Earth Remote Sensing Space System of The Republic of Kazakhstan

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Currently, the Republic of Kazakhstan is actively working to create a national space industry.

National company "Kazakhstan Gharysh Sapary" was created according to the Decree of the Government of the Republic of Kazakhstan in 2005 for the implementation of the competitive space technologies for the interests of Kazakhstan.

The company is appointed as the National operator of the ERS space system by the Government of the Republic of Kazakhstan.

The company is involved in the following segments of the space-based services through the implementation of the following projects.

1) design and manufacture of the spacecrafts – project "Assembly, integration and testing complex of spacecrafts in Astana". The created AITC SC will provide closed-loop on assembly and testing of spacecrafts weighing from 100 kg to 6 tons.

2) services on provision of ERS data – "Creation of the Earth remote sensing space system of the Republic of Kazakhstan" project.

3) satellite navigation services – "Creation of the ground infrastructure of High-accuracy satellite navigation system of the Republic of Kazakhstan" project

Today, in the Republic of Kazakhstan our company deployed ground infrastructure of High-accuracy satellite navigation system to provide qualitatitve coordinate and time services to consumers of information in the global navigation satellite systems (GLONASS and GPS).

4) development of scientific and technological basis of space activities – "Creation of science-technological space system" project. This space system is created for the purpose of developing design technologies, assembly and testing of spacecrafts, conducting researches of the Earth's ionosphere, receiving flight history for technological load of its own design.

5) launching services – "Participation in the Dnepr program on the commercial use of IBM RS-20" project.

Today, the company is a shareholder (holding 10% of shares) of the Kosmotras company, which is the operator of the Dnepr program. The Dnepr program provides commercial launches of spacecraft using the conversion IBM RS-20.

ERS space system of the Republic of Kazakhstan was created in cooperation with Airbus Defense and Space. Currently, the system is going through the experimental phase and starting from 2015 it will provide ERS services within the country and around the world.

Spacecraft with a spatial resolution of 1 m was launched on April 30, 2014. This spacecraft contains higher modulation transfer function (MTF) and signal / noise ratio (SNR) comparing to other satellites of high resolution. SC has a high maneuverability and good accuracy of positioning, stereo images are taken at one loop. Performance of SC HR — 220 thousand square kilometers per day.

Spacecraft with a spatial resolution of 6.5 m was launched on 20 June, 2014. Stereo recording is also performed at one loop. Performance of SC MR is 1,000,000 km per day.

Controlling of the spacecrafts and ERS data processing are conducted at the Ground segment which is located in Astana.

In order to develop our ERS space system of the Republic of Kazakhstan it is planned to implement the following projects:

1) Project – creation of the space radar system in the frame of ERS SS development, that will allow to obtain high resolution radar images, duration – 2016 – 2020.

2) Project — replenishment of ERS SS RK constellation of satellites by launching KazEOSat-3 and KazEOSat-4 satellites, duration – 2018-2021.

Our company is a distributor of the world's major suppliers of remote sensing data. Our main customers are government agencies and organizations of the Republic of Kazakhstan. We plan to provide services of remote sensing in the world market and develop a network of distributors.

Our partners are the largest European companies.

Kazakhstan is ready to enter into the world space community with its services to provide remote sensing data which can be used by other countries.

We are open for the dynamic dialogue and mutually beneficial cooperation in the field of ERS data application.