KB PANORAMA
Geoinformation technologies

Innovations in cartography: automated decryption, generalization, multiscale map

Speaker: **Alexander Kirichenko**

Automated
Decryption and Vectorization

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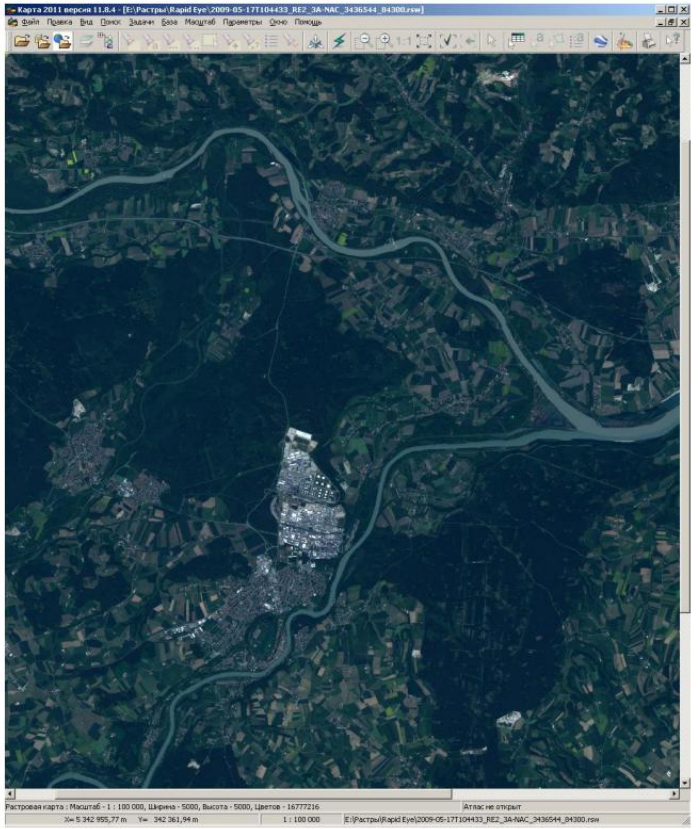
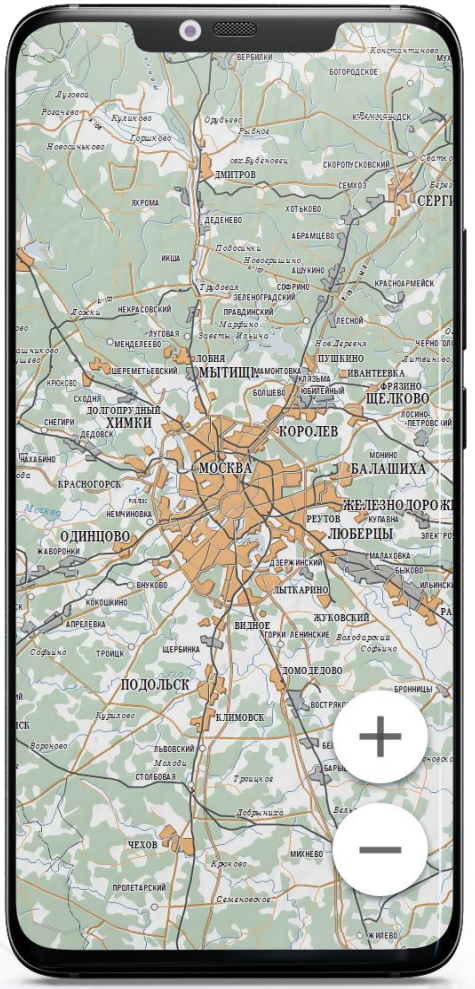
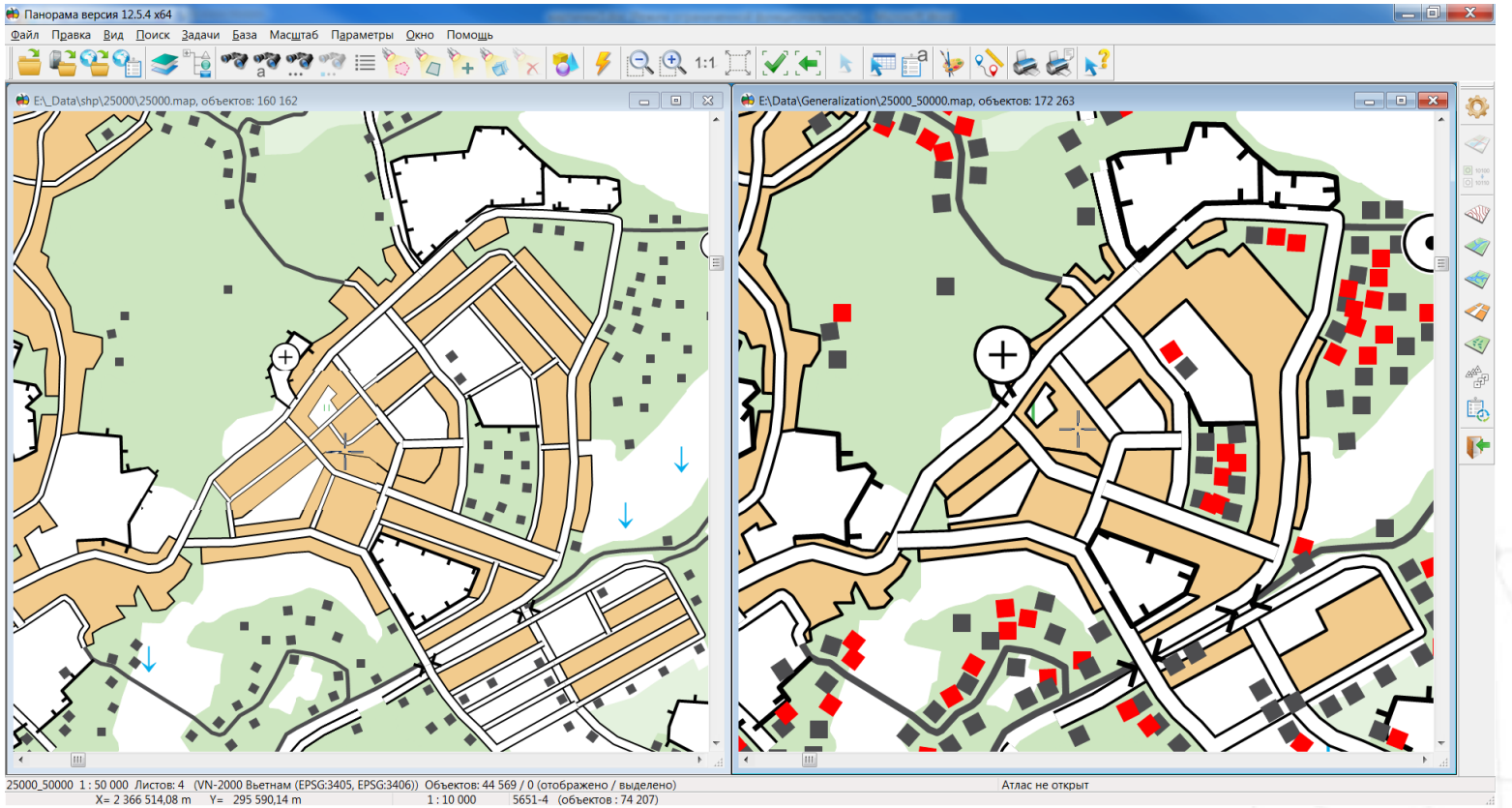


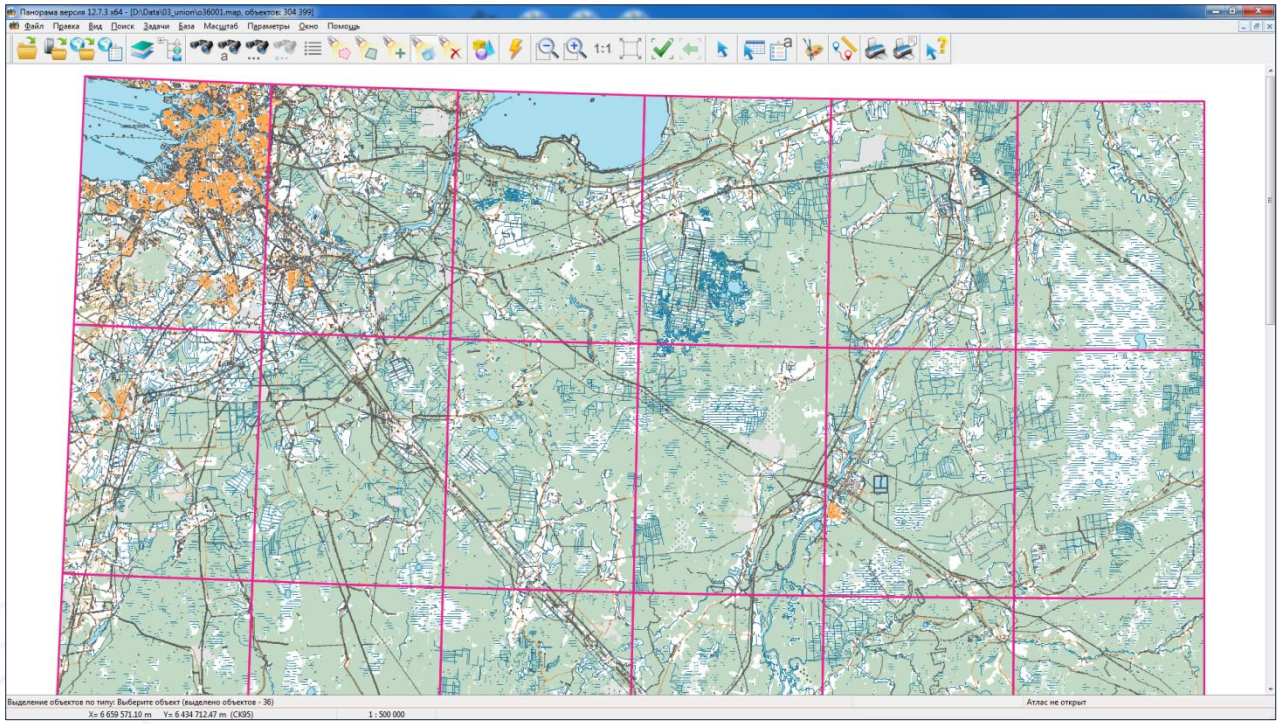
Multiscale maps

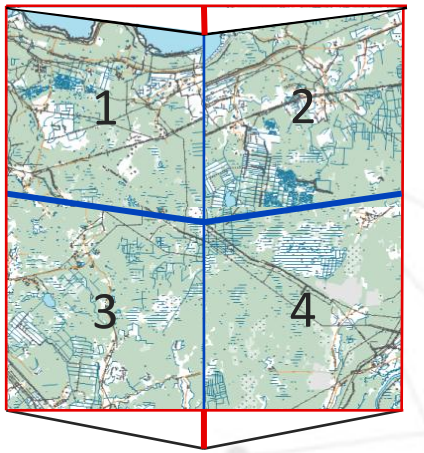


Automated generalization



Formation of nomenclature sheet





- Initial map sheet frames
- Derivative map sheet frame
- Auxiliary lines (junction lines)
- Lines of maximum divergence of points of objects coming to frame

Simplification of metrics and generalization of contours

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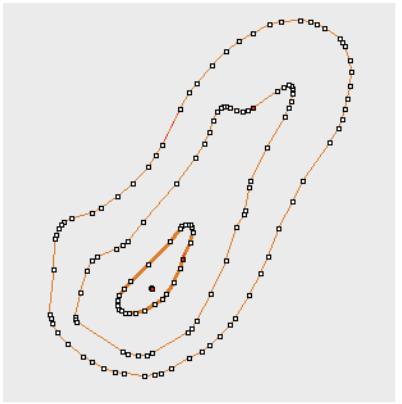
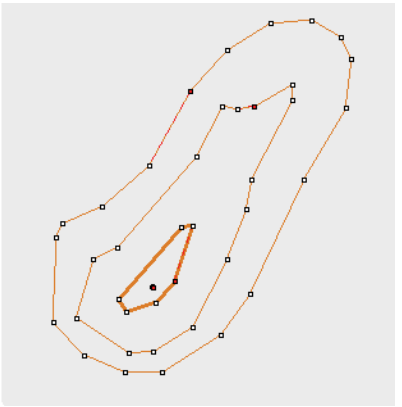
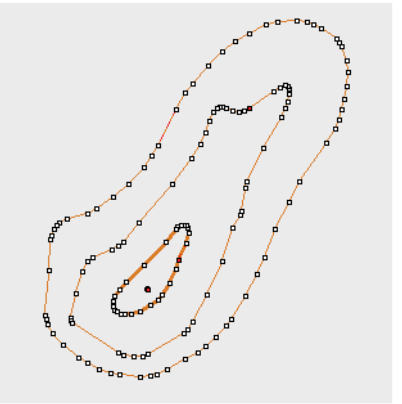
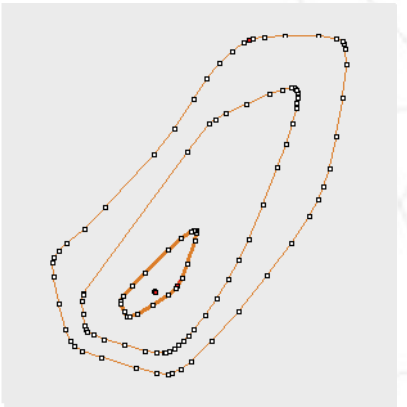
Filtering allows removing unnecessary points (located on one straight line or almost on one straight line)





Contour generalization is designed to smooth the metric description of linear and areal map objects.





Generalization of mathematical, planimetric and elevation base objects

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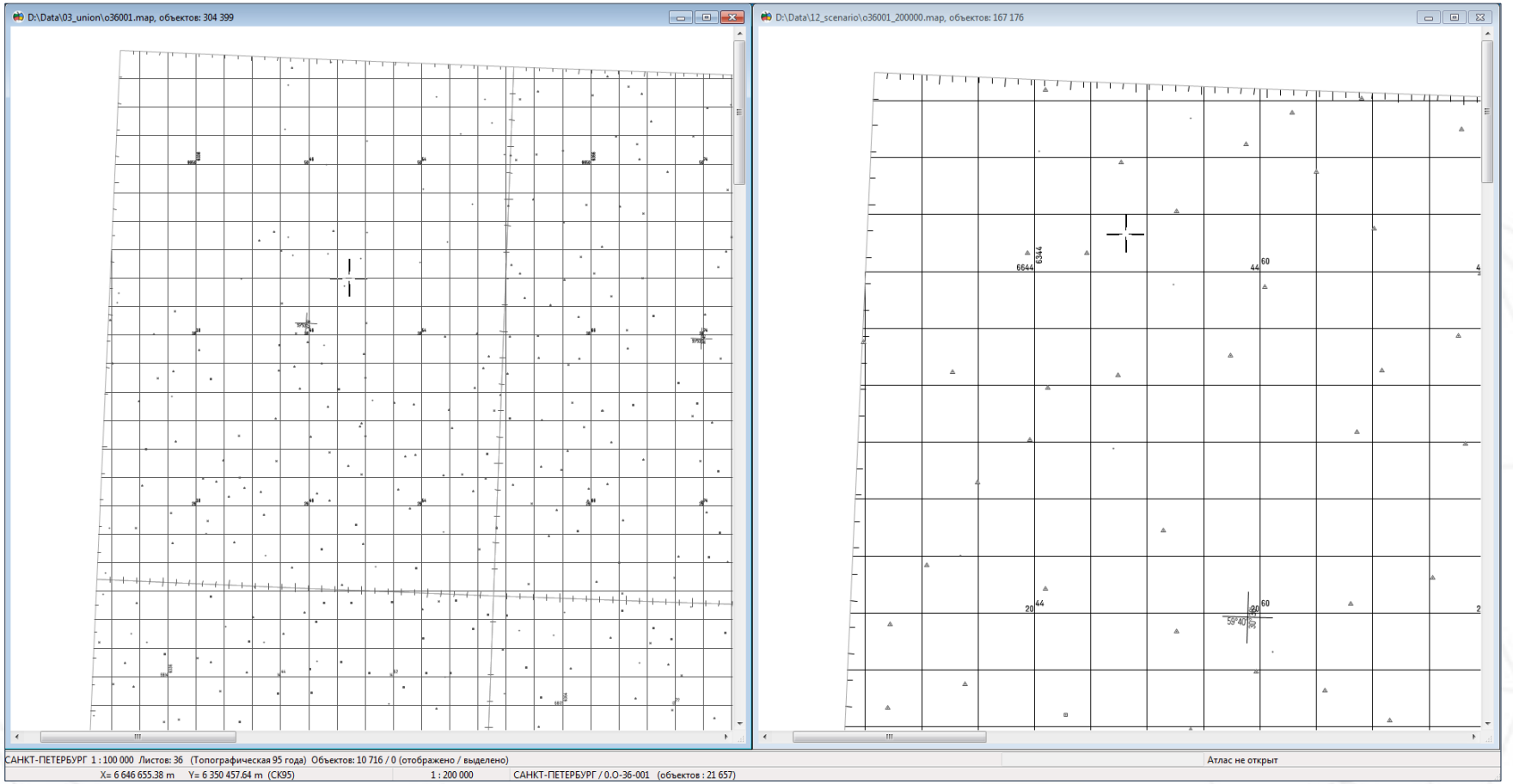

Automated terrain generalization

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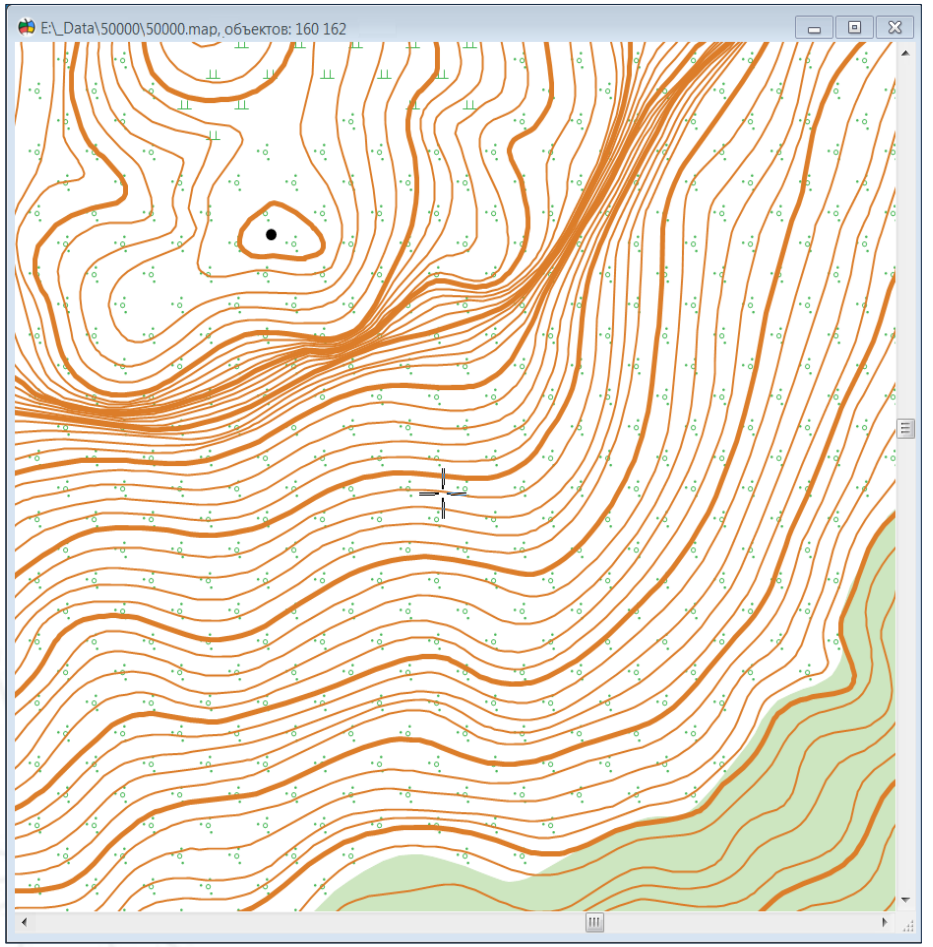
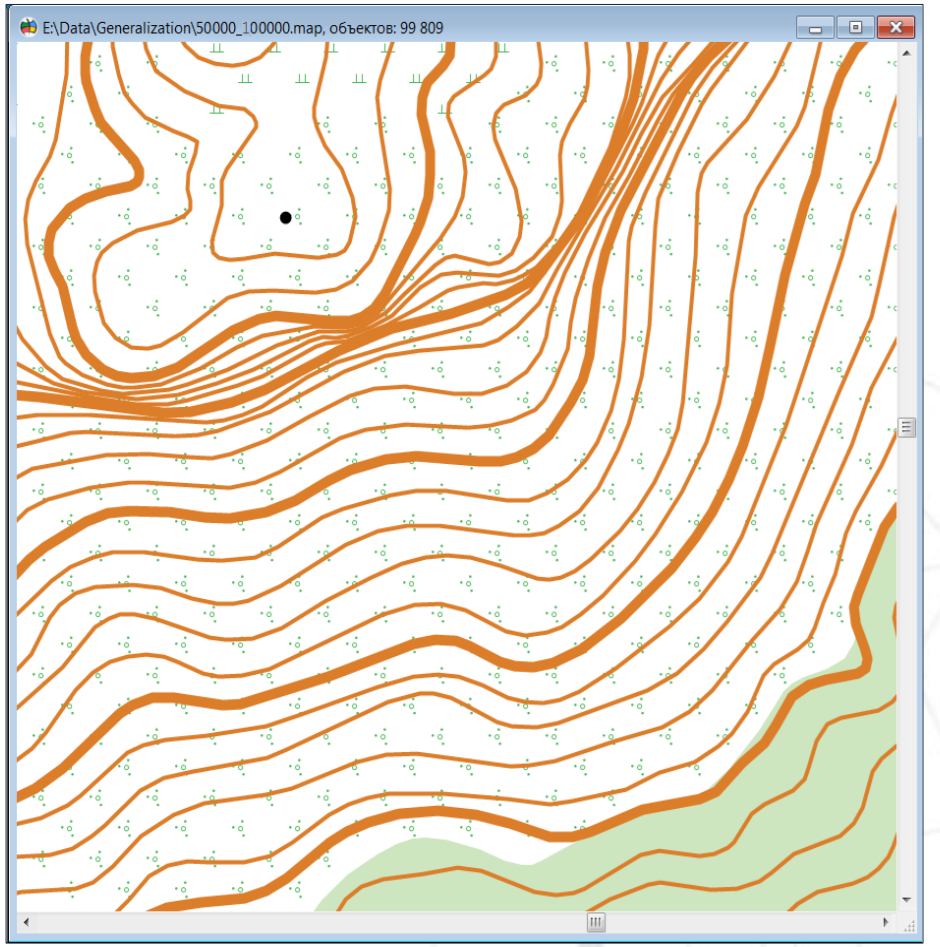
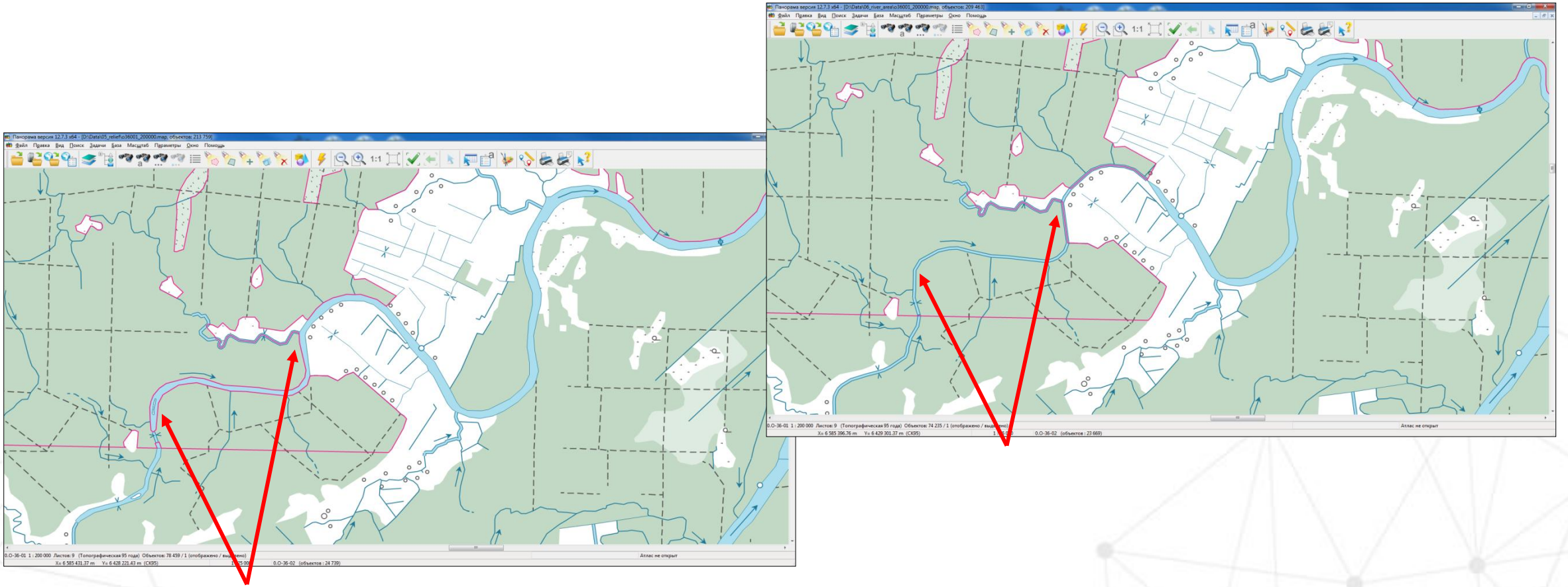




Automated generalization of areal rivers



When replacing a fragment of an areal river with a linear fragment, the metric of adjacent objects (areal forests and linear tributaries) is automatically matched

Automated generalization of linear rivers

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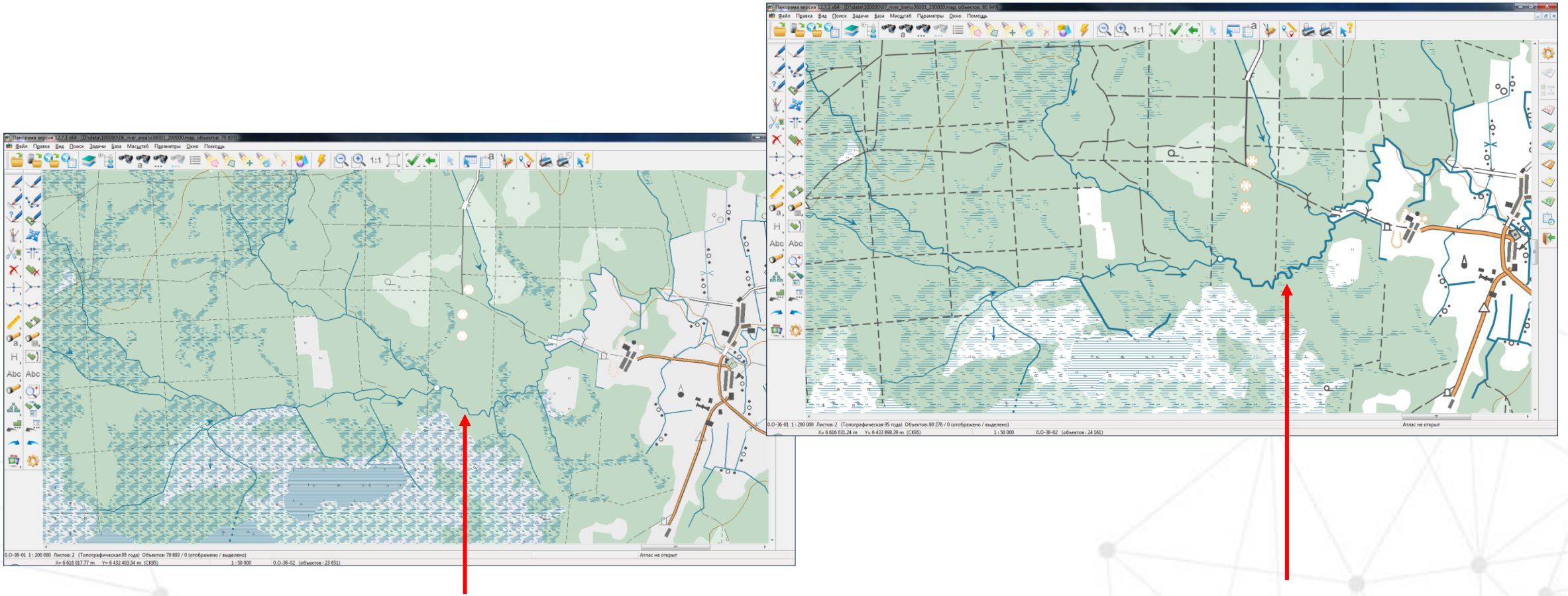
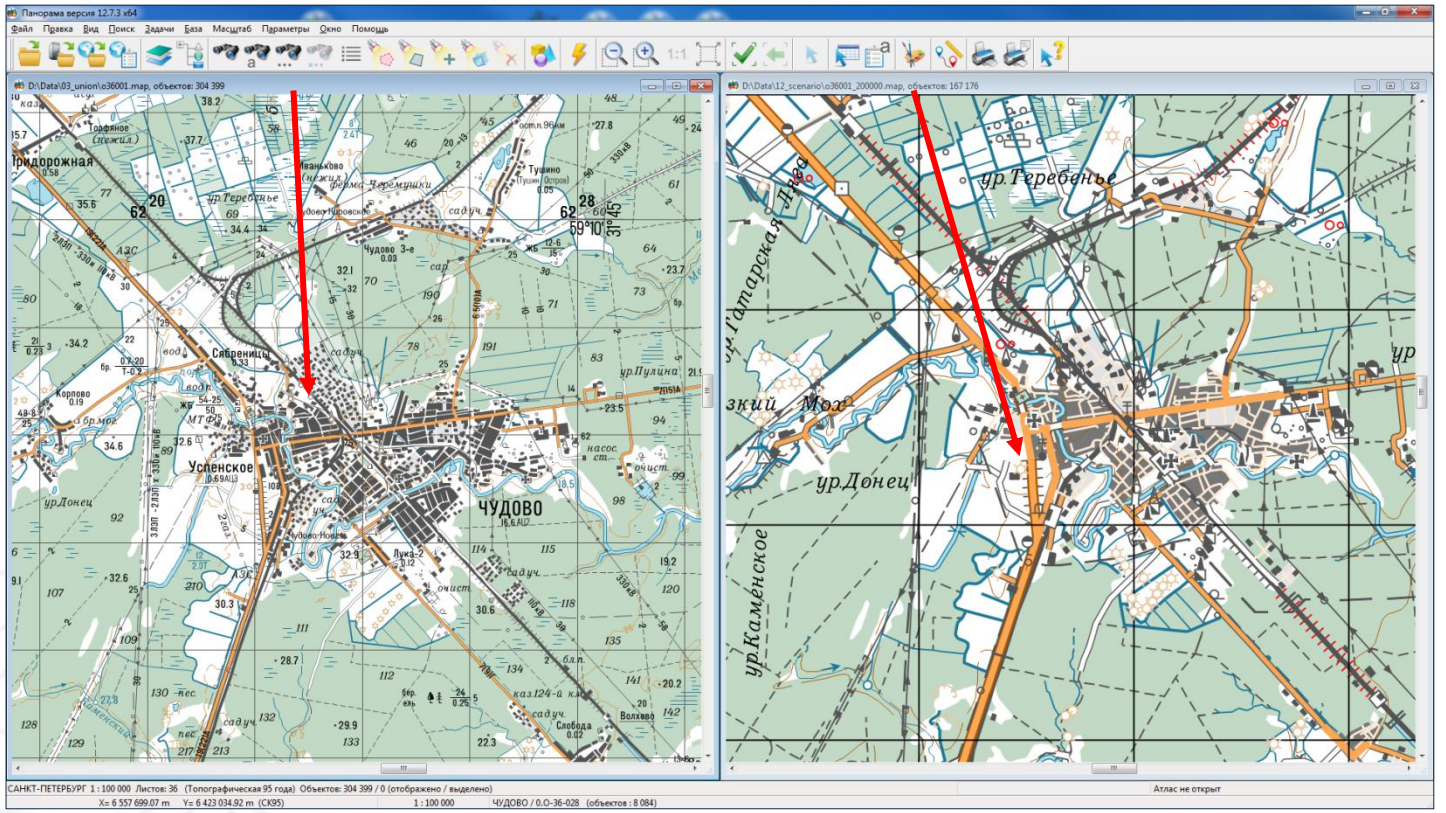


Linear rivers are broken into fragments between tributaries and a thickness - increasing from source to mouth – is assigned to each fragment

Automated generalization of road network

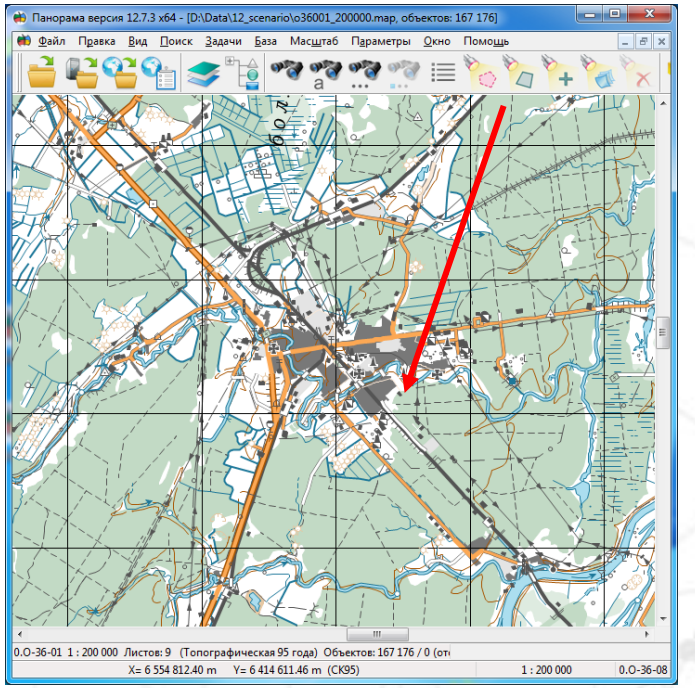
Settlement view in the **1 : 100 000** scale



On initial map

On derivative map

Settlement view in the **1: 200 000** scale after map processing



Automated generalization of urban settlements

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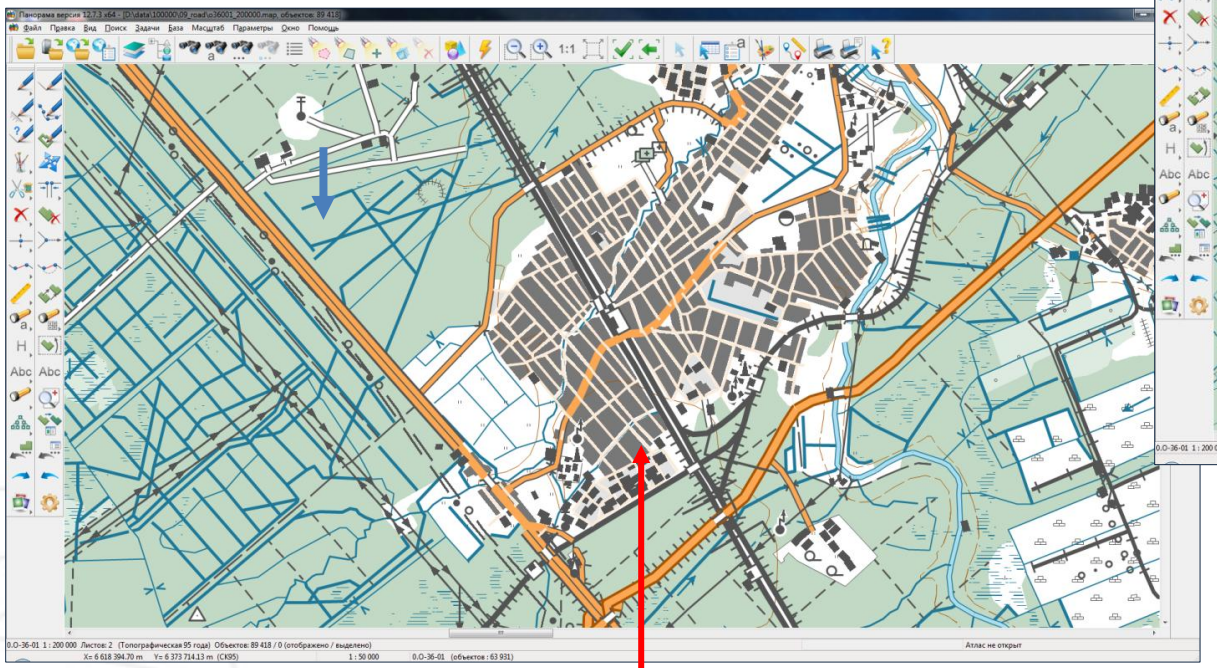
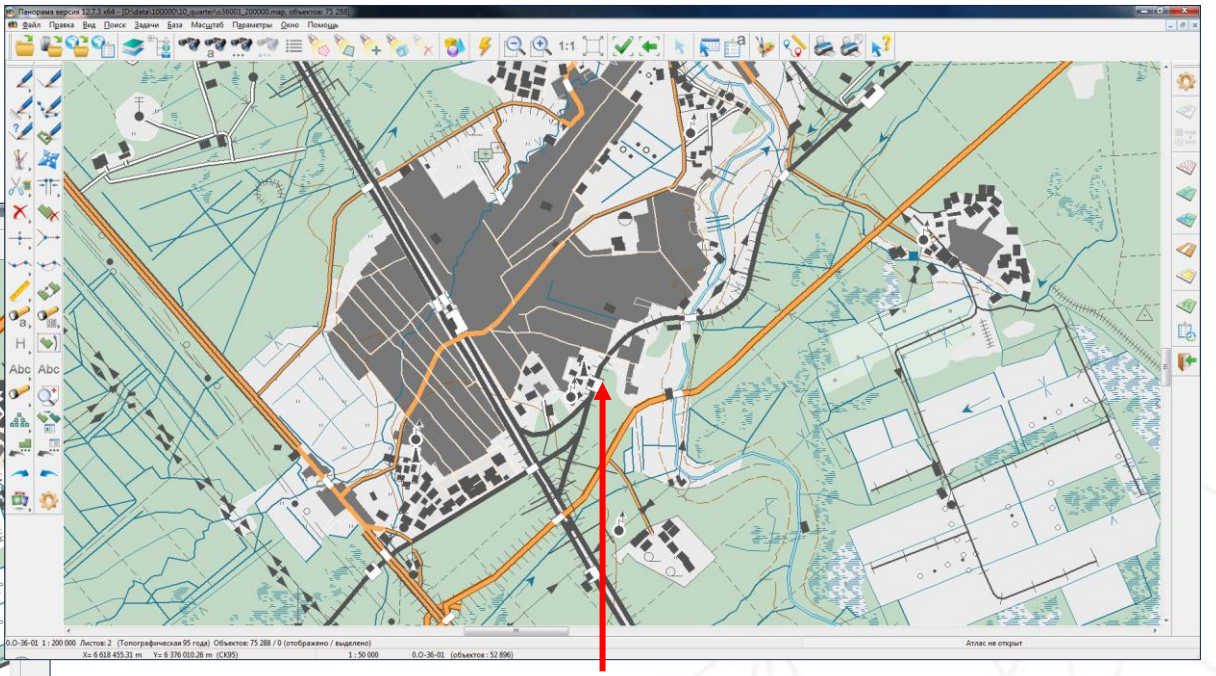
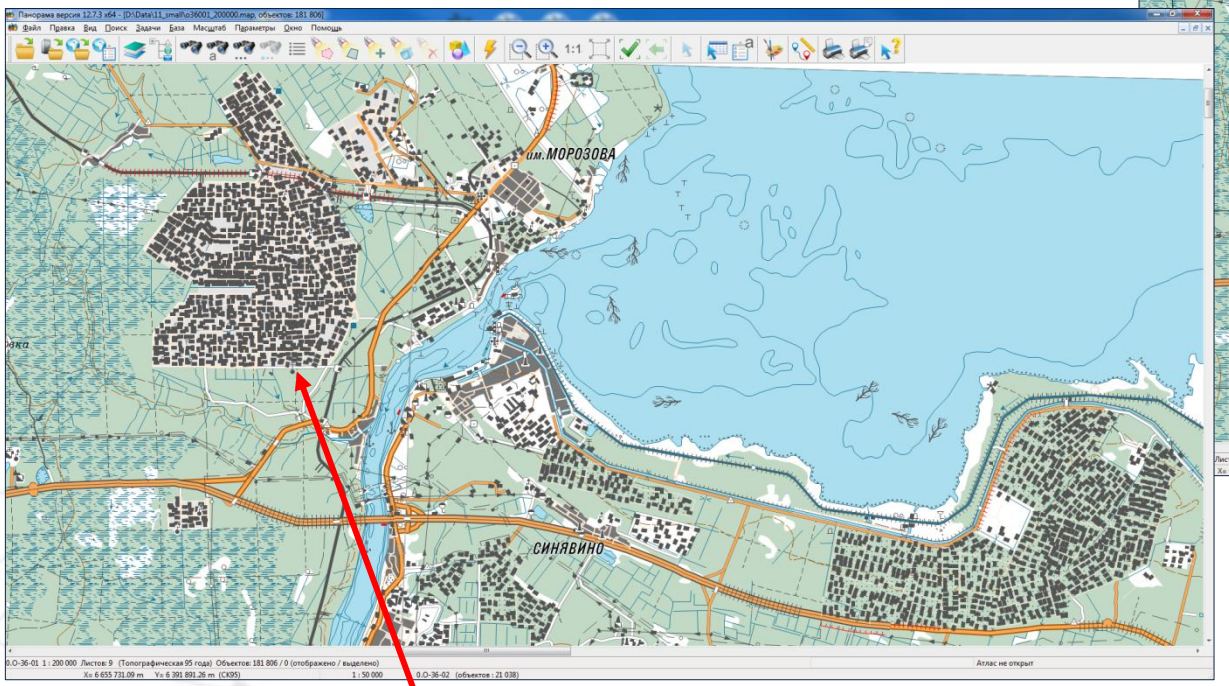


Districts **before** map processing

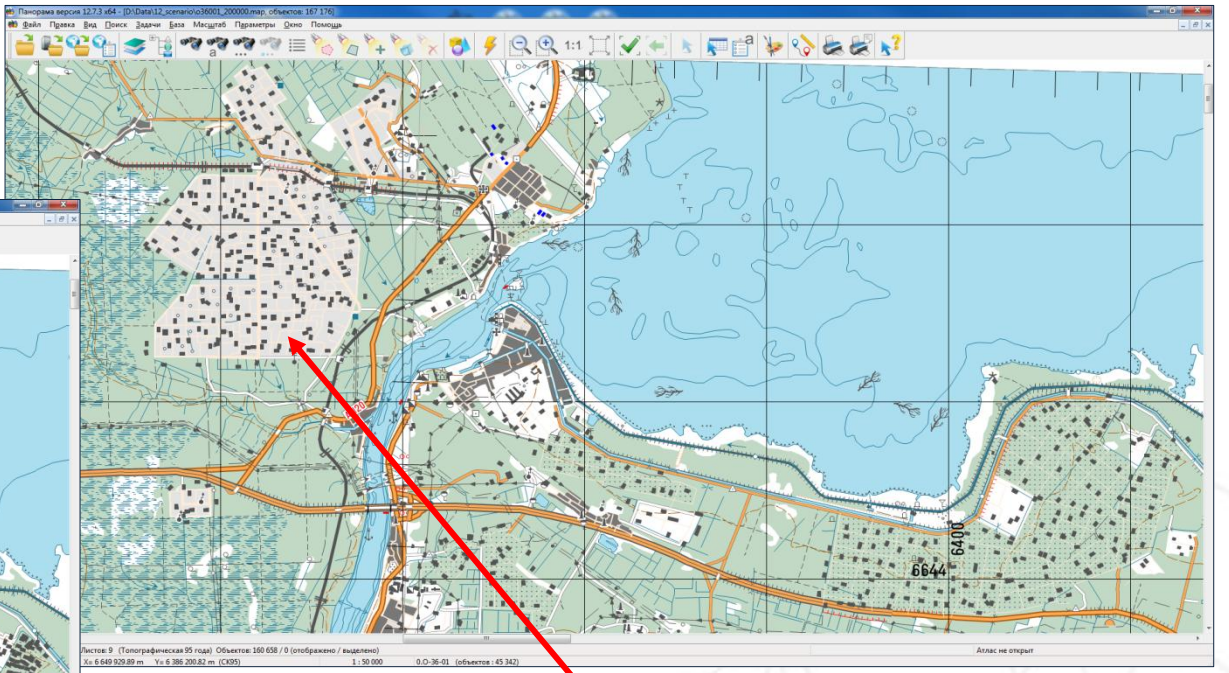


Districts **after** map processing

Generalization of buildings



Rarefaction of buildings **before** processing



Rarefaction of buildings **after** processing

Automated generalization of small-form objects

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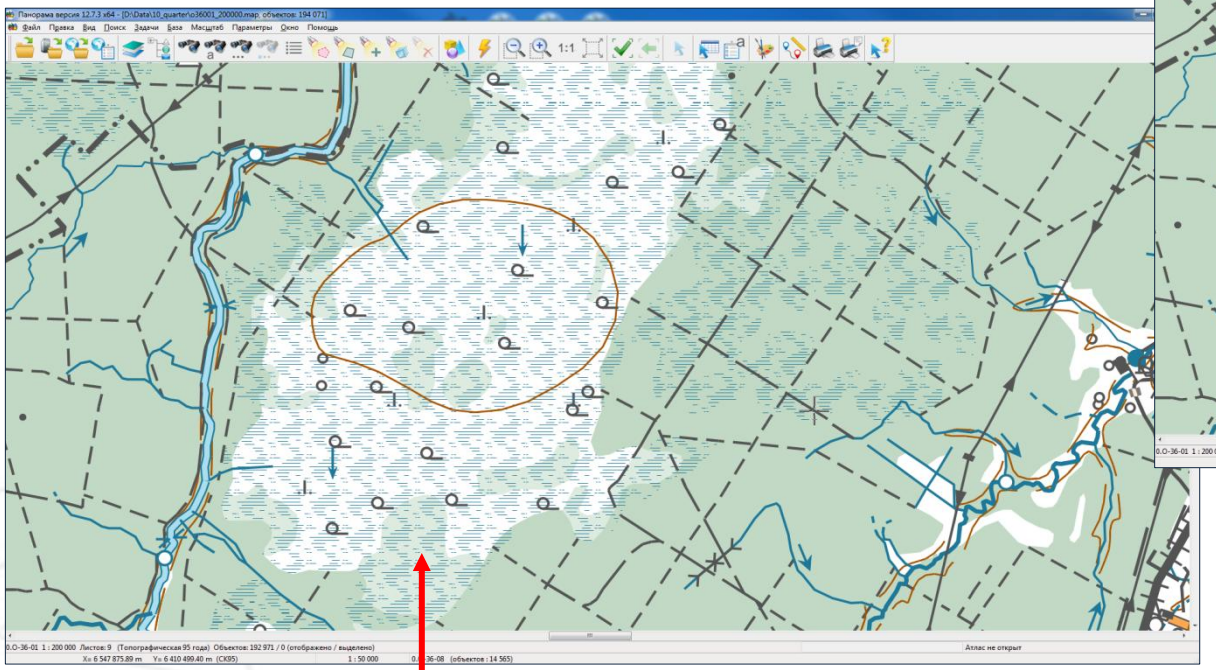
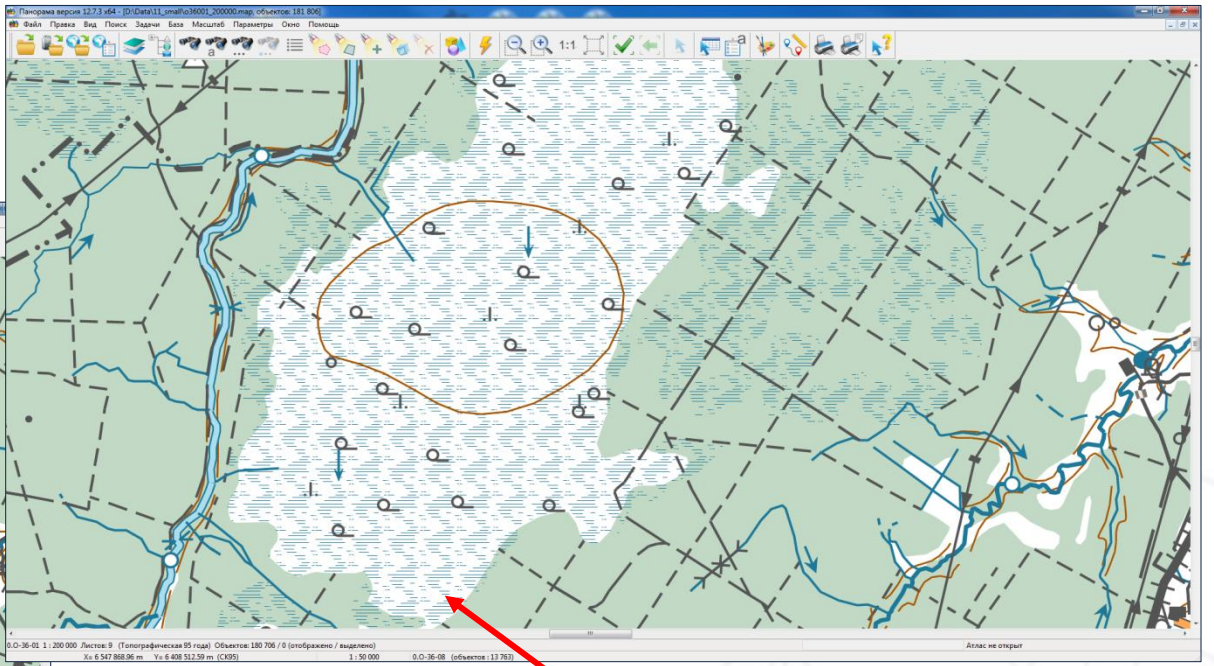


Map type **before** processing



After processing the map lacks small-area objects (green forests in the swamps)

Takes the formation of 1 sheet of derivative scale

*When converting 36 1:100000 scale map sheets to 9 1:200000 scale sheets

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Thank you for attention!

Speaker:
Alexander Kirichenko
a.s.kirichenko@gisinfo.ru

www.gisinfo.ru
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