

GEOIndustry 4.0

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The modern world lives in the era of the third industrial (digital) revolution, started with active use of electronics and information technologies in 1969. Nowadays we can see a gradual transition towards the fourth industrial revolution which is characterized by a merger of technologies and blurring of the boundaries between physical, digital and biological spheres. Geoinformation technologies and the Earth Observation is undergoing the same transformation, possibly named GEOIndustry. What kind of changes can occur in the industry of geoinformation technologies and the Earth Observation in 15 years? Let's try to predict the distinctive features of GEOIndustry 4.0.

Satellite imagery will be conducted in a continuous mode. In the field of unmanned aerial vehicles, there will appear a system of fully automated docking stations with UAV which are integrated into the existing infrastructure components. In the sphere of aerial photography

and airborne laser scanning, there will take place a transition from manned survey systems to UAVs. Revolutionary changes will occur in the field of data processing, software development, geoinformation systems. The very concept of "map" will be a subject to review. Transition to the spatiotemporal model, information analysis will be done automatically (starting from the collection of necessary data), transition to systems with informal and intuitive perception of tasks will be carried out, providing the users with optimal solutions on the base of the dynamic spatiotemporal model. The user's request to receive necessary analytical information will be met online.

In 15 years when GEOIndustry 4.0 gains full strength, the spatiotemporal terrain model and intelligent analytical services will become basic concepts. In general, the industry will be characterized by: BigData technologies, cloud computing, full automation of processes, neurologics, convergence of all spatial data sources.