture of insulated wire and cable*
- *Manufacture of radio, television and communication equipment and apparatus*
  - *Manufacture of electronic valves and tubes and other electronic components*
  - *Manufacture of television and radio transmitters and apparatus for line telephony and line telegraphy*
  - *Manufacture of television and radio receivers, sound or video recording*
- *Manufacture of instruments & appliances for measuring, checking, testing*
- *Manufacture of industrial process control equipment*

***ICT services (goods related services)**:*

- *Wholesale of household appliances and radio and television goods*
- *Wholesale of computers, computer peripheral equipment and software*
- *Wholesale of other office machinery and equipment*
- *Renting of office machinery and equipment incl. computers*

*Table **13**-22 does not include any data on the above-mentioned CZ-NACE activities coming within the ICT sector in services (trade in ICT products) for the absence of reliable data in requested breakdowns.*

***ICT services (intangible services)**:*

- *Telecommunications*
- *Computer and related services*
  - *Hardware consultancy*
  - *Software consultancy and supply*
  - *Data processing*
  - *Data base activities*
  - *Maintenance and repair of office, accounting and computing machinery*
  - *Other computer related activities*

The data on the ICT sector (the average registered number of employees, book value added and sales) were obtained from a structural survey on businesses operating in selected production industries, conducted regularly every year.

*Tables **13**-23 to **13**-26. **Information and communication technologies in the business sector***

The data given in this part of the Statistical Yearbook were obtained from a regular annual statistical survey on the ICT use in the Czech business sector. The survey was comparable in terms of methodology and contents with similar surveys conducted in the EU member states (Community Survey on ICT Usage and E-commerce in Enterprises 2005). The population comprised legal and natural persons, both incorporated and unincorporated, and employing 5 to 9 persons (mutation A) and 10+ persons (mutation B), operating in all industries except for agriculture, mining and quarrying, public administration, education, health and non-profit institutions.

***Broadband**: defined by means of a maximum data transfer rate, which has to be at least 144 kb/s (transmission of information towards the user).*

***Computer network**: a system of more computers, which are interconnected with communication means. The computers dispose of functional software and hardware tools enabling them mutual communication (data transfer).*

***Local area network**, LAN: one or more interconnected local computer networks whose user (organization, business) and operator are identical (the network is the property of the user). It is characterised by shorter distances between its nodes and (often) by higher transfer rates and is used especially for developing internal communication, transferring data, sharing the same programmes, data files, peripheries, etc. – generally for electronic interconnection of individual processes in businesses.*

***Electronic data interchange** (EDI) **system**: electronic exchange of data in a structured form (e.g. of orders, invoices, debentures, etc.), based on agreed standards of messages between information systems of businesses, carried out with the help of electronic means through reserved, mostly private computer connected networks.*

***Electronic commerce** (e-commerce): undertaking of business transactions (or parts thereof) with the help of advanced means of information and communication technologies. The questionnaire used the OECD definition which defines electronic commerce as the **sale** or **purchase** of goods or services between businesses, households, individuals, governments, and other public or state organisations conducted over networks based on the **internet protocol** (**Internet, Extranet via Internet, EDI via Internet**, …) or over **other computer interconnected networks** (system EDI via private computer interconnected networks which do not use the internet protocol). The goods and/or services are ordered via these networks, but payments and deliveries can be made on-line or off-line. (Orders received by fax, phone or traditional non-interactive electronic mail are not included in e-commerce.)*

***Purchase via the Internet**: purchase of goods and services implemented by means of computer networks based on Internet protocols, most frequently through the seller's www interface. Purchases implemented by virtue of orders made on the basis of information obtained from the Internet and placed in a classic way (telephone, fax, written order) or through classic, hand-written and dispatched e-mails are not included. The goods or services have to be ordered electronically via the seller's Internet-www interface to be counted in. The goods ordered in this manner can be paid for and delivered off-line, not through the Internet.*

***Sale via the Internet**: sale of goods and services implemented by means of computer networks based on Internet protocols. Orders placed electronically, most frequently through the seller's www pages and www applications, are included. Sales implemented by virtue of orders received in a classic way (telephone, fax, written order) or through classic, hand-written and dispatched e-mails are not included. The goods or services ordered in this manner can be paid for and delivered off-line, not through the Internet.*

*Table **13**-27 to **13**-33. **Information and communication technologies in households and among individuals***

The data rely on the periodic annual statistical survey on the ICT use in Czech households and by individuals, which was conducted by the CZSO in the 1st quarter of 2005. The survey followed up the pilot survey of 2002, run on a limited sample of respondents, and the periodic survey implemented in the 4th quarters of 2003 and 2004. It was based on a similar survey carried out in the

EU member states ('Survey on ICT usage in households and by individuals') with which it was comparable in terms of both methodology and contents. It was taken in the framework of the Labour Force Sample Survey of the CZSO (on a separate questionnaire), which allowed the link with socio-demographic characteristics of persons in the households. It was a face-to-face type survey and its sample comprised 10 000 individuals aged 15+. In line with the LFSS methodology, the results were weighted to the whole population of the CR.

The reference period of the survey was (i) the 1st quarter of measured year (data for households) and (ii) mostly last three months in the period observed (for individuals).

***PC user**: an individual who used PC in last three months.*

***Internet user**: an individual who used Internet in last three months.*

***Personal computer**: includes all types of personal computers: desktop, notebook or handheld (palmtop).*

***Broadband**: defined by means of a maximum data transfer rate, which has to be at least 144 kb/s (transmission of information towards the user).*

***Purchase via the Internet**: purchase of goods and services implemented by means of computer networks based on Internet protocols, most frequently through the seller's www interface. Purchases implemented by virtue of orders made on the basis of information obtained from the Internet and placed in a classic way (telephone, fax, written order) or through classic, hand-written and dispatched e-mails are not included. The goods or services have to be ordered electronically via the seller's Internet-www interface to be counted in. The goods ordered in this manner can be paid for and delivered off-line, not through the Internet.*

*Table **13**-34. **Information and communication technologies in the public administration sector: 31 December 2004***

The data come from the periodic annual statistical survey on the ICT use in the Czech public administration sector in 2004, which followed up the pilot survey of 2002 and the first periodic survey implemented in 2003. It was organized (by means of separate questionnaire divisions) in the framework of the annual questionnaire of the government departments, territorial self-governing units, semi-budgetary organizations and similar government institutions. The questionnaire divisions on ICT use were completed by government departments and territorial self-governing units (regions and municipalities). As to the ICT use, the survey was exhaustive and referred to 31 December 2004.

***Broadband**: defined by means of a maximum data transfer rate, which has to be at least 256 kb/s (transmission of information towards the user). One should be cautious when comparing results of statistical surveys because there are more possibilities of defining the broadband.*

*Table **13**-38. **Use of the Internet and computers by employees of independent surgeries of physicians***

***Other information**: legislation and general information from various areas relating to work in health establishments.*

***Other administration**: tax authority, municipal office, regional office, the Czech Social Security Administration, the Czech Statistical Office, the Institute of Health Information and Statistics of the CR; medical chambers; dental chambers; pharmaceutical associations.*

Use of the computer for keeping health records:

– *at the doctor's: keeping their patients' health records (files) in the physician's computer,*

– *on the Internet: keeping health records via the Internet, by means of health books on the Internet (e.g. the implementation of project IZIP – Internet Access to Health Information on Patients).*

The data published in the tables are comparable with the data published in the statistical yearbooks of previous years.

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Other information concerning statistics on information society is available in the following CZSO publications brought out according to the CZSO Catalogue of Publications 2006 (thematic group 9 – SERVICES, subgroup 97 – Information society):

– *"ICT in Households and Among Individuals in the Czech Republic" (Czech-English) – September 2006*

– *"ICT in the Business Sector of the Czech Republic" (Czech-English) – November 2006*

– *"ICT Usage Survey in Public Administration of the Czech Republic in 2005" (Czech-English) – December 2006*

Further data are published on the following web pages of the Czech Statistical Office:

– http://www.czso.cz/eng/redakce.nsf/i/information_society