

COMMUNISM'S DEFEAT SPAWNS POLAND'S GREATEST IT ENTREPRENEUR

BY RICHARD STEVENSON

Janusz Filipiak was one of the pioneer volunteers in IEEE Communications Society from Central and Eastern Europe. Along with publishing in *IEEE Transactions on Communications*, *IEEE Journal on Selected Areas in Communications*, and *IEEE Communications Magazine*, he was one of the first from this region to attend Globecom and ICCs. He also organized several successful conferences in the area of network and service management. His example attracted many new members to our Society, and he supported them in their activities.

The article about Janusz Filipiak, written by Richard Stevenson, within the Technology Leaders' Forum, differs somewhat from those published earlier in this column by presenting also the personal side of this outstanding entrepreneur, engineer, scientist, and educator, as well as by showing the political background of Poland in the years of transition from the communist-style to market-oriented economy. I do believe that the readers of the *Communications Magazine* will find this article interesting and stimulating.

Andrzej Jajszczyk

It was 1993. Shattered remains of the Berlin wall hung as framed mementos in the homes of a recently re-united Germany, and over the border in Poland millions of out-of-work citizens grabbed their newfound freedom, launching their own businesses.

Janusz Filipiak, then a professor of electrical engineering at AGH University, Krakow, joined the startup fray. But unlike most of these entrepreneurs whose initial forays into capitalism failed, Filipiak succeeded. Today, Comarch, the firm he founded to build a database for Poland's leading telecommunication company, is huge, generating sales of over \$200 million a year and employing 3500 people in 14 countries.

"I think we're bigger than HP or IBM if you ignore sales of computer equipment," says Filipiak.

And in his homeland, he certainly has the prominence of a Bill Hewlett or Dave Packard. His 42 percent stake in Comarch put him on Forbes' list of the hundred richest men in Poland, and his

name regularly crops up in the business section of national newspapers. Turn over a few pages and you might also see him mentioned in connection with his family's luxurious nine-room restaurant that's welcomed celebrities as famous as Kate Moss, Steven Spielberg and Robert De Niro. And he also appears in the sport pages: he's president of the nation's oldest soccer club, Cracovia, Krakow.

Fame, of course, is a mixed blessing. Step out of line and everyone hears about it, like the time Filipiak was controversially arrested following accusations of withholding wages. But at least his public apology from Minister for Justice made the headlines too.

These days Filipiak takes this level of fame in his stride. But it wasn't something he anticipated as a child growing up in Bydgoszcz, a city in the north of the country. Back then he dreamt of being an academic.

He reasoned that if he could make his dream come true, he could bask in the joys of learning in the sole haven of meritocracy. But if he failed, his career options would depend on his connections, and his father, a middle level manager, and his mother, a primary school teacher, would not be able to offer much help.

Filipiak's parents did their best to equip their offspring with strong, well-rounded educations, forking out for private English and music lessons. "My parents forced me to play an accordion," says Filipiak. "The piano was too expensive for them."

But neither language nor music enraptured the child. Then, when he was in his mid-teens, an inspirational teacher turned him on to



Janusz Filipiak has masterminded Comarch progression from a spin-off of AGH University of Science and Technology to one of the biggest software houses in the world.

theoretical physics. He turned to the city's public library to feed this new passion. Russian texts dominated the physics section, but that didn't matter, because everyone had to learn that language. Soon, Filipiak's knowledge of physics surpassed that of his teachers, and he began giving local schoolteachers presentations on theoretical physics.

At age 19 and in his last year of schooling, Filipiak applied to study physics at one of Poland's premier universities, AGH University of Science and Technology in Krakow. He chose this five-year, masters course because it matched his interests: constructing theoretical models of real life.

But he didn't get accepted. He aced the entrance exam, but when he got there the Dean of the Faculty of Engineering told him that physics department was already full, and he should study electrical engineering instead.

"It was a tragedy for me," says Filipiak. "I blamed the whole world that it was unfair."

Filipiak had very few options at his disposal. Getting onto another physics course at a different university would take another year, and he couldn't stomach the wait. So he complied with the Dean's wishes.

He was pleasantly surprised. "I noticed that I could construct mathematical models in the electrical engineering area." Within six months his engineering teachers, spotting his prowess in the parts of the course that touched on physics, encouraged him to switch subjects. But engineering had hooked him.

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The majority of Comarch's staff are based in a light, airy complex built on the outskirts of Krakow. These buildings are bedecked with paintings from one of Poland's finest modern artists, Rafal Olbinski.

INDUSTRY PROFILE

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Looking back, it was the right choice. He still cherishes theoretical physics, but feels it has made little headway in the last 30 years. “There are no new facts or knowledge to push theoretical physics forward.”

In his fourth year, Filipiak took a trip that would change his outlook on life forever. By winning a competition for a three-month internship in Japan, he not only got the chance to get his hands on state of the art IT technology at Nippon Steel Works, but the opportunity to see a completely different way of life. He loved living and working in a different country, and returned to Poland eager to repeat that experience.

In 1976 he finished his electrical engineering degree, won best graduate of the year at AGH University, and started a PhD there, a highly theoretical research project looking into ways of improving the efficiency of traffic flow through telecommunication networks.

But his life was not just filled with complex equations describing traffic flow and the computer code that represented them. He had fallen for Elizabeth Staszak, a materials engineering student at the university. They married in 1977, and had the first of their three children, Anna, the year after.

In 1979, PhD in hand, Filipiak became an associate professor, fulfilling his dream.

He taught and brought in research contracts. His first, for Huta Katowice, a company owning a steel processing plant in south-west Poland, provided access to cutting-edge French and US technology. Built to showcase modern Poland, this plant housed some of the nation’s fastest computers, and Filipiak exploited them to optimize the flow of steel through the mills.

For another contract, he designed a database for recording every citizen’s personal details, such as their name, and address. Filipiak’s role was purely theoretical; he never set eyes on the personal data itself. Poland’s current national database incorporates his work.

Filipiak also landed a contract for improving coal miner safety. By tracking every miner’s location, it is possible to shut the doors at the ends of empty corridors, stemming the flow of poisonous gases. “The main idea of the project, which Janusz came up with, was to put a sensor emitting a code on each miner,” recalls Zdzislaw Papir, a co-worker on the project who is now an electrical engineering professor at AGH. The sensor network aided field trials involving a score of miners running in different directions. But today

Filipiak and his colleagues on the project do not know if coal mines ever implemented their technology.

In the early 1980s, Filipiak moonlighted as a security guard. It’s not that his academic career didn’t keep him busy, or pay him a decent salary. It’s because his young family desperately needed more living space. One way to increase the chances of getting an apartment was to help out some way in its construction, so Filipiak agreed to keep an eye on the building site. His efforts paid off, and in 1985 his family moved out of their two-room dwelling in a student hostel into one of the brand new apartments.

The security guard job wasn’t particularly demanding; Filipiak spent much of the time writing papers. He craved international recognition for his work, and knew this would only happen if he wrote papers in English, which was practically unheard of in Poland at that time. It didn’t come easy; he would draft the paper in Polish, then scan through English papers in journals, find appropriate sentences, and swap them with his Polish ones. It worked well enough. He first had a paper accepted by the UK journal Large Scale Systems, and others followed. His confidence blossomed, and he then drafted a book detailing his take on optimizing data transfer rates in high-speed networks. One of his happiest memories is the day he received a letter from the large German publisher, Springer, saying that they would print it. In 1988 Modelling and control of dynamic flows in communication networks hit the academic book market.

Thanks to this growing international reputation, in 1984 Prosper Chemouil from France Telecom offered him a one-year contract to work in Paris.

Convincing the University to keep his job open was easy. But he still needed a passport, and refusing to bribe the officials in this department didn’t go down well. They slowed down the application process, and he left for France two months late, on 1 October 1984.

The French government wasn’t much easier on him than the Polish government had been. It labeled him a political refugee and barred his wife from visiting, fearing she would immigrate. However, thanks to good friends of his who personally invited her, Elizabeth made two brief trips to Paris, visiting her husband in the middle and near the end of his time there.



Filipiak says that there are two approaches to combating the stresses of work: drinking and exercise. He’s backing the latter, and through his company he is sponsoring professional sport, both in Poland and overseas. Recently Comarch has started to support the German football club, TSV 1860 Munich, which is also known as “The Lions.”

Still, Filipiak had a good time, reveling in the opportunity to direct all of his energy at his research, free from teaching duties and shifts as a security guard.

He returned to Poland in June, 1985, but headed out of the country again two years later for a three-year stint at the University of Adelaide, Australia, working on research contracts for the country’s domestic and international telecom providers, Telecom Australia and OTC.

This time he took his wife and family with him. Nearly for good, as he was offered a professorship there.

“If I accept this chair we immigrate from Poland,” he reasoned. “If I don’t accept it, we have to go back.”

He opted for the latter. Australia just wasn’t home. “Australia is far away and very different,” he says. “How can you get involved in cricket or Aussie rules?”

Back in Poland the political landscape was changing fast. Civil unrest in the spring of 1988 gave way to strikes in the summer, followed by talks in the Fall between the government and the independent trade union Solidarity. Finally, in April 1989, the voters in national elections rejected Communist candidates, and Poland started transitioning to a free market economy. By the time Filipiak and his family came home, just before Christmas 1989, the foundations for democracy were falling into place.

“In free Poland we could have a passport,” he points out. “So I said to my wife, ‘if something goes wrong we could always leave. We can always go to Australia or the US, because I could easily get a contract in one of those countries.’”

Back at the University, now a full

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professor, a rare recognition in Poland, Filipiak launched a research contract sponsored by Telecom Poland to create a database inventorying its switches, hubs, transmission lines and other paraphernalia that made up its infrastructure, records then kept on bits of paper and random spreadsheets. Filipiak's team created the model for the database, and Telecom Poland tried to get a company to build it. But no one wanted the work—the database was just too big.

Filipek wanted to try to build it. But to do so he'd need staff and resources. He thought he could make it work by establishing a research center within the university, something he had seen work successfully in the U.S.

But AGH University said no. "It was too innovative for them," says Filipiak. "Universities in Europe are very rigid, formal structures."

His wife had a solution: He should launch his own company. Poland, after all, had startup fever; Millions were already giving it a go, and Filipiak's contacts and knowledge gave him a great chance of success.

She won him over. But he didn't want to go it alone, so he joined forces with ten academic peers, launching a private company, Computer Communication Consultants. They leased a room in the engineering department, directly below Filipiak's offices.

"After several months I realized that I was the only one contributing to this company." Filipiak's peers lapped-up the kudos of co-founding a tech start-up, but were not going to let this venture distract them from their teaching and research.

This lack of commitment riled Filipiak. He bought out his colleagues and renamed the company Comarch, for computer architectures. He paid rent and wages for most of the first year, until the company got paid for building that database for Telecom Poland.

Filipek's wife ran the company at first. "The [university] was my real life," says Filipiak, "and this was a shop on the side." Sticking with the university, it turned out, gave him an advantage—access to students, hungry for industrial experience and not put off by low wages.

Competitors failed to take Comarch seriously at first. "HP and IBM were laughing at me because I spoke about high-quality products meeting customer expectations," recalls Filipiak. It was the expectations part they didn't understand. Comarch's products weren't nearly as sophisticated as Western products, but Polish businesses didn't want cutting-edge software, preferring

Comarch's simpler, easier-to-use offerings. "As Polish businesses became more sophisticated, we were in step with them, developing more sophisticated solutions," explains Filipiak.

Throughout the 1990s the company thrived, netting more contracts, ramping annual sales to \$44 million, and building a talent base of former AGH University students. By 1998 head count reached several hundred and the company desperately needed a full-time leader. Filipiak resigned from the University.

Comarch grew up fast. In 1999 it launched on the Warsaw Stock Exchange, shedding its image of a company run by a bunch of students.

Today, Comarch's staff no longer cram into University offices; they now work in a custom-built North Krakow complex of light, airy buildings adorned in surrealist paintings from one of Poland's finest modern artists, Rafal Olbinski.

The dot-com bubble at the beginning of the decade took its toll on many Polish IT firms, including Comarch. Angel investors from the U.S. rode into town and began poaching local talent with offers of better wages and company cars. Filipiak could play that game. "I took a risk, bought one hundred cars and gave them to the best employees."

Staff retention issues vanished when the bubble burst. But Filipiak then had another headache to deal with: Comarch lost the Telecom Poland contract which, at the time, made up 40 percent of sales. He implemented a contingency plan that he had been tweaking since 1995—developing software for a variety of markets, without seeking contract support first. Products for banks and insurance companies came first, followed by software to help governments and utilities manage their inventories and bill customers.

Comarch also started to chase overseas contracts. Initially Filipiak traveled all over world trying to drum up business, but now he's put the scattergun away, focusing on a handful of neighboring countries, plus China.

When he's not out of the country, Filipiak begins work at home. He spends much of his time thinking about how his company runs, focusing on the challenges of optimizing the company's hierarchy of internal flow of information. His belief in the benefits of mathematical modeling remains, and he has even published papers showing that really good information flow is the key to making good decisions.

Just before noon he leaves home, climbs into his four-door Bentley Continental Flying Spur, and takes a short drive from the South of the city to his massive,

luxurious office. He typically grabs lunch and then begins a series of afternoon meetings. Once they are over he heads back home, where he spends several hours answering emails and signing paperwork.

But Comarch's CEO is not all work and no play. "If you work under a lot of stress, the solution is to either to drink or do sports," says Filipiak. He wants more people to take the healthier option, and he's encouraging this by backing sport at all levels, from the building of a publicly available fitness center at the company's headquarters to sponsoring professional football and ice hockey.

Today, Filipiak is most famous for his football connections. He's the president of the football club Cracovia Krakow, and since Comarch's takeover of Germany's SoftM he's also involved with sponsorship of the German soccer team Munich Lions.

Some of Filipiak's football-related fame stems from his arrest two years ago, following a dispute over a player's wages—police charged Filipiak with abetting the back-dating of a former soccer player's employment contract and breaking employment law. In a very public scene at Balice Krakow airport on the afternoon of 12 April 2008, a team of 30 police officers escorted him from a plane coming in from Italy and handcuffed him. After questioning they let him out on bail the following morning.

The courts quickly vindicated Filipiak, but not before newspapers printed headlines like: "Comarch CEO charged over soccer contract fraud"; and "Janusz Filipiak spent the night in jail".

To this day, Filipiak does not know who was behind his run-in with the law. He claims to have few enemies, but like anyone in the public eye, there will always be somebody out to get him.

What don't people like about Filipiak? It might be his unflinching honesty, and an unwillingness to take the bribes that would make their lives easier. Or it could be his rebellious, anti-authority streak, evident years ago, when, as a student, he helped to build a snowman, which Poles consider to be a symbol of stupidity, outside the offices of the management of a leather shoe-making factory. Or it may simply be envy of Filipiak's tremendous wealth, or the fact that generally he thinks he knows best, a trait that can make him come across as slightly arrogant. But even if he's guilty of all these peccadilloes, they are still overshadowed by his absolutely tremendous achievements: An incredibly successful academic career, followed by an even more successful venture into the business world, when he has undoubtedly played a major role in putting Poland on the IT map of the world.