

Assyl Bakasheva,
Cand. Eng. Sci. , Mission Planning Engineer,
JSC “National Company “Kazakhstan Gharysh Sapary”, Center of ERS Space System,
assylbakasheva@gmail.com

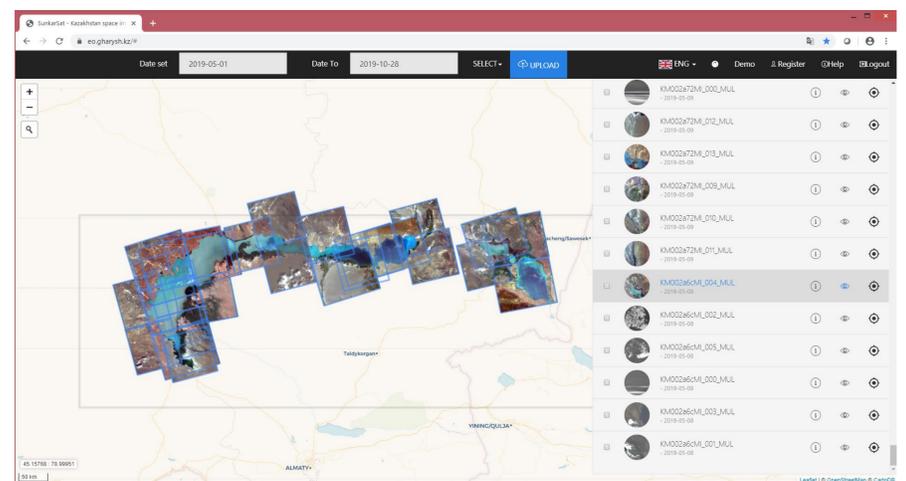
Background

As you know, the Republic of Kazakhstan has an ERS space system consisting of 2 commercial satellites of high and medium resolution (<http://gharysh.kz>). JSC National Company “Kazakhstan Gharysh Sapary” is the National Operator of the Earth Remote Sensing Space System. The stages of control of spacecrafts and their mission accomplishment are implemented.

An archive of digital satellite images has been formed from the moment the satellites were commissioned to the present. Interactive access technologies to the electronic catalogue and the generation of orders for the acquisition of archived data using the Internet enable potential consumers to quickly receive images of territories of interest (<http://eo.gharysh.kz/sunkarsat/>).

The increase in the number of users and the growing need for the rapid acquisition of satellite imagery data necessitate the development and implementation of new services and technologies for obtaining satellite images and products based on them. Sustainable operation of the online access level of consumers should be based on the structural and regulated organization of a long-term archive of digital satellite images, and this task remains to be solved by the National Operator of the Earth Remote Sensing Space System of the Republic of Kazakhstan.

<http://eo.gharysh.kz/sunkarsat/>



Balkhash and Alakol Lakes, 2019

Long-term and operational digital image archive

The digital image archive consists of two levels: long-term and operational.

The long-term level of the archive should ensure the physical integrity of the data. Operational level - designed to reduce the time and cost of access to the most frequently used data.

In our case, the physical integrity of the satellite image archive and products based on them is implemented on modular data storage arrays that provide simplicity, speed, and support for a powerful set of data services included in the virtualized array system architecture.

Catalogue

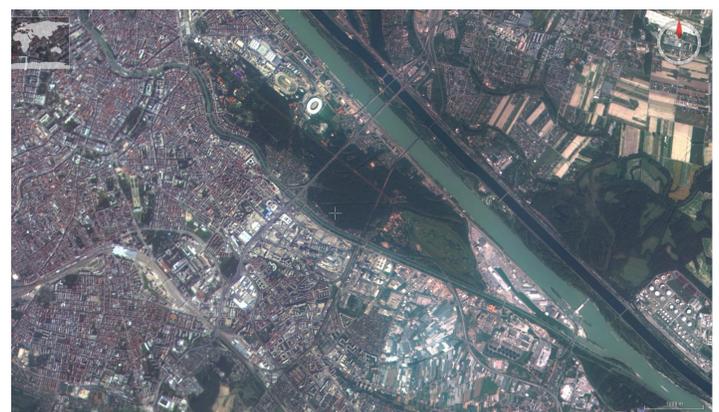
To organize access and archive management, we need to create a functional catalogue in which data can be divided by type and level of data, purpose, storage time, access categories, etc.

In the long-term archive of the National Remote Sensing Space System Operator, it is necessary to store all satellite images received from domestic RS satellites, all satellite images received from foreign spacecraft by receiving stations in Kazakhstan, as well as all acquired the satellite images due to budget or private funding. At the same time, access to satellite images acquired via private financing can be carried out in an interactive catalogue taking into account the data storage time.

The operational level archive can store data, for example: for the last 3 months, data for a specific project, products based on satellite images.



KazEOSat-2 Team, JSC “NC “KGS



Vienna, Austria

KazEOSat-2©2019 JSC “NC “KGS