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National Dependability Policy Environments

Poland

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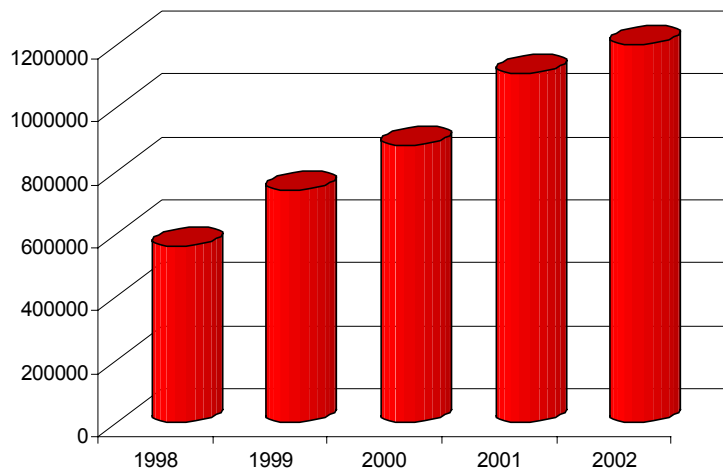
Overview of the Country's Information Infrastructure

The Polish ICT environment has substantially improved in recent years. The value of its ICT market has increased noticeably over the last five years. In 1998, it was worth 8,608 million EUROS, by 2000 it valued 12,157 million EUROS, and in 2002, it is expected to reach 16,028 million EUROS. ICT intensity (+ by components) has also increased – from 559,400 EUROS in 1998, to just under 1.2 million EUROS in 2002. Computer services currently have an annual growth rate of 30%. It is expected that this will be maintained over the next three years.¹

ICT penetration in households in Poland is low. In terms of Internet penetration, in 1999 it was estimated that there were 1.5 million Internet users in Poland out of a population of 38 million. Internet penetration in households was 4.1%. By the end of 2000, about 7% of Polish households owned computers, and 5% had access to the Internet (some 2 million users). It is anticipated that there will be 4 million Internet users by 2003. In 2000, there were 350 Internet providers in Poland. The number of Internet hosts increased from 163,400 in September 1999 to 295,000 in September 2000. The value of Internet on-line and communications services has also risen – in 1998 it was 2,776 million EUROS, in 2000, 3,751 million EUROS and in 2002 it is expected to total 4,447 million EUROS.

Number of PCs in Poland

(Source: EITO 2001)



With regard to the fixed and mobile telecommunications infrastructure, there were 22.8 subscribers per 100 inhabitants at the end 1998. By spring 2000, there were a total 4.5 million subscribers in Poland, some 12% of the population. By the end of 2000 this figure had increased to 7 million (18% of the population) and by 2004 it is expected to reach 41%. There are 565 companies with a telecommunications or Internet license, granted by the Ministry of Posts and Telecommunications.²

¹ [Poland: Data Transmission and Internet Services](#) -- (CEEIBIC)

[Poland: Computer Services in the Information Technology Market](#) -- (CEEIBIC)

[Internet Development in Poland](#), Warren Clark, U.S. State Department

² [European Information Technology Observatory, Statistical Outlook for Poland](#), pp 496, 479, 488 (EITO, Brussels 2001)

There is a growing awareness of the importance of doing business on the Internet in Poland. In a survey in March 2000, 78% of Polish business officials said that e-Business offers a company a competitive advantage. 46% also said that companies not doing business via the Internet will lose market share to their more sophisticated competitors.³ Estimates of the value of Internet business in Poland for the year 2000 range from US\$50 million to as much as US\$2 billion.⁴

Indeed, business usage is high. There are 10,000 commercial web-sites in Poland, and 80% of businesses use the Internet on a daily basis. 57% of companies have their own web-sites, and 320 companies are selling through the Internet. There is an increasing number of companies offering IT and telecommunication services.

The volume of B2C trade is, however, still limited. Consumer sales over the Internet totalled only \$3.2 million last year. Obviously this is in part a reflection of the low household penetration rates of ICT in Poland. Even still, it is the equivalent of just \$2 per Internet user.

Main ICT Regulatory and Legal Developments

Following a ministerial conference on the 'Information Society: Accelerating European Integration', held in Warsaw in May 2000 a report was published on the state of development for various central and Eastern European countries. The assessment for Poland overall was upbeat.

Poland has been working to implement the 'Aims and Directions of Information Society in Poland' document prepared by the State Committee for Scientific Research and the Ministry of Posts and Telecommunications. Adopted in the second quarter of the year 2000, this plan acts as a background for the implementation of measures needed to advance the Information Society in Poland. In the near future, an Information Society Project Office is to be created. It will merge activities of the IT Systems Department of the State Committee for Scientific Research, FEMIRCs, the Polish Chamber of Informatics and Telecommunications, and the National Contact Point for the 5th Framework Programme.

The 'Aims and Directions of the Information Society' document lies at the heart of the 'Strategy for the Information Society Development in Poland 2002 – 2006'. This includes an action plan, financial impact estimate and gap analysis by each ministerial department. The Government's overall task is seen as the creation of relevant economic, legal and administrative mechanisms to guarantee access, ensure fair competition and enable the use of ICT across all sectors of society.

The Aims and Directions Plan indicated as a priority a revision of the Commercial Partnerships and Companies Code. This has to be done in line with existing European regulations in the area of electronic commerce and telecommunication services. In July 2000, a report by the Inter-ministerial Task Group on e-Commerce was adopted by the Council of Ministers in July 2000. This document examined the possibilities of using current legal provisions for electronic transactions (and proposed solutions). However, it recognises the fact that other more advanced nations are having trouble identifying the most appropriate legal provisions and this will mean that Poland will not be left too far behind.

³ *Warsaw Voice e-Business*, March 19 2000 No 12 (595)

⁴ The latter estimation was by Warburg Dillon Read.

The importance of ICT in Poland has also been stressed in 'the Outline for the Medium Term Development of the Country until the Year 2002'⁵, and in the 'Policy Outline for the Spatial Development of the Country', approved in October 1999.

The State Committee for Scientific Research has been working on a number of specific IT related initiatives. These include the Strategy for the Development of IT for Polish Scientific Community (October 1993) and the IT Infrastructure Development Programme for Polish Scientific Communities (March 1995). In order to generate interest in e-Commerce, the Polish Association of Electronic Commerce and Marketing was established in September 1998. Meanwhile, in May 1999 an Inter-ministerial Group for Electronic Commerce was also launched to examine the regulatory requirements in relation to e-commerce.

In early January a preliminary draft of the Digital Signature Act was also published. This is seen by many as a critical part of the removal of a significant barrier to the widespread adoption of e-Commerce in Poland. This law is due to be released in conjunction with the New Civil Code and was prepared in conjunction with experts from the Ministry of Justice, Ministry of Internal Affairs and Administration, National Bank of Poland. The draft was sent to the Inter-ministerial Group for Electronic Commerce.

Notwithstanding all of these initiatives, the low density of telephone lines in Poland may become the principal obstacle in Poland's economic growth. Therefore, construction of physical infrastructure has been given the highest priority in Poland's strategy of national economic development. The stated aim of the Telecommunications Minister is to ensure general public access to telecommunications services for citizens. This includes speeding up access so that ICT development can proceed.⁶

Telekomunikacja Polska (TP S.A.) was formally privatised in September 1997. The process was split into three stages. Firstly, 15% of the companies stock was sold in an IPO (Initial Public Offering). Another 15 % of the stock was then taken over by the companies employees. The State Treasury then oversaw the sale of 25-35% of the stock to a foreign strategic investor chosen via open tender. This was finalised at the end of June 2000. It is expected that there will be over 2m new rural subscribers by the end of 2004. This means that there will be a lot of slack for new telecommunications service providers to take up.⁷

In March 2000, the existing DCS1800 mobile telephone operator was granted a licence to extend its services into the GSM900 standard and the two GSM900 operators were allowed to move into the 1800Mhz band, thus deregulating the entire market. Poland will be the first country to tender provision of next generation (3G) mobile services. The provision of fifth generation cellular services (UTMS) was set out to tender and licences were granted in January 2001.⁸ One of the licences was automatically assigned to TP S.A. The timetable for the introduction of these services will be that network operations will begin between 1 January 2002 and 31 March 2002. 60% of the population should be covered with data transmission services and 80% of the population with voice services, by the end of 2009.

The globalisation process is drastically affecting the telecommunications market in Poland. A Telecommunications Act was passed in July 2000 that will assist Poland in adjusting to some of the radical

⁵ Approved by the lower house, the Council of Ministers, in June 1999

⁶ Stated within the context of the Aims and Direction paper

⁷ Strategy for Activities of Governmental's Plenipotentiary for Rural Telecommunications for years 2000 – 2004, Governmental's Plenipotentiary for Rural Telecommunications, 2000, Warsaw

⁸ Draft concept of the UMTS Tendering Process in Poland in the year 2000 (Consultative document) Ministry of Communications UMTS Tender Documents Development Team, 2000

changes occurring in the market. This will see the full liberalisation of the telecommunications market in a two-stage process where the national telecommunications provider will have a monopoly on the provision of international voice telephone services until December 2002. This occurs in line with Poland's request for European Union membership. The law also allows for the unbundling of the local loop.

Following the successful assent of this law, it is expected that an independent telecommunications regulatory authority will be established within 1 month of this legislation coming into force and will obtain an initial operating capability within 3 months. This body will be called the Telecommunications Regulatory Office. It is looking at models in the UK and Sweden, under a 'Phare' twinning project, as examples of telecommunication regulatory bodies. An Ordinance of the Minister of Posts and Telecommunications on the 'general terms and conditions of the interconnection of telecommunications networks and rules for interconnection settlements' governs interconnection between existing operators and the dominant operator, TP S.A.

E-government is also a priority for the Polish government. The Council of Informatics (a body under the President's Chancellery office) is assisting the Ministry of Internal Affairs and Administration to draw up plans for a Strategy of Teleinformatics Development in the Public Administration (roughly an e-Government plan). It is also looking at other efforts with respect to systems compatibility, telecommunications standards, data security and other requirements laid down by the European Union, for example the Data Protection Directive. Greater efficiency in the use of information in public service, in fact, has been one of the aims and directions of the Information Society Action Plan.

Government Initiatives Aimed at Tackling Cyber-Security

The Polish government agency responsible for government computer security is the *Biuro Bezpieczeństwa Łączności i Informatyki Urzędu Ochrony Państwa*. Similar organisations exist within the Police and Ministry of Interior Affairs and Administration, but these bodies have only a preventative and forensic responsibility.

Sub-committee NKP172 of the Polish Normalisation Committee oversees the adoption of the international Information Security Standard IS017799. The Polish Academy of Sciences was given the task of examining the adjustment of legal provisions to protect citizens and the nation state against the adverse effects of the transition to an Information Society.

Whilst unrestricted development of ICT is crucial, Poland recognises that new threats have appeared. Poland is broadly in favour of minimal legislation in this area and where such legislation appears, it should be technologically neutral. It is expected that many areas of Polish law will be reviewed in light of the new dynamics of the information society. However, any new legislative instruments must not contradict current legislation. It is hoped that legislation would be open to a process of formalised consultation with software development teams, who would analyse it to see how it would impact on business and the financial consequence for development of the information market place.

Nevertheless, laws against alteration and/or destruction of electronically stored information, need to be urgently passed. Poland recognises that ICT tools may be used in crimes such as blackmail and sabotage. Any regulations should comply with the regulations of the European Union in that respect. A draft law considering the promulgation of illegal and harmful materials is also urgently needed, building on OECD material and the Resolution of the Council of Europe of 17th February 1997 (this should be adopted as a starting point).

In relation to encryption, Poland would like key escrow to be implemented.⁹ However, Poland recognises that it needs to maintain the balance between preservation of privacy and the interests of the state. Therefore, any legislation must be very carefully drafted and be done so in collaboration with the EU and mindful of the OECD's Cryptography guidelines.

Poland is also in favour of the development of relevant agencies for the detection of offences committed in ICT networks, with services available 24 hours a day (a crisis response centre). It has also looked at the appointment of court experts to deal with hacking cases and recognises the need to harmonise legal regulations and international operational activities to ensure that cross border crime can be dealt with effectively. Poland is aware that it lacks an adequate crisis management infrastructure, which may complicate its entry into NATO and full military integration.

A number of provisions relating to the protection of cyber-space and the creation of barriers to abuse of telecommunications and information networks are contained within the Telecommunications Act of 2000.¹⁰ Most notably the Act makes provision for government agencies performing tasks related to national defence, state security and public law and order to have access to calling line identification. Fines have also been established for those who fail to exercise the obligations present in the Telecommunication Act in respect of national defence and security or public law and order.

With regards to data protection generally, telecommunication companies must inform customers of the types of data that they hold on customers for the purposes of telecommunications secrecy. However, the Act requires Telecommunication providers to maintain records of customers for a minimum of 12 months to provide for evidence in case of disputes.

Industry and Other Non-Government Activities Related to Dependability

Security for the ZUS social security system is handled by a private company called Prokom S.A. - a rare example of a public sector organisation outsourcing its security responsibility to a private company.

There has also been much activity on the part of banks, with much information security work handled by banks themselves. However, Contrast S.A. and e-Telbank are generally regarded as providing leadership in this sector. Early attempts to set standards have also been undertaken by Bankow Polskich (The Association of Polish Banks).

The Polish Information Society Forum (SPIN) was registered as an association in December 1999, with an open membership model. At present its activities are not widely known, but awareness is growing.

A CERT currently operates as part of the Polish Incumbent ISP, NAST.¹¹

Public-Private Partnerships

The PIONIER (Polish Optical Internet) Programme is a major consortium of academic institutions, national and local government bodies and companies that focus on ICT applications and the creation and modernisation of the infrastructure needed to implement such technologies. The PIONIER programme is

⁹ This was in 2000 and such views may have been altered by the rise in e-Commerce

¹⁰ Chapter 5: Telecommunications Secrecy and Processing of Personal Data in Telecommunications, Telecommunications Act, July 21, 2000

¹¹ <http://www.nask.pl/NASK/CERT/ang.html> (visited on 21 March 2002)

being implemented in three stages. The implementation of applications and base services (2001 – 2002), pilot deployments of applications (2003 – 2004) and then finally, technology transfer to administration and industry (2005). Applications cover computational sciences, Internet based training, tele-education, spatial information studies, management of environmental resources and tele-medicine.

Research and Development

In the 2000 Aims and Directions Paper, the development of research on the ‘technological and organisational methods of protecting ICT systems and the data processed within those systems.’ was highlighted as essential with a view to national security. Poland’s R&D priorities are very much geared towards economic growth. Poland, consequently, needs to use its R&D capability to take advantage of the fact that it is seen as an entry point for Eastern and Central European markets.¹² Hence target orientated investments are looked upon as the only way forward. Scientific technology transfer between academia and industry is viewed as an essential part of the R&D process and needs to be stimulated. State expenditure will be increased in this area, resources permitting, with the state Committee for Scientific Research taking the lead. An award system of prizes will be implemented for the most innovative products.

Research funding, nevertheless, needs to be increased in certain areas: computer networks and dispersed information technology systems; parallel processing; computer-assisted decision-making; databases; human-computer interaction (incl. natural-language processing and speech recognition); artificial intelligence; virtual reality; bioelectronics; "artificial life"; cognitive psychology; foundations of steering systems; management systems; optoelectronics; photonics and satellite-transmission systems. A number of pilot projects would eventually follow on from initial studies¹³.

In September 1999, Poland officially entered the Fifth EU Framework Programme for Research and Technology Demonstration (RTD) and within that, the IST programme. The Institute of Fundamental Technological Research of the Polish Academy of Sciences were then chosen by the State Committee for Scientific Research as the National Contact Point for work on the Fifth Framework Programme. 24 regional and thematic contact points were also identified. Priorities for research and development include computer networks and distributed systems, parallel processing computer decision support systems databases and human computer interaction (HCI).

A number of academic departments are conducting work into dependability related issues. These include: the Laboratory of Computing Systems, Institute of Computing Science, Poznan University of Technology, which conducts research work into fault tolerant and dependable systems and failure detection across distributed operating systems; the Faculty of Electronics, Telecommunications, and Informatics of the Technical University of Gdansk, which looks into object orientated safety analysis of computerised systems and modelling and analysis of computerised systems and the Information Systems Department of the same University which has a research program dedicated to assessment of the reliability and survivability of communication networks. The PIONIER programme also carries out R&D in this field.

¹² Paper on Aims and Directions, 2000

¹³ Ibid