

## USE OF MODERN ACHIEVEMENTS OF SCIENCE AND TECHNOLOGY BY JUDICIAL EXPERT IN THE MANUFACTURING OF GEODETIC EXPERT EVIDENCE

### *Ivan V. Parkhomenko*

Department of the Federal Service for State Registration, Cadastre and Cartography in the Novosibirsk Region, 28b Derzhavina St., Novosibirsk, 630091, Russia, Ph. D., Deputy Head, e-mail: iv\_uy@ngs.ru

### *Yulia V. Fedorenko*

Government of the Irkutsk Region, 20, Lenin St., Irkutsk, 664025, Russia, Assistant Deputy of the State Duma of the Federal Assembly of the Russian Federation N. P. Nikolayev, phone: (902)510-18-05, e-mail: 601-805@bk.ru

### *Daria V. Parkhomenko*

Siberian State University of Geosystems and Technologies, 10, Plakhotnogo St., Novosibirsk, 630108, Russia, Ph. D., Associate Professor, Department of Cadaster and Territorial Planning, phone: (913)900-19-50, e-mail: dara8@inbox.ru

The article highlights the problems of using modern technologies in the judicial land expert evidence, including in terms of the incompatibility of scientific achievements with the requirements of the legislation. The aim of the study is to identify the features of the use of special measurement methods in the judicial geodetic examination, and the task is to characterize the changing trends of measurement methods and technologies. The research method consists in the analysis and synthesis of the existing practice of the production of forensic geodetic examination. The results of the study are that the expert's conclusion is to indicate all the methods used by the expert. It was concluded that for measuring and analyzing large spatial arrays, methods of cartography, photogrammetry, and laser scanning can be used as an essential sub-institution of photogrammetry. Taking into account the quality of measurements that has stepped forward, experts should use them. The authors conclude that if there is a discrepancy between the requirements of the law and the achievements of science, the expert should indicate in the expert opinion such discrepancies. The conclusions of the expert opinion should follow scientific results and trends.

**Key words:** geodetic expert evidence, research methods, land management.

## REFERENCES

1. Ministry of Justice of Russian Federation of December 27, 2012 No. 237. On approval of the List of births (types) of forensic examinations performed in federal budgetary forensic institutions of the Ministry of Justice of Russia, and the List of expert specialties for which the right to independently conduct forensic examinations in federal budgetary forensic institutions of the Ministry of Justice of Russia. Retrieved from ConsultantPlus online database [in Russian].
2. Federal Law of May 31, 2001 No. 73–FZ. On state forensic expertise in the Russian Federation (2001). *Sobranie zakonodatel'stva RF [Collection of Legislative Acts of the Russian Federation]*, No. 23, Article 2291 [in Russian].
3. Economic Development Ministry of the Russian Federation Order of March 1, 2016 No. 90. On approval of requirements for accuracy and methods for determining the coordinates of characteristic points of borders of a land plot, requirements for accuracy and methods for determining coordinates of characteristic points of a building's contour, structure or facility under construction on a land plot, as well as requirements for determining the area of a building, structure and room. Retrieved from ConsultantPlus online database [in Russian].

4. Avrunev, E. I. (2019) Use of active basic stations in the performance of cadastral works with respect to real estate objects. *Vestnik SGUGiT [Vestnik SSUGT]*, 24(1), 135–145 [in Russian].
5. Economic Development Ministry of the Russian Federation Order of December 8, 2015 No. 921. On approval of the form and composition of information of the boundary plan, requirements for its preparation. Retrieved from ConsultantPlus online database [in Russian].
6. Antonovich, K. M., Kalenitski, A. I., Avrunev, E. I., & Kljushnichenko, V. N. (2014) Modern problems of the preparation of information for the maintenance of the state real estate cadaster. *Izvestiya vuzov. Geodeziya i aehrofotos"emka [Izvestiya Vuzov. Geodesy and Aerophotography]*, 4/S, 122–125 [in Russian].
7. Karpik, A. P., Fedorenko, Yu. V., & Parkhomenko, D. V. (2017). On the geoinformation role in the civil-legal problems of estate state register data public reliability (on the example of Irkutsk region). *Vestnik SGUGiT [Vestnik SSUGT]*, 22(2), 114–123 [in Russian].
8. Federal Law of August 23, 1996 No. 127–FZ. About science and state science and technology policy. (1996). *Sobranie zakonodatel'stva RF [Collection of Legislative Acts of the Russian Federation]*, No. 35, Article 4137 [in Russian].
9. Karpik, A. P., & Parkhomenko, D. V. (2019). Land expert evidence problem review in Russia. *Vestnik SGUGiT [Vestnik SSUGT]*, 24(1), 192–203 [in Russian].
10. Ozhegov, S. I. *Slovar' russkogo yazyka [Russian dictionary]*. Retrieved from <http://www.ozhegov.org/ru>
11. Federal Law of January 10, 2002 No. 7–FZ. On environmental protection. *Sobranie zakonodatel'stva RF [Collection of Legislative Acts of the Russian Federation]*, No. 2, Article 133 [in Russian].
12. Parkhomenko, D. V., & Parkhomenko, I. V. (2016). Laser scanning in the state real estate cadastre technological and legal aspects. *Vestnik SGUGiT [Vestnik SUGGT]*, 1(33), 114–123 [in Russian].
13. Rylski, I. A. (2017). Assessment of the possibility of using data ALS and aerial photography from the UAV to ensure the design work. *Geoprofi [Geoprofi]*, 2, 15–23 [in Russian].
14. Danilova, T. D., Nafieva, E. N., & Tarasova P. D. (2019). Results of remote sensing spacecraft launches in 2018 and further prospects. *Geoprofi [Geoprofi]*, 1, 16–19 [in Russian].
15. Matukhnov, S. S. (2017). Modern technologies of technical inventory and transport infrastructure. *Geoprofi [Geoprofi]*, 1, 43–45 [in Russian].

Received 12.07.2019

© I. V. Parkhomenko, Yu. V. Fedorenko, D. V. Parkhomenko, 2019