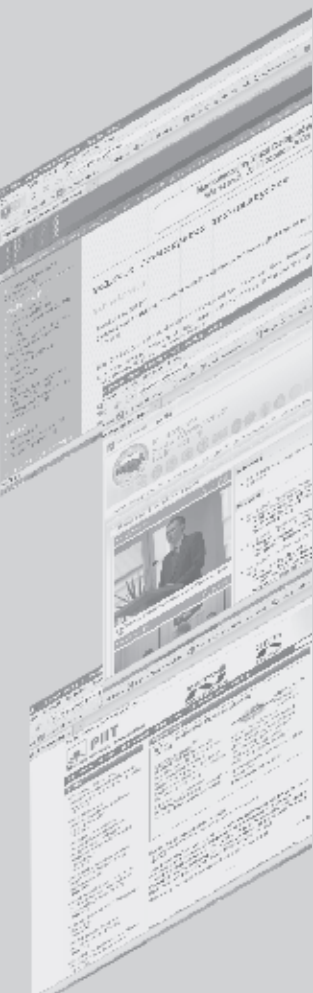




DIGITAL POLAND 2009



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Ladies and Gentlemen,

In this publication we are proud to present the leading programs and activities designed to develop our electronic administration and continue strengthening the information society in Poland.

We would like to present the most interesting initiatives and projects implemented by both central and local administrations.

This publication coincides with a series of important initiatives announced in the Strategy on the Development of the Information Society in Poland that was adopted in 2008 by the Polish Government. The initiatives include the program entitled Digital Poland and the drafts of far-reaching legislative amendments which will facilitate more effective on-line communication between citizens and businesspeople and the public administration and will also facilitate investing in a broadband infrastructure. As of the beginning of 2011, the Polish Government will offer all citizens ID cards with an electronic signature. Intensive work is in progress on the development of the public administration portal, ePUAP, which will allow many procedures to be completed on-line. The Minister of Culture started the digitalization of the national cultural heritage, while programs co-funded with EU funds have helped establish hundreds of new companies offering innovative e-services. Local administration provides more and more effective support for e-inclusion. In Autumn 2009 more than 100 local administrations launched projects which will provide computers with Internet access together with training packages to digitally excluded people. The necessary equipment is also to be supplied to schools, community centers and libraries. In line with the project Biblioteka Plus (Library Plus) implemented in collaboration with the Government, businesses and NGOs, Polish local libraries are being transformed

into multimedia centers of knowledge. Local administrations are building regional broadband networks which, when combined with the so-called “last mile subsidies”, will make the Internet generally available. Polish IT companies are appearing on foreign markets in growing numbers and young Polish IT students have achieved spectacular successes in international programming contests and competitions. Not surprisingly, the coming edition of the international competition Imagine Cup will be held in Poland. We are also preparing ourselves for active development of the European-level information society policy. In the second half of 2011, Poland will take over the Presidency at the European Union Council, and we intend to place the pressing problems of the information society high on the agenda of our Presidency.

All our initiatives are mindful of the fact that the emergence of the information society requires deep social transformations. More intensive educational and training programmes are required in order to enable as many citizens as possible to reach the level of knowledge needed for safe and efficient use of new technologies. The governmental team, Digital Poland is working on finding solutions which will allow better use of the Internet. We are fully aware that without access to proper content, digital exclusion will be transferred from the infrastructural level onto the content level.

In order to build an electronic administration, in order to offer the tools of the next generation (like the e-ID card) and to proceed with e-inclusion, we need the harmonic collaboration of the Government, local authorities, businesses and science as well as wide media support. This publication testifies to the feasibility of such an undertaking. Digital Poland is becoming an integral part of Digital Europe.

Witold Drożdż
Undersecretary of State
Ministry of the Interior and Administration

Wacław Iszkowski

We are already an information society as more than 50% of the population of Poland uses the Internet. However, the remaining 50% is deprived of such an opportunity either for technical or financial reasons, or – approximately 30% – remain barred from Internet access because they do not seem to need it or are reluctant to use it, perhaps for fear of not being able to cope with its demands.

In an attempt to extend the opportunities of Internet use through the development of infrastructure, reduction of prices, and education, it is worthwhile to seriously consider all those who refuse to use the medium. Such people should be offered direct access to the information network. One might even paradoxically claim that it is those who manage daily *without* Internet access and often without a mobile phone that may become highly useful in a situation of a major IT network breakdown – they will know how to find their way.

The development of Internet access infrastructure in Poland has recently undergone a significant acceleration, however this situation still needs recognition in various international reports. The speed of access offered is mostly up to 2 Mb/s, sufficient for most Web services. The leader of fixed Internet access, incumbent Telekomunikacja Polska, is obliged to make its network available to alternative operators.

The presence of alternative operators – targeting almost solely at the reduction of prices – is by now a fact, even though a certain lack of cooperation between the parties involved remains a problem. A significant market-share (over 30%) of broadband access has been reached by cable TV operators, who managed to build their infrastructure independently of the telecommunication regulation system. Hundreds of small local ISPs successfully supplement the infrastructure outside large cities. It is worth to mention the fast-growing offer of access using mobile telephony. As of now, practically the majority of the population is able to benefit from Internet access for a reasonable price.

Investments in IT infrastructure (traffic exchange nodes, servers etc.) keep pace with the growing needs and expectations of Internet users. The largest information portals in Poland are equipped with good server and storage capacity, proper security solutions and breakdown protection. Poland has an efficient connection to the global information network, and recently has not faced any major disturbance of any kind in its infrastructure. Nonetheless, improvements are still needed, particularly when compared with other EU countries.

The quality, credibility and security of operations booking trips or hotels, car rental, purchase of airline, railways, cinema and theater tickets is acceptable. On-line banking is offered by all major banks; an efficient interbank settlement system facilitates quick and easy electronic bank transfers. However, traditional pen-and-paper operations and orders are still in place, though their number is steadily decreasing.

Internet users in Poland can enjoy quite a rich Polish-language content at highly popular Polish information and community portals, as well as e-shops and auction portals. Polish version of Wikipedia, which started in September 2001, by November 2009 has reached almost 650 thousand articles, being Number 4 in the World. However, there are also certain shortcomings. Even though there is a Polish version of Google, the development of Polish search engine has been abandoned. There are too few websites presenting Polish history and culture. Most libraries, museums and archives are not yet available on-line.

For a truly information society, the public administration electronic services is of utmost importance. Regrettably, it is difficult to sketch an optimistic picture here. Ironically, one can claim that this situation is better than in the case where wide computerization of services is paired with excessive bureaucracy, which is still the case in Polish administration.

Polish IT professionals for years have been raising the following two main issues:

- the legal principles, the procedures and tasks of public administration should be subject to algorithmization, in order to make the operations verifiable, explicit, non-contradictory and complete;
- the public administration is free to demand from a citizen only such information which it fails to have in one of its public registers.

Both statements find it very difficult to reach the awareness of public officials and policy makers, though gradually this is changing. Thus, there is a chance that the IT systems of individual departments in public administration included in the ePUAP – the common electronic platform for public services – will operate according to the above-mentioned two principles.

It is worth noticing in this context that the primary objective of computerizing public administration should be a full accessibility of e-services to officials who serve citizens at their offices; making the services accessible via the Internet to the general public is a matter of secondary importance. It is only then that information society services are accessible to all citizens – including those who fail to have access to the Internet or for various reason refuse to use it. The most valuable improvement of such services should be an extensive simplification of every official matter. Poland seems to be at the beginning of this process and a lot needs to be done in this respect; the reforms have a chance of being aided through an efficient use of European funding.


Being already an information society, Poland must try to foresee and prevent the risks connected with this situation. An information society stores most (if not all) information about itself in the global information network, where the information is prone to become embezzled by people or criminal groups of an international scale. Regrettably, the means of defense against highly detrimental acts – theft of assets and

identity – are still limited. Such proneness to theft is on the one hand a result of often unconscious light-heartedness of Internet users caused by the lack of proper knowledge of risks, while on the other hand, it may result from a lack of effective measure for combating theft on the part of the State.

While thinking about the future, it is worthwhile to consider the development of a NGN – Next Generation Networks. NGNs need to be constructed to offer high throughput, to be able to deliver HDTV content and then 3D one. The investments will be very expensive, featuring low rate of return, but without them the development of the information society can slow down or even stall in the coming years.

The digitization of television, which is supposed to be completed by the year 2014, will bring about some major changes on the media market, resulting from the development of various audiovisual contents for information, education and entertainment. This process will be combined with issues of ‘selling’ the content coming clearly to the foreground, seen in combination with the rights of authors and producers, vis a vis expectations of users who seek freedom of access. There will be a natural attempt to cover the relevant costs from advertising, this however will significantly influence the prices of the advertised goods and services, thus affecting the economy. The issues of how the economic environment should be shaped in the new information society constitute a major challenge for lawyers and economists.

The development of the information society constitutes a continuous process – there is no final state which can be seen as the termination of the process. Measures of development are only estimates and will probably change with the progress of information technology. In Poland, this process of development has been commenced, while the expectations of the general public are aroused to a degree where they



must be met by both business and public administration. What is highly positive, even those politicians who not so long ago questioned both the sense and the usability of the Internet now become advocates of this medium.

Wacław Iszkowski (Ph.D. Eng)
President of PIIT

Tomasz Napiórkowski

Membership in the European Union and thus the ability to benefit from its structural funds has contributed in a significant way to the acceleration of work on the development of electronic administration in Poland. Since 2004, external co-funding based on European Regional Development Fund has been offered to projects of both central and regional levels. The below-presented projects signal just the spectrum of areas where activities are initiated: from spatial information systems, through public statistical information or tax administration systems to regional-level public administration projects.

Spatial Information

Geoportal.gov.pl was implemented during 2004-2008 by Head Office of Geodesy and Cartography. It is an Internet portal which offers public administration, businesses and citizens access to spatial data collected in the State geodesic and cartographic resources. *Geoportal* complies with the INSPIRE Directive and performs the function of a broker that makes available geospatial data and services. An important feature of this solution is interoperability achieved by an application of recognized standards.

Geoportal 2 is a development of the high-quality national spatial information infrastructure of georeference registers and services important for economic activities, sustainable development and protection of the environment.

Completion of the *Geoportal 2* implementation is planned for 2012.

Taxes and Customs

One of the projects implemented by the Ministry of Finance during the period 2007-2013 is the *e-Podatki*. It consists of a set of organizational, legislative and IT activities meant to equip the tax administration with modern information management tools. The related *e-Deklaracje* (its first stage was

implemented in 2008) vested in economic entities an ability to submit tax returns in an electronic form. More than 60 interactive forms were made available, integrated with the www.e-deklaracje.pl portal. A repository of electronic forms was established, supplemented by help desk services. Electronic forms support the process of filling-in, affixing of a secure electronic signature and transferring the tax return form to the fiscal office through a single access point. The use of web service standards and supplying software developers with a test environment facilitated high level of interoperability of the *e-Deklaracje* system with other e-government systems.

e-Deklaracje is continued by *e-Deklaracje 2* that introduces a new services, i.e. the submission of electronic tax return form by citizens who did not proceed in with business in the year 2008, without the requirement of a secure electronic signature verified by the qualified electronic signature. The incentive was very important in order to spare the cost of such a signature, particularly for those citizens who do not conduct business and submit the tax form once a year. Till July 2009, the electronic tax returns submitted through the *e-Deklaracje* system numbered to more than 0.5 million, with some 80 thousand of them being the annual personal income tax returns. The most important benefits yielded by the implementation include simplifying fulfilling tax duties for businesses, improving taxpayer service and effectiveness of tax administration, facilitating access to tax information.

e-Deklaracje 2 project will be completed at the end of 2013.

The Ministry of Finance proceeds also with the *e-Cło* project based on EU initiatives and regulations. *E-Cło* will implement an e-Customs initiative. The long-term objectives are effective customs control and supervision, improved efficiency of customs administration, secure exchange of data with businesspeople and with other EU customs administrations.

Business Statistics

Projects in the domain of simplification of the business registration process and statistical duties are implemented by the Central Statistical Office (SISP – Public Statistical Information System) and by the Ministry of Economy (CEIDG – Central Business Activity Register and Information System).

The *e-Statystyka* system will offer on-line access to statistical information to citizens, economic entities, public institutions and administration. This information will be available through the new website of the Central Statistical Office and also through the Electronic Platform of Public Administration Services (ePUAP). An important objective is the performance of statistical duties through the Internet (electronic reporting). A matter of major importance is the ability to register businesses and to update registration data on-line in the REGON statistical register.

A significant facilitation will also come from the Central Business Activity Register and Information System (CEIDG). Implementation of this project results from provisions found in the *Business Freedom Act* that obligates the Minister of Economy to establish CEIDG. The purpose of the project implemented by the Ministry of Economy is the fully electronic and integrated business registration. A central database of businesses will be established, storing information about granted licenses, permits and entries recorded in the regulated business register. The on-line process will use an interactive form that covers all data required for CEIDG, tax service, statistical service and social insurance. The electronically signed form will be transmitted between relevant agencies using mechanisms offered by ePUAP platform.

CEIDG system will be an important stage of the EU 2006/123/WE Directive implementation that provides for the liquidation of barriers for business activities.

This project will be implemented till 2011.

Health Care

Electronic Platform for Collection, Evaluation and Making-Available of Digital Resources Concerning Medical Events is one of the biggest e-health projects in Poland, currently implemented by the Ministry of Health. The project will facilitate health checkups, ease registration and introduce an e-prescriptions. A matter of vital importance is the access by the rescue services to medical information such as blood group, allergies, chronic diseases. The implementation of the system should significantly improve the efficiency of the healthcare system in Poland. The relevant data will be presented in unified standards; requirements concerning IT systems of medical registers will be developed together with a specification of data formats, communication and encryption protocols, making it interoperable with other EU IT systems. Completion of the project is expected to take place in 2014.

Regional-Level e-Services of Public Administration

The SEKAP System (Electronic Public Administration System) benefiting from external co-funding from the Integrated Regional Development Program 2004-2006 is a good example of regional-level e-government services. Launched in the Silesian Voivodship in 2008, the SEKAP System established standards for public administration in Silesia. 54 local partners participated in the project.

Signaled here are just selected projects related to the development of electronic administration in Poland. The aim of the 7th priority axis of the Innovative Economy Operating Program is to improve conditions for conducting business through improved availability of public administration information resources and digital services addressed to citizens and businesspeople. The list of projects approved covers 29 projects (e.g. land and mortgage register, national court register, full implementation of 112 emergency number infrastructure, systems for social security

and social welfare). EUR 788.2 million was scheduled in total for the years 2007-2013 to develop electronic administration at the central level, however, many e-government projects are co-funded from the Regional Operating Programs at the regional level.

In the current financial perspective of 2007-2013, significant funds have also been assigned to develop electronic business and mitigation of technological, economic and mental barriers of the use of e-services. EUR 1.415 billion was assigned in line with the 8th axis of the Innovative Economy Operating Program for 2007-2013. The local initiatives are substantially supported by a special body – Information Society Council of Marshalls at the Convention of Marshalls of Voivodships.

Considering the funds at disposal in Poland, and taking into account at the same time the legislative works which are in progress in the domain of electronic economy and information society, it can be claimed that the objectives presented in the *Strategy on the Development of the Information Society in Poland for 2013* are of a major chance of successful implementation not only in the area **State** but also in areas **People** and **Economy**.

Tomasz Napiórkowski
Information Society Department
Ministry of the Interior and Administration

Wojciech Wiewiórowski

The development of public e-services in Poland constitutes a peculiar merger of central initiatives launched by governmental institutions, and numerous local initiatives kept in place by local-government agencies of all levels. Poland, a 40-million country with a three-tier local-government system, should offer its citizens and businesses an array of public e-services which would facilitate reaching the State information resources and systems where services can be obtained through a single Internet access point.

Similarly to most EU countries, e-services in Poland are offered in specialized IT systems operated by individual public institutions – both at the central-government or local-government level. It is assumed, however, that the level at which the services are offered is of secondary importance to the citizen or businessperson. A matter of utmost importance is the ease of access to a service or information resource. Thus, the facilitation of easy access from a single point in the Internet constitutes the chief objective for institutions which coordinate the development of public e-services. Such institutions include the minister responsible for the IT in administration (since 2005, it is the Minister of Interior and Administration) and the Committee of the Council of Ministers for Computerization and Communication (established in 2007).

Of the wide variety of activities initiated in Poland in the domain of e-government services, there are three projects which deserves a special recognition. Implemented by the Minister of the Interior and Administration, they are addressing all spheres of public e-services and include:

- a) Public Information Bulletin (information resources);
- b) ePUAP – Electronic Platform of Public Administration Services;
- c) pl.ID (identification of user and integration of the public registers services).

Public Information Bulletin

Europe has for many years seen the vesting-in of the right to access information as a way leading towards the civic society. Following this reasoning and assuming that the information technologies offer citizens new avenues of contact with public administration, Poland adopted in 2003 a unique solution in the form of the Public Information Bulletin (BIP). Established as the official medium of communication on the Web, BIP facilitates general, free-of-charge access to public information through any Internet browser. The publishing of public information in BIP constitutes an implementation of the obligation to make public information available, and thus the information does not have to be published in other forms stipulated by the Acts. This approach of the legislator is meant to collect in the future most of public information in a generally accessible ICT network.

Access to the information found in BIP is possible both through BIP-related websites of public institutions or through its central home page, at www.bip.gov.pl. Institutions are obliged to prepare, maintain and update the contents on BIP pages.

Websites of BIP-related institutions (entities) present amongst others:

- information about a given institution, the organization, scope of activities and competence;
- the constitutive bodies of the entity, the persons who hold functions in the bodies and their competences;
- the ownership structure of the entity and assets it controls;
- the rules and regulations of the entity;
- information about registers, files and archives kept and about methods and rules of availability of the data they contain;
- customer guide-books and compendiums of knowledge about services rendered by the entity.

The Public Information Bulletin becomes a platform of communication between public administration agencies and other entities and citizens. The process of integration of the information function as provided by the Public Information Bulletin with the service function offered by the Electronic Platform of Public Administration Services (ePUAP) is currently in progress, and is meant to result in a uniform information system. Entities obliged to make public information available will publish certain sets of information to supplement the content of the Catalog of Services at ePUAP and to update the service platform. Information collected in BIP so far should become integrated with the information structure of the Catalog of Public Services found at ePUAP. A selection of a service from the list will enable the user to obtain general information about that service. General descriptions will be unified on an all-system scale; the user will be free to go from the level of general description to a detailed description found off the platform, e.g. on a given institution's own website, or will go straight to an e-form found at ePUAP or at a website of an administration agency.

Electronic Platform of Public Administration Services

Access to public information resources, constituting an implementation of the right to obtain and process public information by the citizens, meets just a minor part of the expectations of citizens and business-people that concern electronic public administration.

Poland has started implementing a joint nationwide service platform, ePUAP, Electronic Platform of Public Administration Services, which is meant not so much to replace activities of individual public entities, as to coordinate them and facilitate their use from a single access point. Such coordination should lead to an improved availability of services and to the launching of complex services which employ electronic operations of various public entities.

One of the main tasks of the ePUAP platform, launched in 2008, is to integrate activities of governmental institutions with those of the local-government units. This is achieved through services which coordinate and support the framework of interoperability and of joint catalogs of services. ePUAP facilitates the use of on-line public services through introducing a uniform classification (catalog of services). The result will be a facilitation of service search by the end user coming close to the ability to ask questions in a natural language.

The total expenditure will amount to c.a. PLN 140 million, with 85% of the sum coming from the European Regional Development Fund in line with the Innovative Economy Operating Program.

pl.ID – Polish ID Card

The matter of identification of entities which use electronic public services and the integration of services based on main public registers are undertaken within the third of the most important projects of the Ministry of Interior and Administration, the pl.ID project.

Spanning the years 2009-2013, the pl.ID project has the objective to introduce an electronic ID card which would offer to its bearer authentication functions in the IT systems of the public-sector units. The new ID document will comply with the EU concepts of the e-ID. The pl.ID project provides also for the computerization of the Registrar's Offices and the reconstruction, modernization and integration of the existing State registers.

pl.ID is meant to offer efficient and easy identification and authentication of a citizen in the IT systems of public entities. The project leads to an integration of State registers, meant to offer effective flow of information between registers and the information systems of various public entities, a unification of data concerning citizens and information about their documents, as collected in the public registers.

Such measures lead directly to an improvement of services offered to citizens and businesspeople through the standardization and integration of the processes conducted by public administration. A way that leads to this objective as well as to the simplification of administrative procedures is the reduction of the number of required documents which confirm personal data and civil status.

The electronic ID card, an identity document equipped with a microprocessor, will include a free-of-charge electronic signature which facilitates authentication of every citizen in contacts with public administration. pl.ID card will also perform the function of digital key that facilitates access to citizen-related data found in State registers. Such a function will be particularly useful when it becomes necessary to supply additional documents (e.g. certificates) found at other offices.

The total expenditure will amount to c.a. PLN 370 million, with 85% of the sum coming from the European Regional Development Fund in line with the Innovative Economy Operating Program.

*Wojciech Wiewiórowski (Ph.D.)
Director of Department for Information Technology Development
Ministry of the Interior and Administration*

Wiesław Paluszyński

The concept of European Computer Driving License (ECDL) implemented for 10 years in Poland, enjoys a growing reputation both among young Poles who continue their education, and among those who are employed and see it as a chance for improving their qualifications. ECDL is also recognized by employers, in whose opinion the ECDL Certificate confirms knowledge of IT techniques needed by a modern employee.

The concept of a national unified certificate of computer skills came into being in 1992 in Finland, where the first ECDL certificates were issued in 1994. In early 1996, following the Finnish example, the Council of European Professional Information Societies (CEPIS) decided to popularize the European Computer Driving License in all European Union states.

ECDL in Poland

In Poland, the ECDL initiative was undertaken by the Polish Information Processing Society, which prepared documentation and procedures and chose and trained examiners. Operating within the PTI structures, the Polish ECDL Office took care of coordination, operation of certificate issuing system and supervision of the examinations. In 1997, the first certificates were issued, while in 2006, the ECDL Advanced certification was started.

In Poland, the ECDL certification instantly enjoyed success especially among the young. The ECDL dissemination initiative was augmented by the *Interk@sa* project, a support program addressed to schools which prepare their students to an unrestrained functioning in the information society in accordance with EU standards.

In 2005, the Council of IT at the Ministry of Interior and Administration recommended ECDL as a standard of qualification concerning the use of IT tools and methods as applicable to civil servants.

In 2005, the University of IT and Management in Rzeszów won the Digital Literacy Award of the ECDL Foundation.

In Poland, 44.000 people are registered in the ECDL program, and over 220.000 tests have been conducted. With the total number of more than 18.000 issued certificates, Poland belongs to the group of countries of a medium progress in ECDL implementation.

By the end of October 2009, more than 15.800 European Computer Skills Cards have been issued, more than 94.000 examinations were conducted, and 10.600 certificates were granted (ECDL Core, Advanced, eCitizen, CAD and WebStarter).

ECDL examiners are professional computer scientists usually they are members of the Polish Information Processing Society. Contact data of examiners can be found at www.ecdl.com.pl; they can be also obtained from the ECDL Coordinator for Poland or from Regional Coordinators. In 2007, there were 2.000 examiners registered at the Polish ECDL Office.

Educational institutions – schools, colleges, training centers, etc. – are free to sign with the Polish Information Society agreements on collaboration in organization of ECDL examinations and dissemination of the idea of the program. Trainings organized at the partner centers are subject to certification by the Polish Information Processing Society for compliance with requirements of the ECDL Foundation. The verification process is culminated in the awarding of the “Compliant with ECDL” seal to a given training center.

„...it is necessary that the unified reference point is recognized in the general knowledge of information technology techniques (e.g. the so-called ECDL that is being implemented by European Union), and the system of specialization degrees for computer scientists. Certificates like those can be of assistance in determination of qualifications and responsibilities of employees employed among others in public administration...”

“Objectives and Directions of Development of the Information Society in Poland”, KBN, Warsaw, 2000.

„...[ECDL examiners] are extremely friendly, show uninterrupted readiness to offer help, they even allowed me to pass one of the exams at home when I felt ill. I think the certificate like this will improve my chances of finding a job to be done at home.”

Krystyna from The Foundation for Helping Physically Disabled Mathematicians and Computer Scientists

„When employment is changed, the certificate is a credible document that confirms my ability to use computer”

Piotr, civil servant

*Wiesław Paluszyński
Vicepresident of PTI*

Continuing substantial achievements of Polish mathematics and logics, associated with the names of Stefan Banach, Jan Łukasiewicz or Stanisław Ulam, the Polish computer sciences continued its development even during the difficult years 1950-1980, maintaining contact with the world and transferring the most important developments to Polish universities. This enabled many IT specialists to become highly educated, and after the 1989 transformation, they had no problem using the latest information technologies. Many of them work successfully in Poland and abroad.

Even though Poland is not a leading supplier of hardware or software, there are still specific domains where Polish computer scientists are world leaders. Worth mentioning here are the works of Prof. A. Mazurkiewicz on distributed algorithms, the rough sets theory of Prof. Z. Pawlak applied in data analysis, works of Prof. J. Kacprzyk on fuzzy logic in control and decision making, and works of Prof. R. Słowiński and Prof. A. Skowron. Highly recognized are the achievements on diagnostics of digital systems and the Poznań school of task scheduling and scheduling algorithms, represented by works of Prof. J. Błażewicz, Prof. A. Janiak, Prof. J. Węglarz and others. Works of Prof. S. Węgrzyn on nanoinformatics in biological systems is an excellent example of multidisciplinary applications of computer sciences.

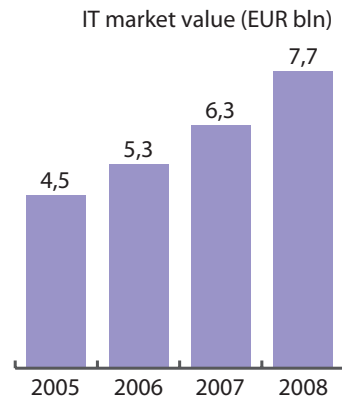
Worth mentioning here are the spectacular achievements of young scientists. In 1995, Marta Kasprzak was honored by the Polish Information Processing Society for her master's thesis, in 2000, she was awarded the Prime Minister's award for her doctoral dissertation, while today Professor Marta Kasprzak is engaged in bioinformatics and applies IT tools in analyzing DNA chains. Professor Mikołaj Bojańczyk from the Institute of Information Technology, University of Warsaw, is 32 years old but managed to solve a number of problems other scientists had been struggling with for 20 years. Perhaps the youngest Polish doctor, Adrian

Kosowski, rewarded for his master's and doctoral theses, has already published 60 publications on the theory of computing. Accomplishments of Polish students of information technology give us hope for continuing that truly splendid tradition. Since 1995, Polish student teams have been the finalists of the ACM International Collegiate Programming Contest, the world programming championship (they won the contest in 2003 and 2007), while winning the leading places in other prestige competitions like TopCoder Open, Google Code Jam or Microsoft Imagine Cup. Their achievements were recognized by having the 2010 Image Cup scheduled for organization in Poland.

From its very beginnings, the Polish IT market has been and still is unique because of the high market share of local companies. According to this year's Polish edition of *Computerworld TOP 200* list, as many as 12 out of the top 20 biggest companies and groups of companies are domestic businesses. In the top twenty, the Polish distributors (ABC Data, Action, AB and Komputronik), integrators and suppliers of IT services, hardware and software (Asseco Poland, Vobis, NTT System, Pronox Technology, Comarch, Sygnity, PC Factory and ABG) compete on an equal footing with Polish branches of world giants (HP Polska, Tech Data Polska, IBM Polska, Microsoft, Intel Poland, Dell Computer Poland, Acer or Fujitsu Technology Solutions) which have been present on the Polish market for many years now. According to the PMR analyst company, the total value of the Polish IT market arrived in 2008 at PLN 27.1 billion (EUR 7.7 billion). Even though the second half of 2008 showed some effects of economic slowdown, the 2008 sales of PCs were at record level, at 3.7 million in total, with 2.11 million notebooks and 1.59 million desktop models according to ICD Polska; however expectations for the 2009 sales are 2.8 million PCs only. According to PMR, the market dynamics is to be a single digit figure (for years it has remained at or above 15%), but the IT companies expect economic recovery at the turn of the year, combined with an increase of public administration investments aided by EU funds.

	Top 10 IT Company on Polish market	Total sales in Poland In 2008 (EUR mln)
1	HP Poland	792,6
2	ABC Data	775,6
3	Action Group	627,8
4	AB Group	480,1
5	Tech Data Poland	454,5
6	IBM Poland	355,1
7	Microsoft	340,9
8	Asseco Poland Group	264,2
9	Vobis	250,0
10	Intel Poland	241,5

Source: Computerworld Top200 2008



Source: PMR

The development and implementation of an entirely new IT system for the calculation and payments of retirement pensions was a necessary condition that governed the realization of the reform of the pension system which was launched in Poland in 2000. Before the reform, the Social Insurance Institution (ZUS) handled just one premium from every employer, processing some 18 million account documents a year. After the 2000 reform, every insured person has its own account while the system is required to distribute the premiums paid by every employer between five funds, to manage transfer of premiums to the Open Pension Funds (OFE) and to process some 260 million account documents a year.

In the early years of implementation, the supplier of the system was forced to act in circumstances of unstable changing legal grounds (the legal system of social insurance was composed of 19 Acts and 48 administrative acts). Till 2002, the said legal foundation was modified as many as 230 times resulting in a condition severely hampering both an elaboration of the system and its initial implementation. But the matter that proved to be the biggest problem during 1999-2000 was the quality of data delivered in the form of paper insurance declarations; there was only 5-10% of payers who communicated with ZUS using electronic communications, and only 70% of the paper forms which were filled-in correctly. In December 2001, the Social Insurance Institution, the then Ministry of Economy, Labor and Social Welfare and Prokom Software launched a special project called Program 100% that was meant to improve the quality of documents up to more than 90% using electronic forms; at the same time, during 2001-2003, the legal grounds of the social insurance system stabilized.

Changes in the IT system (including the implementation of an application that pre-verified and transmitted data, and the development of special algorithms which corrected the most frequent errors), and changes in the legal foundation which were introduced (as of July 2007

all payers employing more than 5 people have been obliged to use the electronic document system) resulted in a situation where c.a. 75% of all payers deliver electronically the data of more than 95% of the insured. The quality of the documents reached 99.5% correct; only 0.5% requires clarifying.

Annually, the Integrated IT System for Social Insurance Institution (KSI ZUS) accounts for premiums amounting to approx. PLN 120 million. It is used daily by some 15.000 users-employees of the Social Insurance Institution who have access to the database of more than 40 TB. This makes it one of the world's biggest social insurance IT systems of such complexity, which was recognized by the European Commission that awarded it with the main award „eEurope Awards for eGovernment 2005”.

The KSI ZUS system is currently being developed and maintained by Asseco Poland, the largest IT company listed on the Warsaw Stock Exchange. As a result of the merger of Asseco Poland and Prokom Software in April 2008, the company became one of the ten largest IT companies in Europe in terms of capitalization. Its IT systems are used by more than half of the banks operating in Poland. The company also provides solutions for the insurance sector, enterprises and public administration.

Besides the system for ZUS, Asseco Poland is carrying out large IT projects, such as the Integrated IT System for PZU (biggest Polish insurance institution), the Central Register of Vehicles and Drivers system for the Ministry of Interior and Administration or the Integrated IT System for the PKO BP bank.

Integrated Management and Control System (IACS) handles direct payment service for farmers-agricultural producers, according to the principles specified by the Common Agriculture Policy. The system is an indispensable tool for handling and controlling aid proposals in the process of transferring direct payments from the EU funds to farmers. Owing to the IACS system, Polish farmers obtained in 2004 over PLN 1 billion in direct payments in accordance with the schedule adopted by the Polish government.

The system has been designed by HP Poland for the state Agency for Restructuring and Modernization of Agriculture (ARiMR); the leading subcontractor was ABG, other subcontractors included Intergraph Poland and ZETO Olsztyn. Today ABG as a member of Asseco Group is a leading Polish supplier and contractor or subcontractor of IT systems used for management and handling funds in the Polish agricultural sector, i.e. systems for handling SAPARD funds, PROW system for rural area development, IRZ system for identification and registration of animals, LPIS system for identification and registration of farming plots.

The framework of the IACS system was designed and implemented between November 2001 and December 2004; the registration of households commenced in March 2004; the payment system started in May 2004. Since 2005 the system is run, maintained and developed under the warranty and maintenance agreement by ABG and is used by ARiMR's personnel at the county level, voivodship level (Polish provinces) and central level, receiving and processing applications for payments. Farmers have access to the system via the Internet.

The main functions of the IACS system include:

- registration of producers,
- registration and validation of applications for payments,
- calculation and handling of payments,
- cross compliance control on spot,
- verification of applications based on information from GIS.

The system serves:

- 8500 concurrent users with access from all over Poland,
- 330 user locations (counties, voivodships, ARiMR's central office),
- 1.8 million households,
- 30 million farming plots,
- 60 million documents.

The IACS system is one of the biggest IT systems used in Polish public administration. In 2008, the system handled PLN 13 billion (EUR 3 billion) payments for 1.5 million beneficiaries. Approx. 1.6 million payments applications are managed on yearly basis, there are more than 2.1 million agricultural producers and almost 1.3 million locations of animal herds registered in the system.

The competence and experience gathered by ABG in the implementation of IACS in Poland gave the company the solid ground for offering the development and implementation of such a system in Romania. ABG in close cooperation with Romanian Siveco SA is now supplying an IT system handling direct payments for Romanian Agency for Payments and Intervention in Agriculture.



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Polish Chamber of Information Technology and Telecommunications (PIIT) is a non-government NTA with over 150 ICT companies as members. Established in 1993, PIIT is a member of DIGITALEUROPE (EICTA) and WITSA.

The main activities of the Chamber include:

- *formulation of opinions on draft acts and decrees concerning potential effects on the ICT business, lobbying for the development of the ICT market (copyright, tax law, telecommunication law, public procurement law, electronic signature and electronic document, protection of personal data, electronic services, recycling etc.), support and representation of the Chamber members at government agencies in matters of critical importance for ICT in Poland, evaluation and information to the Chamber members on potential effects of implementation of EU directives on the Polish and European ICT market.*
- *promotion of the Polish ICT industry in the government, parliament, central and local administration through exhibitions, fairs and conferences, presentations and discussions on ICT sector, promotion of Polish ICT companies in the EU and other important regions (Ukraine, Canada, Australia, USA, Far East), combined with maintenance of contacts with the trade missions.*
- *arbitration of business disputes and disputes on ownership of Internet domains (Court of Conciliation for Internet Domains at the Chamber established in 2002).*

Polish Information Processing Society (PTI) is an association uniting Polish computer professionals, which exists since May 1981. The Society's activities are aimed at support and promotion of R&D activities in the fields of computer science and technology. The Society represents its members to home and foreign institutions, raises the level of knowledge and professional ethics of its members, facilitates the exchange of information within professional community, popularizes IT issues in society. The Society reaches its goals through cooperation with economic entities, domestic and foreign organizations and institutions, publishing accomplishment, organizing congresses, conferences, lectures, competitions, professional consultancy, workshops and trainings, creating scholarship funds etc.

Since 1992, PTI has been a member of the Council of European Professional Information Societies (CEPIS). On the basis of this membership, PTI is in charge of national structures for both professional and citizen-level computer literacy certifications: ECDL (European Computer Driving License), and EUCIP (European Certification of Informatics Professionals).



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