

THE WARSAW VOICE

Polish and Central European Review

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Poland's ruling three-party coalition ruptures as government leaders trade accusations of lies and corruption, leaving the country with a minority government heading for early elections.



BREAK DOWN

Gondolas in the Air: Future of Commuting

Olgierd Mikosza, IT specialist and inventor, talks to Michał Jeziorski.

■ Anyone who lives or works in a large metropolis is all too familiar with that feeling of helplessness that comes with being stuck in traffic. You've invented a transport system that would see passengers gliding along in electric gondolas 10 meters in the air.

Can your invention, called MISTER, or the Metropolitan Individual System of Transportation on an Elevated Rail, revolutionize the way we travel?

I hope so. MISTER is a system of electrically powered overhead rail gondolas. Gliding along a few meters above street level in a small gondola is much cheaper, faster and safer than anything on offer today. Lightweight poles resembling street lamps would be stationed along the street to support the openwork rail. People would soon get accustomed to the new streetscapes in which four-person gondolas would be whizzing overhead at about 50 kph. The gondolas would stop at special stations but only on demand. This would ensure smooth and collision-free traffic flow along the main arteries.

The gondolas can travel along a 45-degree gradient. This saves space when turning into stations, which can be placed anywhere without disturbing the existing infrastructure. Accidents wouldn't happen. There would be no problems with distracting the driver, talking over the phone, listening to music, or driving all day with your lights on. The gondola simply drives itself. Passengers need only proceed to their nearest station, board one of the waiting gondolas and choose their destination. The gondola would then leave the station, merge in with the traffic and cruise to the selected station at constant speed without stopping along the way.

MISTER is the opposite of today's transportation systems where "the bigger the better" is the prevailing mind-set everywhere. Airbuses are built to carry 600, and subway systems are designed to carry thousands. I believe that efficiency is best achieved with small vehicles. Today's subway and tramway networks are either overcrowded with sweaty passengers or empty. My gondolas run on demand, not to some arbitrary timetable.

■ A lot of gondolas are going to be required if a lot of people are to be transported. Isn't there a risk of exchanging a traffic jam for a gondola jam?

MISTER is like spilling a glass of water. The



OLGIERD MIKOSZA is the designer of the revolutionary MISTER—an electrically powered overhead gondola transport system. Having graduated from the Warsaw University of Technology, Mikosza went to Britain in 1975 and quickly found a job working on large IT systems at the Rothschild bank. He later worked as a programmer for a mining company in South Africa, where he created a control and safety system to protect miners in the world's largest platinum mine that employs 15,000 miners per shift. He followed that with a stint at ICL and then set up his own business and worked with Siemens. His career subsequently took him to New Zealand and several Asian cities including Singapore. While in Singapore, Mikosza developed an innovative system to regulate bus traffic. He spent the next three years in the United States, where he was a consultant to telecommunications giant Lucent. While there, he developed a network architecture for one of Visa's major systems. He returned to Poland in 2001 to devote himself to MISTER.

water level is high when the glass is full but disperses over the tabletop when spilled. MISTER disperses crowds of people throughout the city instead of cramming them into a single large vehicle. The heart of MISTER is its computer system which regulates traffic and optimizes its flow. This is not difficult from a scientific perspective and doesn't require a Pentium chip in each and every gondola. Standard industrial processors which can be purchased in bulk would do the trick.

The constant availability of gondolas prevents gondola jams although the system obviously requires more gondolas than passengers to work. Not everybody converges at a bus stop simultaneously; they come in dribs and drabs over time. When buses arrive every three minutes during rush hour, there are 20 people waiting. But there wouldn't be anybody waiting had each of those passengers boarded a gondola during those three minutes. The gondola stations are a key component of the system as they ensure that stationary gondolas don't block traffic. My calculations show that stations capable of holding five gondolas would suffice for downtown Warsaw. Gondolas can park parallel to each other just like cars except that they are shorter and therefore take up less space.

A major strength of the system is that gondolas are available 24 hours a day but only run when required. However, they are there when required so there is no waiting. If you have ever traveled by bus at night you would appreciate this.

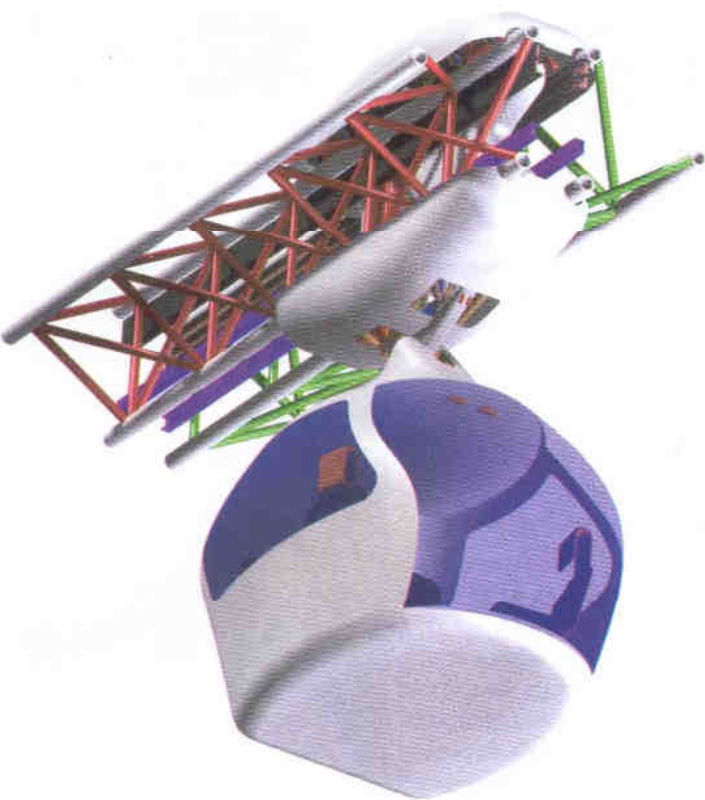
■ When did you come up with this original idea and how?

I lived near San Francisco for two years during which time I got to learn all about traffic congestion. My daily 40-kilometer commute to work was a three-hour odyssey. I remember thinking how life was flitting by while I was sitting idly in traffic. And this is the United States we're talking about, one of the world's wealthiest societies with a road infrastructure second to none. The San Francisco area has an eight-lane freeway, countless kilometers of overpass roads, a well-developed subway system and many bridges are going up all the time. The result? Traffic congestion gets worse every year.

Most urban areas are blighted with countless and unsightly overpasses and the areas under the supports are just wasted space unless they were designed as shelter for the homeless. Why keep sinking huge sums of money into traditional means of transport for so little return? What we need is a new approach. MISTER, like most other inventions, was born of necessity.

■ Is the system safe technically? Should people might have reservations about traveling 10 meters in the air.

I'm happy to run my system by any authority on IT systems anywhere in the world. I have competed successfully against the likes of IBM and Hewlett-Packard to win lucrative contracts in South Africa and Asia more than once so I can safely say that my systems



as good as theirs. This system has been worked out to the last detail from an IT standpoint and is absolutely foolproof. And building a gondola, a support and a rail is hardly a major feat of engineering.

Gondolas are much less likely to break down than planes, which as we all know, are the safest means of transport. The frequency of failure is practically zero because there is nothing that can go wrong apart from an electric motor and a couple of bearings. Gondolas are on a par with bicycles in terms of mechanical complexity. Obviously, they require planned maintenance but they come equipped with failure warning systems. If a gondola does break down, that section of the route can be temporarily closed and other gondolas rerouted while it is removed. The eventuality of a breakdown doesn't seem to cause motorists undue trauma and cars have more than 3,000 parts.

■ How much would your system cost?

MISTER costs about zł.250 million per 10-15 km which is roughly the same as 1 km of metro rail. It's a lot easier and cheaper to erect a support than it is to drill a tunnel. We haven't even managed to build 20 km of metro rail in Warsaw over the last 50 years. And the taxpayer chips in about zł.9 for every ticket sold. If that doesn't bother you then it should. If we spent our limited funds on building a MISTER network over the next 50 years, we could have 250 km covering 70 percent of the city instead of another measly 20 km. Most Varsovians would choose to

travel by gondola. Cars are only popular now because public transport is so uncomfortable and overcrowded. Low power costs and high reliability translate into lower operating costs. MISTER doesn't require a cast of thousands—just a few IT specialists. The system could turn a profit with tickets priced no higher than today's tram tickets. Forget about deficits and subsidies and think about earning money instead of throwing it away.

■ **MISTER should delight those of us who value environmental protection. Public transport without exhaust fumes is a dream come true for any environmentalist.**

Electric gondolas are the most eco-friendly transport there is. They neither damage green areas nor emit exhaust fumes. They are also the most energy-efficient form of transport. It only costs one grosz to carry one passenger one kilometer. Compare this with the 40 groszy it costs to achieve the same thing by car. And that's at current gas prices! It only takes a kilowatt of power to set a gondola in motion compared with 60 kW for a 15-tonne tram. That's comparable to running an efficient hairdryer. We would still need to generate power, of course, but we would use a good deal less than we do now. MISTER's flexibility is another factor that has to be taken into consideration. It's a simple task to dismantle a section of gondola rail should that part of town be rezoned or redeveloped.

■ How long would it take a system like this to become operational?

Technically, it's a no-brainer. Several universities including the Warsaw University of Technology have pronounced the system feasible. However, it's officials and not engineers who make strategic decisions on behalf of their cities. If I had a permit, MISTER would have been operational for two years now. Instead, I've spent the last two years knocking on doors and trying to convince people that I'm not crazy. And this is not rocket science. In fact, the beauty of MISTER is that all the technological components have not only already been invented but are cheap and readily available. Fortunately, things are starting to happen and a prototype is being built. I hope that we will soon be given permission to set up a demo in front of Warsaw's Palace of Culture. This would be the breakthrough we need. People would be able to see for themselves that this thing really is a goer.

If we get a favorable decision quickly, we could have MISTER up and running in time for Euro 2012. This would not only alleviate traffic congestion but would promote Warsaw and the entire country. The rest of the world would look up to Poland as a trail-blazer.

We have contingency plans in case City Hall lacks the imagination to pick this up and run with it. Negotiations with smaller resort towns including Zakopane, Krynica Górská and Szczyrk are at an advanced stage. Opole and Kielce have also shown an interest and I am in touch with Santa Cruz in California and Daventry in Britain. For purely patriotic reasons though, I would like to implement MISTER in Poland first. The Swedish Chamber of Commerce for the Scania region is prepared to put up zł.400 million. All we need now is a city. Once we get MISTER up and running in one city, the rest will be beating a path to our door.

15 YEARS AGO IN THE VOICE:

After 47 years, the elite Russian First Armored Guard has returned home. In 1945, it took part in the capturing of Berlin, and later helped crush the anticommunist opposition in former East Germany and Czechoslovakia. About 45,000 soldiers left the Saxonian capital of Dresden for Smolensk. In Saxony, only one division and several smaller detachments remain, whose job is to hand over former bases and firing ranges to the German authorities. (1992)

10 YEARS AGO IN THE VOICE:

Egon Krenz, East Germany's last hard-line

Voices from the Past



communist leader, was taken into custody Aug. 25 after a judge finished reading a verdict sentencing him to six and a half years in jail for manslaughter.

Presiding judge Josef Hoch said Krenz, convicted for the deaths of refugees trying to flee over the Berlin Wall, had to be taken into custody immediately to prevent him from leaving the country. Hoch said there was a danger Krenz could try to escape, given the length of the sentence.

(1997)