

IT in Poland - the Story of Hopes, Pitfalls and Limited Success

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In memory of Zdeněk Rusín.

Abstract

Polish IT seems to be in full positive swing now. It's view from outside however is somewhat different. This article brings closer the historical roots of nowadays Polish IT arena and describes the process of change in it, which is far from finish. Few aspects of computer communications services available in Poland are discussed and an ample part has been devoted to economy and market statistics. Major IT pitfall which took place in 1995 has not been spared. Crime story lovers will find something interesting in the chapter where software legality issues are discussed. Those wishing to visit Poland for computer exhibitions and conferences will learn where to go from last two chapters.

If anyone feels dissatisfied with the contents of this - please raise your doubts and questions during seminar's discussion time or write to the author to the address above. Every letter will be individually answered ! To clear any doubts I would also like to emphasise strongly I'm the only person responsible for all views and opinions expressed below.

Mottoes :

1. To Vick Lovell, who told me dragons did not exist, then led me to their lairs
Ken Kesey - One Flew Over the Cuckoo's Nest
2. Organisations that do not make transition will fail, they will become irrelevant, or cease to exist.
(Paradigm Shift - Tapscott and Castron, 1993)
3. What's good for Bill Gates, is good for America.
(New American proverb)

1. Historical background

Current (this is written beginning of April, 1996) situation in Polish IT, despite its similarities and dissimilarities to neighbouring countries, has its roots very much back in the late seventies.

Following the economic boom of the first half of the 70's, the national economy of Poland started failing in crucial areas, what led to the well known and publicised upheaval of 1980. Together with internal and external restrictions which resulted from martial law introduced 1981, this has almost cut Poland from significant influx of modern IT technology for some 5-7 years. Affected was not only direct import of computer hardware and software, but also the level of general and specific knowledge in that area.

Reacting to martial law in Poland the Western countries introduced many restrictions and cut all cultural and scientific exchange. Internal restrictions on abroad travel and strict censorship on all literature and periodics did the rest.

IT professionals in Poland spent early 80's trying to keep all that ancient computer stuff some-how running against all odds, while their colleagues in other countries took part in what had become the most exciting experience of their professional lives. That, in my opinion, was the main reason for which Poland has bypassed one whole era in IT's history - the era of mini- and midrange computers.

Situation started changing around 1985 when we leapfrogged from ageing mainframe onto absolutely immature PC. With worst possible effects.

Anyway - quite a number of fortunes were made by bringing the cheapest Far-Eastern stuff into Poland by private channels and selling them to companies, businesses and administration. Trading illegally copied software and poorly xeroxed manuals had significant share in that.

It was during the late eighties when *MLAMOJ*, a character widely known here in Czech Republic, knocked the door of Polish enterprise. At that time he didn't wear colour Versace jacket and Paris tie, but he was even more successful than his nowadays colleague, who first thing after entering your office room produces a cellular phone out of his attaché case and places it in front of himself. Usually he used simple and unsophisticated method to persuade potential buyer : after throwing on his/her desk few leaflets advertising just one more PC-XT clone, he would say : *In terms of computing power that's much more than your vintage ODRA (IBM, ICL, Univac etc.) mainframe. With that computer, which obviously is the latest state of the art, you would not only serve your whole enterprise, you would serve it better and you would reduce significantly your personnel soon, as they did it in America.*

Hearing that and understanding hardly anything the managers had nothing to do but believe that rubbish and did order to buy. What's good for America, must be good for us (see motto no. 3).

At that time most PCs were imported by private individuals, taking advantage of some relaxation in state rules. PC sales boomed, companies trading them rose and fall leaving owners with enormous fortunes. To prove and illustrate that let me quote one example. Just recently clearing old papers from my files I spotted a copy of a bill my company paid back in 1988 for a device called *mouse*. It cost then the equivalent of 4 (!) monthly wages of a top class IT specialist ! There is no need to add, it wasn't any quality product at all !

That way an enormous flux of money from state sector into private hands has become another important result of the PC-boom of the late eighties. By these means a statistical

paper money became real, substantially increasing the level of inflation, and, most probably, drawing nearer the collapse of the system as a whole.

By an irony of fate the very same period of time was seen as the worst one by Western IT companies representations operating in Poland. No one in those days seemed to be believing in what they had to say and to offer if that had not been PC or something about PC.

System ? That's easy - it's called dBASE.

System design ? No longer in fashion.

Analysis of requirements ? You must have been released from kind of Jurassic Park recently.

Overall system concept ? It's cuckoo's ward were you do belong.

The whole thing wasn't without strong support from media, which always regarded themselves as apostles of progress. As *MLAMOJ* here, in Czech Republic, a symbolic creature in Poland became *a brother-in-law of a county governor*, who, according to media report (authentic case !), needed only two nights to write *a program to serve every affair of that county's office*. Needless to say - on a single PC.

That was the heritage with which Polish IT entered the political turmoil of the nineties.

2. Change begins

The process of change in Polish political system and national economy which started in 1989 ruthlessly exposed all weaknesses and numerous appearances. Many facades which seemed to be made of indestructible marble turned out to be of poorly painted cardboard. No other was the fate of giant, state owned companies and it would had been a wonder if their computer centres would had been spared.

Most of them however, including almost all district computer centres (ZETO), managed to adapt promptly to new rules and conditions, and survived till today in relatively good shape. One can even say that those which were smart enough to survive are now expanding their businesses by providing not only the service of their traditional mainframe computers, but also entering dealership agreements with hardware and software manufacturers, giving training courses and consultancy services. Most of them replaced the vintage ODRA and RIAD hardware with newer, however mostly second-hand, IBM mainframes. Prior to that exactly the same happened in government computer centres, most of which are now on IBM 43xx hardware.

The computing service the district computer centres provide today is not anything of traditional mainframe batch processing based on the rule *bring your data today and you'll get printed results next week*. They very much exploit communication facilities available and serve their users either on-line or with remote batch facilities.

3. There is no IT nowadays without communications facilities

After the year of 1989 mushrooming branches of foreign trade and industrial companies and also local banks were to lead the way in putting modern IT services into place. That worked fine until remote branches of a company or those of a bank were to contact each other. The communications facilities offered by Polish Telecom authorities were at that time so much limited in capacity and even worse in quality, they proved absolutely unable to cope with demand. That situation lasted until 1993-1994 when several Telecom operators managed to establish their own networks and started looking for return on their investment i.e. for customers.

Now the following services are available :

1. State owned Polish Telecom (Telekomunikacja Polska SA) runs the POLPAK network, providing X.25 service throughout the country. ISDN service is to be offered by them in few months time. The level of service is reasonable, but the system lacks capacity in industrial and business areas (Upper Silesia) and in huge administration centres (Warsaw, Krakow, Wroclaw, Poznan and others).
2. Since Polish banks didn't want to waste any time waiting until POLPAK will become mature and reliable service with proper capacity, they established the communications company of their own. This has been named TELBANK and provides now services of X.25, VSAT and X.400. Because TELBANK is a typical commercial company, its offer is in no way limited to banks only. TELBANK's nodes among themselves are connected mostly by microwave links.
3. In 1995 Polish State Railways (PKP - Polskie Koleje Państwowe) opened their X.25 network called KOLPAK, based on fibre optic links running along railway tracks and also providing other services (phone, fax, signalling etc.). It's being used by computerised Railways' logistics system and also by a central seat reservation system.
4. Polish Electricity Supply Lines (Polskie Linie Energetyczne), the company which separated from Polish Electricity Generating Board, is another example of a company anxious to have its bite on data communications market. So far their service is available locally in some areas. This is based on multiple fibre optics incorporated into high voltage and high power cables.
5. Academic centres are connected by another network called NASK (Naukowe i Akademickie Sieci Komputerowe), which at the moment is the only bulk Internet provider in Poland. Their inept attempt to introduce strict tariffs on Internet usage since 1996 resulted almost in public rebel. It's obvious no one wanted to pay for incoming e-mail by its volume, whether wanted or not, but the question remains - why all tax payers in Poland are to pay limitless bills for those having non-commercial access to Internet ?

The whole NASK-Internet dispute had as its climax a spectacular break into NASK's Web Server. On the night of Saturday, 30 December (New Year Holiday !) unknown Polish hacker managed to enter this Web server on system administrator's level, changed its password and introduced into it files insulting NASK, and made them world-wide available. He also left the message in Polish Internet Discussion Forum in which he commented NASK's intentions : *The organisation which plans to charge users for*

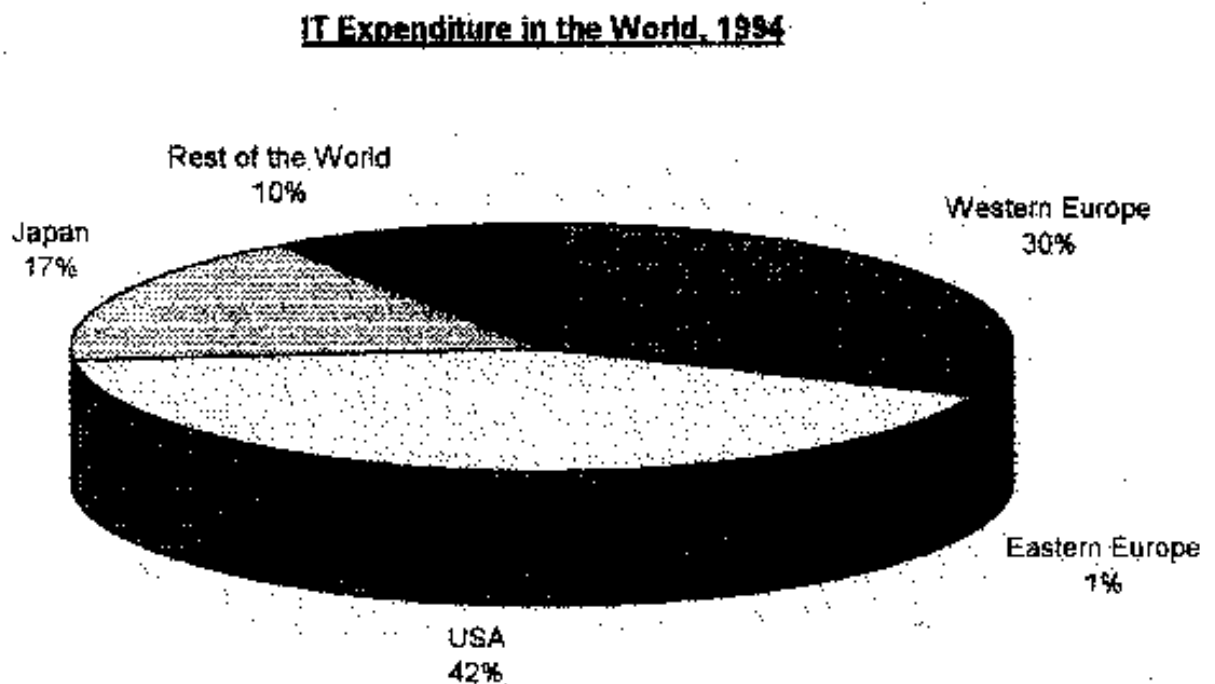
traffic is unable to provide even minimum security on its, one would think, basic machines.

As far as communications facilities are discussed, on the end user side one major problem still remains : the lack of node access lines, whether leased or dial-up, which still have to be hired from Polish Telecom. In many areas of the country the distance to the nearest available node of any X.25 service counts in tens of kilometres and this to be accessed requires long distance connection.

4. Statistics mean much, but they will never say you all

Some people in Poland do think we have reached the state of an over-saturation with computer hardware and software, especially in the state administration and in some banks. IT expenditures in Eastern Europe do not at all look like that from world perspective. This is illustrated by Figure 1.

Figure 1



Source : European Information Technology Organisation 1995 Report

The proportions of money spent in Europe on hardware alone are presented by Figure 2. What's interesting in it - the 1996 forecast together for East European countries and those of former USSR barely exceeds that of Spain alone (and it was lower than that in Spain in 1994).

Figure 2

Hardware Expenditures in some countries millions ECU		
Country	1994	Forecast 1996
Hungary	275	311
Czech Republic & Slovakia	435	539
Poland	387	482
Former USSR	704	1062
Germany	13588	15424
France	6531	6905
Italy	3141	3308
United Kingdom	7113	7911
Spain	1869	1950

Source : European Information Technology Organisation 1995 Report

The very same data as in figure 2 look somehow different if one does relate them to GNPs (Gross National Product) of those countries and size of their populations. The results of that approach are contained in figure 3.

Figure 3

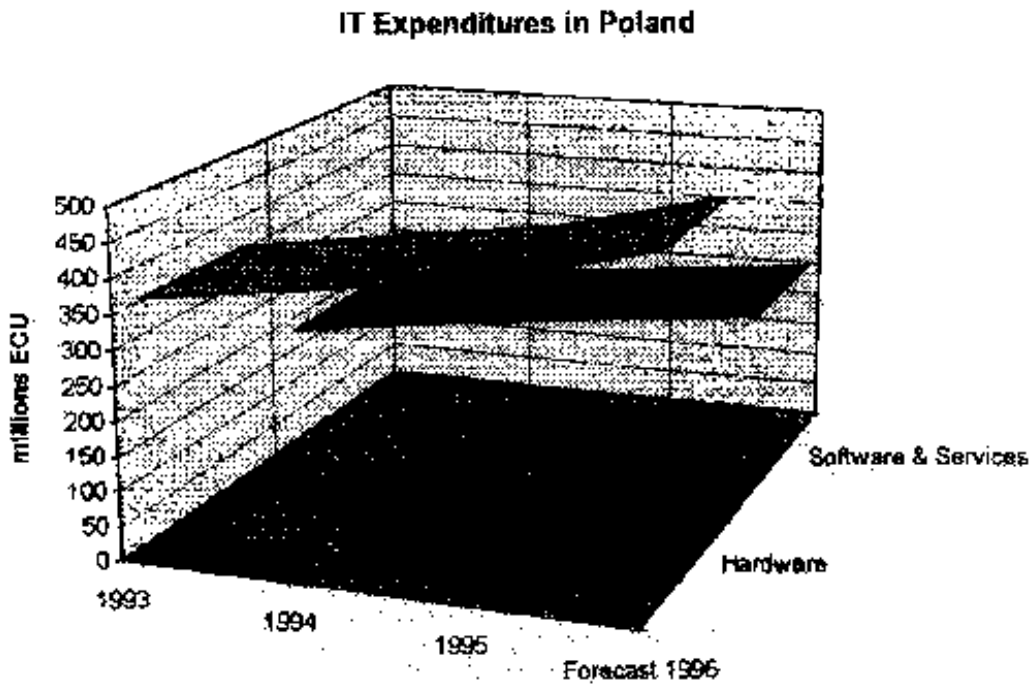
Hardware Expenditure in Some Countries in relation to GNP and population - 1993		
Country	% of GNP	ECU per capita
Hungary	0,57	26
Czech Republic & Slovakia	0,51	26
Poland	0,28	9
Former USSR	0,09	3
Germany	0,91	164
France	0,61	113
Italy	0,38	56
United Kingdom	0,84	116
Spain	0,49	51

Source : European Information Technology Organisation 1995 Report

The detail analysis of IT expenditures in Poland alone presented in figure 4 shows, both hardware and software plus services are on a parallel rise.

The specialist see Poland as a big future market for suppliers of huge servers and mainframe computers, since in 1993 and 1994 respectively, 760 and 836 of these machines were sold there.

Figure 4



Source : IDG Poland Special Report 1995.

Each year IDG Poland presents an extensive *Report* showing the situation on Polish IT market in general and also many detailed analytical data concerning it. This is widely known as TOP 200 list. Many Polish IT companies are eager to get on that list, however one should read it with some reservation, because some data there are based on IDG estimations, since many companies never publish their financial reports. Fragments of that list with top ten companies and several international companies are contained in figure 5.

However - one would easily name at least 4-5 IT companies in Poznan alone, which yearly turnover which would locate them easily among first hundred on TOP 200 list. They simply do not believe in any benefits from publishing their financial data and these are too difficult for IDG to estimate.

One can never attempt to summarise the table below to obtain the overall picture. Many of the data in it are multiplied since original suppliers and their distributors and dealers report each the very same sales they made.

Number of PCs sold in Poland in 1994 has reached almost 275 thousand. How that divides between major suppliers can be seen on figure 6. The forecast for those for 1995 and 1996 is, respectively - 356 and 459 thousand.

Very little can be said about printers on Polish IT market, since some companies (Olivetti, IBM, Fujitsu) refuse to give any data at all about their sales figures. The estimated by IDG market division in terms of quantity between laser, ink and matrix printers is illustrated on figure 7.

Figure 5.

N o. on list	Company	Estab lished	Income USD millions		No. of employees	
			1993	1994	1993	1994
1	Optimus Nowy Sącz	1988	105	127	450	428
2	JTT Wrocław	1990	104	88	210	232
3	Hewlett-Packard Polska	1991	45	68	80	120
4	IBM Polska	1991	51	55	110	102
5	Computer 2000 Polska	1988	23	39	47	56
6	Prokom Gdynia	1987	21	28	149	512
7	Computerland Poland	1990	16	26	76	122
8	ICL Poland	1963	29	25	200	170
9	Softronik	1991	53	24	58	52
10	Compaq Polska	1993	15	23	?	10
15	Digital Equipment Polska	1992	11	17	70	100
16	MSP TH'System	1990	8	17	40	45
24	Novell Polska	1994	8	11	-	5
25	Dell Computer Poland	1992	12	11	25	18
29	Escom Computer Polska	1992	13	10	79	94
30	Bull Polska	1992	25	10	24	26
31	COIG Katowice	1951	11	9	1055	866
34	Microsoft Polska	1992	-	9	9	16
41	Vobis	1993	9	7	45	60
47	Oracle Polska	1992	-	6	-	34
51	AT&T GIS Polska	1990	3	6	12	13
62	Sun Microsystems	1993	-	5	-	7
72	Olivetti	1988	6	4	8	15
86	Siemens	1991	5	3	18	15
90	Softbank	1989	2	3	95	103

Source : IDG Poland Special Report 1995

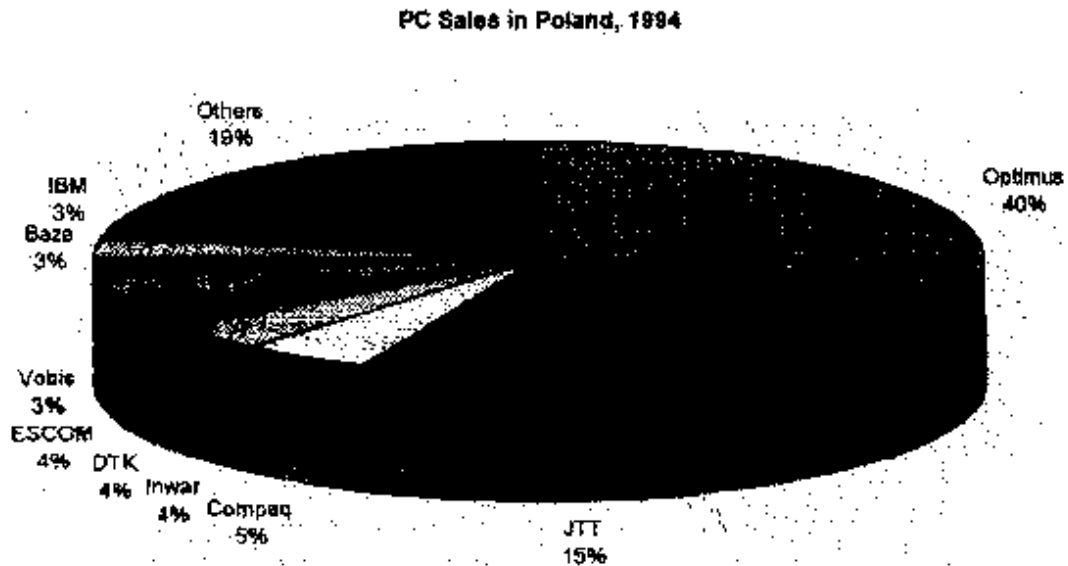
5. Pitfalls

Year 1995 saw in Poland one of the major pitfalls in the history of IT. Lasting for 5 years project for implementation of general tax control and registration system (nicknamed POLTAX) was aborted. The whole thing was based on an agreement signed back in 1990 during Polish state visit to France with French company Bull. This project originally provided for delivery of hardware and software. All hardware has been supplied by French in 1991. The software part of the deal has never been completed and both parties ended it in 1995 blaming each other for failure.

It is very difficult to be objective in this case, especially not knowing all the facts. However one has to see that Bull is very successful in tax systems in the West and just recently they

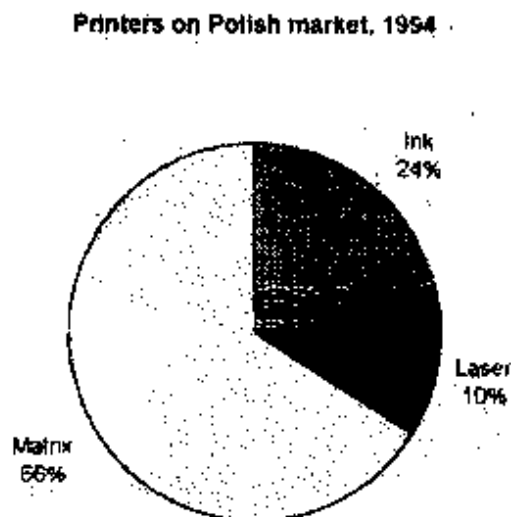
signed similar contract with Russian government. One must be sure before signing up Russians carefully examined instructive and clinical example from neighbouring Poland.

Figure 6



Source: IDG Poland Special Report 1995

Figure 7



Source: IDG Poland Special Report 1995

Despite all the multiple problems the attempt to computerise Polish tax system has been successful to some extent. In a TV interview one local tax officer said *Those cardboard*

boxes after computers are very useful for storing those various filled tax forms people bring in...

6. Is your software legal, sir?

In 1993 Polish parliament passed a bill for protection of intellectual property, what comprises also computer software. The bill was generally received well. Some controversy however was expressed because of its clause allowing for abolition of all claims relating to any software obtained before that bill took effect. Main objections were raised by IBM and they concerned software purchased (some call it euphemistically *inherited*) along with second-hand mainframes by numerous government and state administration computer centres. Its losses Big Blue estimates for hundreds of millions of US dollars.

Since the time the bill in question went into force, Polish police several times raided Warsaw's software street market, where usually one can purchase any software for very little price. Despite the bill's threat for 2 year imprisonment, no arrests were made so far. Each time all ends up in seizure of some equipment and media and next day business returns. This is probably because mostly only private purchases are made on that market.

As far as software legality issue is concerned, the most spectacular was the concerted, simultaneous police action in Poland, Czech Republic, Bulgaria, Holland and USA, where searches were made for illegal copies of software and manuals of Novell Netware Operating System. Such copies were seized by Polish police in offices of one of the major hardware and software distributors in few Polish cities. No other facts were revealed except that the product was faked by a company in the States and there was almost *no way to tell the product was not original*.

Just recently (March, 1996) police raided an establishment in Krakow area and confiscated equipment used for professional copying and manufacture of CDs and also diskettes, manuals, computers etc.

February this year some papers brought the news about leakage of most secret banking information which were stolen from Polish National Bank's headquarters together with personal computers where they were stored. Bank's spokesman denied revelation of any bank secrets, but confirmed *three PC units were stolen during refurbishing works in headquarters building*.

7. Exhibit or perish...

In the course of last few years almost any region of Poland has established one kind or the other of computer fair or exhibition. At least half of those events name themselves as *international*. In fact only few of them have become nation-wide, the majority enjoys only local meaning.

January each year a *Komputer* exhibition and fair takes place in Warsaw. Some regard it as the most important one in Poland. The main problem with it is that to place all exhibitors' stands and booths it uses the corridors of Warsaw's Palace of Culture and Science, which is absolutely unsuitable for the purpose. Its main advantage is the central location, but even that no longer means much, because the acute lack of exhibition space in the Palace resulted in part of the exhibition moved to remote location in Warsaw's outskirts.

Another fair event, whose organisers, as their counterparts in Warsaw, also claim it to be biggest in Poland, is INFOSYSTEM, held each April in Poznan, together with Exhibition of Publishing & Printing Industry and also Multimedia Fair. All these are professionally organised by Poznan International Fair.

Each September in Katowice they have SOFTARG - an exhibition and fair of computer software. This gathers software writers, manufacturers and distributors from all over the country.

Fourth of nation-wide events of that kind is INFOMAN held each autumn in Gdansk. Years ago, it started as another general computer fair, but now it is very much orientated towards banking and administration.

All those events are accompanied by numerous seminars, presentations and short training courses. These are given not only by exhibitors but also by other groups and companies using it as a good occasion: at least a potential audience is already in the place. For last few years the exhibition space in Warsaw is priced so high that some major players on Polish IT market (Hewlett-Packard, ICL and others) stopped turning up there, claiming the whole thing does not generate business proportional to the cost one has to bear to exhibit. Others (also in Warsaw) are competing with *Komputer Fair* hiring exhibition space in nearby hotels and attracting audience with free lunches, dinners, prize draws etc.

8. Are you a member? Professional organisation of Polish IT community.

Many professional unions and organisations were active in Poland for years. It is sad to say only quite a few of them are really active now. That relates also to Polish IT community.

Main organisation of IT professionals is Polish Computer Society (PTI - Polskie Towarzystwo Informatyczne) with ca. 1500 members. To become a member of it one needs to be professionally active on the IT arena, to have an university degree and to be positively recommended by two members with at least two-year membership. The members of PTI come from various walks of life but this organisation is still somehow dominated by people of academic background. Besides local events and activities of various PTI's sections, three main conferences are run by it: Spring (Swinoujscie, Baltic See Coast), Summer (Szczyrk, Beskidy Mountains) and Autumn (Mragowo, Northeast Lake District).

Society for Support of Open Systems gathers about 200 members, mainly from government, state administration and some software suppliers. Each year they run two nation-wide meetings.

Polish Chamber for Computers and Telecommunications as its members accepts only companies operating on IT and communications market. There are no regular events run by it.

9. Summary

That concludes this summary and view of Polish IT arena. On many of the subjects one can delve much deeper than I did, but I hope even that short review gives some update and not only brings all of us closer together but also allows for some conclusions to be drawn.