

A lifting experience. Interview with V. Gershenzon for the "Personal Budget" magazine



Interview with ScanEx R&D Center General Director V. Gershenzon published in "Personal Budget" magazine (February 2010)

Not long ago Earth observation images were accessible only to the military. How can private business enter such enclosed environment? What can be the source of income here? Russian company ScanEx knows the answers.

Analyzing space images together with physicists, geographers and other specialists ScanEx team offers the customers a unique information that enable to reveal illegal forest loggings in Russia, to detect oil spills at seas and even to pilot ships in the White Sea bypassing seal whelping areas. ScanEx is a private company, founded in 1989, reached the turnover of 450 million rubles after twenty years of business. In sphere of science-intensive technology this Russian company competes with its western counterparts. For the company leader – Vladimir Gershenzon – the meeting with ЭЛБ correspondent is another reason to recall how it all started.

Can you enunciate the business-idea of the company in one phrase?

We make satellite data more accessible and cheap. Application may vary a lot: control over construction and transport, forecasting natural and human-induced risks, nature protection. For example, in mid 90s a game warden from Kurgan Region addressed to us. He needed to make plans of roe deer hunting. Hunting was a replacement to natural selection, because there were no wolves in this *zakaznik* (strictly protected nature reserve). If there were too many roe deer left they could eat all the plants in the *zakaznik*, if too few – the population could extinct at all. We could interpret areas of young birch wood based on satellite images. This is the food resource for roe deer. The relation is quite simple: the more food – the more young ones will be in this year. By calculating the area of the birch wood the game warden could determine the number of licenses for wildlife harvesting he may issue in the future. Several images and a few instructions of our specialists on interpretation of these images were enough.

What exactly do you offer to you customers?

Not just the results of space imaging, but the technology of obtaining them. Anyone can now buy a space image via foreign Internet-portals or using the services of reseller companies, including Russian ones. However, when we are talking about a system of monitoring large areas or specific regions or targets, a whole technological cycle is required. And we provide such. The signal from the satellite is delivered to the ground and is processed by our firmware complex called UniScan. Its footprint is 2500 km in radius. Satellite images processing – geolocation and map projection, geometric transformation, creation of 3D terrain models, etc. – all is done using our own software applications: ScanMagic, ScanEx Image Processor. At this stage space imagery data can be supplemented with vector layers with geographical names, statistic data, routes, boundaries, etc. The complete cycle from satellite data reception to its thematic processing and supply to the customer is provided by the network technology called ScanNet. It enables to conduct operational monitoring of objects, processes and phenomena using data acquired from several satellites. What for? For example, to track the seasonal floods on rivers, to control environmental and ship navigation situation at seas.

What is the price of such amenities?

UniScan complex – the backbone of this technological cycle, costs from 6 to 60 million rubles depending on the set of satellites, which data will be needed to the customer. In price-quality-power consumption-reliability ratio the UniScan complex is second to none. In Russia our ground stations are used by the Ministry of Emergency, Ministry of Natural Resources, RosHydroMet. The stations are operating abroad as well: in Armenia, Azerbaijan, Belarus, Vietnam, Iran, Spain, Kazakhstan, UAE and USA. Station customers are governmental organizations and agencies, private companies and

educational institutions that create their own centers of space monitoring based on receiving complexes. A client may order, acquire and process images of an area of interest in near real-time received from the required satellite. We willingly explain the specific features of taking images from all satellites we work with. By the way the satellite layer on the Yandex.Maps Internet-resource is also our product. It should be noted that data about the Russian territory presented over there is more detailed and fresh, than that on the Google Earth. In addition, we launched our Kosmosnimki.ru geoportal. One may see now only images with the resolution of 0.8-1 meters, but also measure, for example, the area of the region of interest or learn the distance from point A to point B on the map on this information resource.

How did the company look like in the earliest days of its history?

A bunch of hopeless workaholics (*laughing*). High quality engineers were getting 300 dollars per month. We were not living, - we were surviving. Mutual aid was the only relief.

What is ScanEx today?

Today it is the "data processing plant" managed by 20-25 leading specialists. It is not enough just to acquire an image of the Earth. One needs to know how to detect separate objects, to track changes and to analyze trends. We buy raw telemetry data delivered from satellites and applying our proprietary data processing technique we prepare geo-information products. There is a great risk in such a business model: the expensive telemetry needs first to be bought wholesale and then to be "prepacked" so that the customers would be interested to buy it. Our system enabled to make ready-to-use products four times cheaper.

We had to master the entire cycle of operations with space data, whereas the western market is very Purpose-oriented – everyone survives in his own niche. There are not such centers in Russia, but the principle regulator of space industry in our country – the Federal Space Agency (Roskosmos) rather resigns itself to our existence, than helps us.

Why so?

We are a private business. Probably, state sector regards us as a successful competitor. Though we invest almost all our revenues into development. At the same time our know-how can give anyone a head start. The diameter of our antenna "dish" is 2.4 m, whereas it is 5.4 m with the best western counterparts. With the twofold increase in size of the receiving system, the price rises almost ten times; additional costs are required, for example, for major construction work. Whereas our structures can be installed on any roof.

How about governmental support of science-intensive enterprises?

There is none. There were no actual investments. It's not a matter of us, it is a matter of supporting Russian technologies as a whole. Moreover, the regulators try to impose constraints on our primary type of activity – Earth observation data reception and processing. Our technology appeared in the list of dual-purpose (civil and military) activities and it became more difficult to get license for such activities. The number of obstacles on our way is permanently increasing. This can be flabbergasting sometimes.

Of course, the reason of closeness of the space industry goes with its roots back to the cold war days. In other countries even private space rockets are being launched now! The liberalization process is ongoing here, but very slowly. But if somebody starts to say that there are no technologies in Russia to protect the nature and the society - to track industrial pollutions, illegal construction or illegal fishing – we can tell for sure that it is not true. Everything can already be seen from space. It is just important not to close the eyes.

Interviewer: Dmitry Artukhov