

# **Prosecutor's Supervision in Criminal Proceedings in the Context of the Leading Development of Digital Relations**

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**Abstract** Our paper focuses on the digital transformation of the Prosecutor's office of Russia and the transition to high-tech supervision of the prosecutor in the context of the development of digital relations which will lead to an increase in the efficiency of prosecutors in ensuring the lawfulness of the institution and investigation of criminal cases. The digital interaction of the Prosecutor's office with other state bodies, organizations, citizens through a single secure digital online platform will allow to achieve a higher quality of criminal proceedings. Digitalization will provide an opportunity to use in the criminal process inaccessible with the classical approach means of analysing materials that have proven themselves in other industries. For example, the use of machine learning, such as semantic neural networks, computer vision, data clustering, can be used within a single production to monitor violations of the law, and globally to search for similar materials and summarize, identify trends in the territory of the state or its subjects, and search for deviations from the norm, generalization of statistics.

**Keywords:** *prosecution, criminal proceedings, leadership, digital relations*

## **1 Introduction**

The development of digital relations is an integral attribute of the modern state and affects most areas of activity. In Russia, digital technologies are increasingly penetrating the law, and criminal proceedings are no exception. In recent years, the Criminal procedure code of the Russian Federation (further – CPC of the Russia) introduced various rules governing the issues related to digitalization.

These are the features of removing electronic media and copying information from them during investigative actions (art. 164.1 of the CPC of the Russia), the ability to participate in a court session by using video conferencing systems, audio recording of judicial proceedings, and using electronic documents and forms of procedural documents in criminal proceedings. The development of digital relations also implies a digital transformation of state bodies, including the Prosecutor's office. The digital transformation of the Russian Prosecutor's office should lead to an increase in the efficiency of prosecutors' activities to ensure the legality of criminal cases.

## **2 Literature review**

The impact of digital technologies on law is one of the most pressing problems of legal science, which is studied by a wide range of scientists. The use of digital technologies in criminal proceedings is viewed from different perspectives. In a number of works, the use of digital technologies is investigated from the point of view of challenging the classical model of criminal proceedings (Caianiello 2019; Turner 2019).

Other studies focus on ways to digitalize the criminal process (Vilkova and Maslennikova 2019; Zaytsev and Pastukhov 2019; Gladysheva et al. 2019; Pechnikov and Shinkaruk 2019). Research related to the study of evidentiary law in the light of digital technologies is of particular scientific interest (Liao 2019; Lazareva et al. 2019). The work related to the issues of forensic support of the case, in particular, the study of the face recognition system (Andreeva et al. 2019) has become relevant.

Optimization of criminal proceedings in the context of the development of digital relations is largely related to the development of digital platforms and the use of evidence obtained in electronic form, in connection with which some studies are devoted to the regulatory regulation of this issue (Grigoryev et al. 2019). The problems of

this study related to supervision and control in criminal proceedings, as well as directly the activities of the Prosecutor in the light of digital technologies, are relevant and reflected in a number of studies (Buday and Kolesov 2019; Skuratov 2019; Putzke et al. 2018). However, ways to optimize the Prosecutor's supervision in criminal proceedings in the context of the development of digital technologies are still debatable and more research is required here.

### **3. Methods of assessment**

Modern technologies provide an opportunity for interactive communication online, allowing you to analyse a large amount of information in record time. A scientific study of the use of digital technologies in law, including in the criminal process, issues of digital transformation of the activities of participants in criminal proceedings requires an interdisciplinary approach. It is interdisciplinary research that can make it possible to understand law in the context of the development of digital relations, in this case, interdisciplinary research at the intersection of criminal procedure and information sciences.

Our paper uses synthetic, integral, and system methods for investigating the problem. The article is based on General scientific, interdisciplinary research methods that are typical for both criminal procedure science and information science, as well as special methods of each of these Sciences. However, to preserve the limits of the scientific specialty, criminal procedure science is identified as a primary discipline, and information science as a secondary discipline. The results obtained during the study will be accepted from the perspective of criminal procedure science.

### **4. Digital transformation of Prosecutor's offices**

In order to improve the information support of the Prosecutor's office of Russia, the Prosecutor General of the Russian Federation approved The concept of digital transformation of bodies and organizations of the Prosecutor's office of the Russian Federation until 2025 (hereinafter referred to as the Concept) (see Prosecutor's General of the Russian Federation 2017). The concept involves the creation and implementation of new automated information systems, databases, updating existing ones, as well as integrating them into a single information space.

The digital transformation of the Prosecutor's office is carried out within the framework of the state policy on the development of the digital economy. The implementation of the Concept is aimed at a comprehensive optimization of the activities of the Prosecutor's office and is aimed at the primary use of digital data, the development of digital infrastructure and the formation of an electronic interaction environment.

The Concept envisages the development of a digital ecosystem of Prosecutor's offices, which will form the digital environment of the Prosecutor's office, taking into account the needs of citizens, business and the state. The developed digital ecosystem of Prosecutor's offices will allow the population to get high-quality and reliable information about the work of state bodies, as well as to receive the necessary public services.

The goals of the digital transformation of the Prosecutor's office include improving the efficiency of the Prosecutor's office and creating conditions for the rapid execution of Supervisory functions by prosecutors; readiness for changes related to the transition to the digital economy; development of unhindered and safe interaction of the Prosecutor's office with citizens, organizations and authorities.

To achieve these goals, there are challenges to solve tasks in three areas: high-tech supervision, digital infrastructure, and the environment of trust.

### **5. Supervision of the Prosecutor in criminal proceedings**

Digital transformation of Prosecutor's offices is aimed at increasing the efficiency of prosecutors' activities. In Russia, the prosecutor carries out criminal prosecution in the course of criminal proceedings on behalf of the state, as well as supervises the procedural activities of the inquiry bodies and preliminary investigation bodies (part 1 of article 37 of the CPC of the Russia). At the present stage, the work of prosecutors to supervise criminal proceedings can be considered to some extent effective.

According to the statistics of the General Prosecutor's Office of the Russian Federation (Prosecutor General's office of the Russian Federation 2020), in 2018 pre-trial criminal proceedings by prosecutors revealed 5,159,080 violations of laws, including 3,730,794 violations - during the initiation of criminal cases, and 1,428,286 violations - during the investigation of criminal cases. At the same time, the number of violations of laws detected by prosecutors by investigators and interrogators is gradually increasing. Thus, over the previous 8 years (since 2011), the number of violations detected by prosecutors increased from 4,148,277 to 1,010,803 (+ 24.4%), i.e. by a quarter.

At the same time, prosecutors do not always have enough powers to eliminate the identified violation of the law.

At present, the prosecutor does not have enough authority to oversee the initiation of criminal cases. In the event that an unlawful or unreasonable refusal of the investigator or inquirer to initiate a criminal case is found, the prosecutor has the power to reverse such a decision, but even if there is a reason and grounds for initiating a criminal case in this situation, he does not have the right to initiate a criminal case, that is, it is not entitled to eliminate the identified violation. The Prosecutor is only authorized to send the material of verification to the investigative body for additional inspection or to the inquiry body with his instructions.

The specialty of the prosecutor's supervision over the investigation of criminal cases by the inquiry bodies and the preliminary investigation bodies is the differentiation of supervision depending on the subject of the proceedings. The scope of the prosecutor's supervisory powers in the preliminary investigation is much smaller than in the inquiry, although the inquiry is carried out in a less complex category of cases. The prosecutor is not authorized to revoke all illegal or unreasonable orders of the investigator, does not have the right to give the investigator instructions on the direction of investigation and proceedings, does not have the right to remove the investigator from further investigation, if he has committed a violation of the law, and more. However, the prosecutor is authorized to do all this in the course of the inquiry. As a result, prosecutors do not have enough authority to oversee the enforcement of laws by investigative agencies. There are no grounds for such a difference in the powers of the Prosecutor depending on the form of investigation: the supervision of the execution of laws should be the same for both investigators and interrogators.

Thus, the optimization of the activities of prosecutors largely depends on empowering them, which would allow not only to identify, but also effectively eliminate violations of the law. But even with the existing scope of powers, the digital transformation of prosecution authorities will provide prosecutors with new opportunities in supervising criminal proceedings and will increase the efficiency of their activities.

## **6. High-tech supervision**

The implementation of the Concept of digital transformation of the Prosecutor's office should lead to high-tech supervision by the Prosecutor. High-tech supervision provides for the formation of a single secure digital platform for electronic interaction between prosecutors and other government agencies, organizations, and citizens, as well as the introduction of modern technologies in the work of the Prosecutor's office.

High-tech supervision is inextricably linked to the development of digital infrastructure. At the same time, the digital infrastructure should provide a new quality of electronic interaction between the prosecutor's office and the public and state bodies by creating a safe high-tech digital environment.

The main task of the development of digital infrastructure should be a comprehensive optimization of the internal and interagency activities of the prosecutor's office. It is supposed to create a single interagency digital online platform of interaction between prosecutors, heads of state bodies, investigators, interrogators to work with a single electronic case.

Working with a single interagency digital online platform has many advantages. Its introduction will allow the use in the criminal process inaccessible in the classical approach tools of analysis of materials that have proven themselves in other industries. The creation of a single interagency digital online platform will allow prosecutors to supervise criminal proceedings in real time.

When developing a platform, it is necessary to provide for the possibility of prosecutors checking the legality and validity of procedural decisions in the online mode. In this case, prosecutors will receive procedural decisions immediately after their issuance, and prosecutors will not need to submit requests to investigators and interrogators to review the materials justifying the procedural decision. This is of particular importance, since in practice, such requests by prosecutors often lead to lengthy correspondence between prosecutors and the investigation authorities in cases where the materials are under review as part of the procedural control of the investigation body. The prosecutor's access to a single electronic case will avoid such difficulties and will provide permanent prosecutorial oversight of the initiation and investigation of criminal cases.

Working with a single electronic case through the operation of a single interagency digital online platform will eliminate the possibility of the loss of a criminal case or its materials. In this regard, the need for the procedure for restoring criminal cases established by Art. 158.1 of the CPC of Russia.

It seems to be a very convenient prospect of transferring materials of verification or materials of criminal cases in electronic form. Prosecutors will be able to automatically transfer criminal cases or verification materials of a crime report from one preliminary investigation body to another (except for the transfer of a criminal case or verification materials of a crime report in the system of one preliminary investigation body) in accordance with the rules established by art. 151 of the CPC of Russia, as well as to seize any criminal case or any materials for checking a crime report from the preliminary investigation body of the federal executive body (under the federal executive body) and transfer it (them) to the investigator of the Investigative Committee of the Russian Federation. This will significantly reduce paperwork and save human resources.

At the end of the investigation, the criminal case with the final procedural decision (indictment) will be sent to the Prosecutor online, as a result of which it will not be necessary to physically deliver multi-volume materials.

If the prosecutor returns the criminal case to the investigator or inquirer for re-writing the indictment then will not necessary to reprint them on paper, all changes will be made in electronic form.

When the Prosecutor sends a criminal case to the court, a copy of the approved indictment will be handed to the accused, the lawyer and the victim in electronic form. In general, the operation of a single electronic case should allow us to move away from paper proceedings and move on to legally significant electronic document management.

The development and implementation of a single interagency digital online platform should lead to the rapid electronic interaction of the Prosecutor's office, the investigative authorities and the court in the procedures of judicial control in the pre-trial proceedings of the criminal process.

Working with a single interagency digital online platform should provide for the ability to track all procedural decisions from the registration of a report of a crime to a court order, as well as the ability to monitor the progress of a case and decisions made on it in case of appeal in higher courts.

The introduction of a single interagency online platform will provide the opportunity to maintain a single system of information accounting, which will allow to avoid repeated interagency records.

A single interagency digital online platform should provide citizens with the opportunity to contact the investigation authorities with a report on a crime. Sending a report of a crime electronically will eliminate the practice of unlawful refusals of law enforcement agencies in the reception and registration of statements about the crime.

In addition, using a single interagency digital online platform, it should be possible to file a complaint against the proceedings (inaction) and the procedural decisions taken by persons involved in the criminal sphere Proceedings.

The results of consideration of applications will be immediately reported to applicants automatically. The use of a single interagency digital online platform will reduce the time spent working with requests, which is especially valuable if the request should be resolved in a short period of time, for example, 3 days when considering complaints about actions (inaction) and decisions of the investigation bodies.

In general, the introduction of such an online platform should increase public confidence in the activities of state bodies and create an environment of trust. A special role will be played by the possibility of maintaining communication with citizens in real time, regardless of their location.

It should be noted that it is now possible to submit applications from individuals, individual entrepreneurs and legal entities to the Prosecutor's office of the Russian Federation through the portal "State Services" (Official Internet portal of public services), but the provision of such a service is not can compensate for the perceived capabilities of a single interagency digital online platform, and the use of this service by citizens confirms the need to further improve electronic interaction.

As with any system, when developing a single interagency digital online platform, it will be necessary to provide for the properties associated with the operation of online platforms.

The most important task will be a reliable scheme of user authorization. It is necessary to exclude the facts of fraud, forgery in the operation of the online platform.

One area of work may be the use of two-factor authorization. In this case, entering a login and password when logging in, as well as when committing significant actions (in particular, uploading, verification of documents) must be confirmed in an additional way, for example, by SMS, push notification, with the help of a special application on a mobile phone or certificate on a portable device (flash drive). However, this issue needs to be further investigated, as each of these methods has a different degree of reliability depending on the situation. Thus, the use of a certificate on a portable device (flash drive) allows you to almost completely eliminate fraud in remote ways, but is prone to local fraud when accidentally left in a computer key provides an opportunity for an outsider to take illegal action in the absence of its owner. At the same time, a modern person tries to carry his mobile phone with him, respectively, authorization through its use is convenient and protects against local fraud. However, SMS can be intercepted remotely, which also does not guarantee absolute security when authorized.

Another important task will be to protect against spam and fraud in various components of the online platform (loading false information, spam attacks and actions aimed at disabling the system).

The development of a single interagency digital online platform will be a high-tech solution not only from the point of view of information security, but also from the point of view of functionality.

Machine learning is now widely used in many industries (Veynberg 2019; Bataev et al. 2019). For example, semantic neural networks are used to check texts for plagiarism, semantic evaluation and evaluation of emotional text categorization, search for similar texts; computer vision is used to recognize objects and texts in images, search for images with similar objects or predetermined characteristics.

These technologies can already be locally used by individual agencies, but their support within a single system will significantly expand their scope, will provide a number of advantages as economic (more profitable to use a single system by all departments, rather than each agency to implement its own) and technological.

Among the technological advantages is the possibility of combining more technologies. The single system significantly increases the coverage of materials available for use by these technologies. In particular, it is possible to track the image of one person in the entire state in the materials of cases of different subjects.

The ease of use of these technologies increases, rather complex algorithmic and machine-learning solutions within single system can be used with just the click of a few buttons. As part of the prosecutors' work, the system will be able to provide the following functionality.

Firstly, a simplified use of the global search capabilities for similar materials, both textual information, and graphic and video images. Prosecutors will be able to select similar decisions according to given parameters, similar materials of checks of reports of crime and materials of criminal cases.

Second, the system can automatically analyse incoming materials in a single criminal case and focus the Prosecutor's attention on any deviations from the norm. This will significantly reduce the reaction time of the prosecutor, improve the quality of his supervisory activities.

At the global level, the use of cluster analysis methods will make it possible to optimize the work of a specific agency and law enforcement agencies as a whole, providing a search for the same type of materials and generalization, identifying trends in the territory of the state or its subjects, searching for deviations from the norm, and generalizing statistics. Clustering can also be used to monitor the effectiveness of investigators, interrogators and prosecutors themselves, identifying bottlenecks and unobvious features.

However, the operation of a single interagency digital online platform will sharply raise the issue of delimitation of competence, access control, namely, the conflict of shared access. It will be necessary to think over the problem of delimiting access, both intra-departmental and inter-departmental, in the case of working with the same materials by different officials. The above ideas will allow us to move to high-tech supervision of the Prosecutor in criminal proceedings.

## **7. Results**

The rapid development of digital relations inevitably leads to a digital transformation of state bodies, including the Prosecutor's office. This implies a transition to high-tech supervision of the Prosecutor, which will be carried out by working with a single interagency digital online platform. Such digital interaction of the Prosecutor's office, state bodies, organizations, and citizens through a single secure digital online platform will allow achieving a higher quality of criminal proceedings.

A single interagency digital online platform is necessary for working with a single electronic case. In conditions that ensure the safety of the operation of this online platform, a single electronic case will create an opportunity for prosecutors to quickly perform the Supervisory function, as well as instant interaction between prosecutors, investigators, interrogators, judges, government agencies and citizens. It will be almost impossible to lose a criminal case or its materials, and a unified system of interagency records will be introduced. The most important advantage of this online platform will be the ability to keep in touch with citizens in real time, regardless of their location.

Digitalization will make it possible to use information science achievements in the criminal process that have proven themselves well and can be used for analysing materials. For example, the use of machine learning, such as semantic neural networks, computer vision, and data clustering, can be used within a single production to monitor violations of the law, and globally - to search for similar materials and generalization, identify trends in the territory of the state or its subjects, search for deviations from the norm, and generalize statistics.

## **8. Conclusions**

Our results reflect the current trends in the development of digital relations, confirm the need for digital transformation of the Prosecutor's office and define its vector, aimed at moving work from paper media to a single interagency digital online platform. Otherwise, ignoring technological progress and not using modern digital advances in the criminal process is fraught with its stagnation and archaic, which is unacceptable for the law.

The future optimization of the prosecutor's activities in criminal proceedings is related to the widespread use of digital technologies, which requires deep consideration of the possibility of applying specific technological solutions and their security. In general, it is impossible to improve the prosecutor's oversight without its integration with information technology.

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## References

- Andreeva OI, Ivanov VV, Nesterov AY, Trubnikova TV (2019) Facial Recognition Technologies in Criminal Proceedings: Problems of Grounds for the Legal Regulation of Using Artificial Intelligence. *Tomsk State University Journal* 449:201-212. doi:10.17223/15617793/449/25
- Bataev AV, Gorovoy AA, Denis Z (2019) Comparative Analysis of the Use of Neural Network Technology in the World and Russia. 33rd International-Business-Information-Management-Association Conference. *Education Excellence and Innovation Management Through Vision* 2020:70-81
- Buday SN, Kolesov MV (2019) Use of digital capabilities to improve the efficiency of control and supervision. *Amazonia Investiga* 8(23):734-738
- Caianiello M (2019) Criminal Process faced with the Challenges of Scientific and Technological Development. *European Journal of Crime Criminal Law and Criminal Justice* 4(27): 267-291. doi: 10.1163/15718174-02704001
- Gladysheva OV, Kostenko RV, Sementsov VA (2019) Digitization: Problems of Use and Protection of Information in Criminal Proceedings. Ubiquitous Computing and the Internet of Things: Prerequisites for the Development of Ict 826:395-401. doi: 10.1007/978-3-030-13397-9\_46
- Grigoryev VN, Sukhodolov AP, Ovanesyan SS, Spasennikova MG, Tyunkov VV (2019) Digital information platforms as an object of normative legal regulation in the sphere of criminal proceedings. *Russian Journal of Criminology* 6(13):873-883. doi: 10.17150/2500-4255.2019.13(6).873-883
- Lazareva VA, Olinder NV, Perekrestov VN (2019) Digital Information in Criminal Proceedings: The Concept and Evidential Significance. Ubiquitous Computing and the Internet of Things: Prerequisites for the Development of Ict 826:93-100. doi: 10.1007/978-3-030-13397-9\_11
- Liao Yi-Ching (2019) Investigating the Use of Online Open Source Information as Evidence in European Courts. 13th International Conference on Availability, Reliability and Security. *ARES* 52:1-6. doi: 10.1145/3230833.3232812
- Official Internet portal of public services. <https://www.gosuslugi.ru/352356/1> Accessed 20 Mar 2020
- Pechnikov GA, Shinkaruk VM (2019) Computing Systems (Computers) and Criminal Trial. Ubiquitous Computing and the Internet of Things. Prerequisites for the Development of Ict 826:265-274. doi: 10.1007/978-3-030-13397-9\_30
- Prosecutor General's office of the Russian Federation (2017) Order of the Prosecutor General of the Russian Federation from 2017-09-14 No. 627 "About approval of the concept of digital transformation of bodies and organizations of the Prosecutor's office till 2025" (together with the "Concept of digital transformation of bodies and organizations of the Prosecutor's office of the Russian Federation until 2025")
- Prosecutor General's office of the Russian Federation (2020) Official website of the Prosecutor General's office of the Russian Federation. <https://genproc.gov.ru/stat/data/> Accessed 24 Mar 2020
- Putzke H, Tarbagaev AN, Nazarov AD, Maiorova LV (2018) The Role of the Prosecutor in the Prevention and Elimination of Investigative Errors: Russian and German Experience. *Russian Journal of Criminology* 12(3): 424-430. doi: 10.17150/2500-4255.2018.12(3).424-430
- Skuratov YI (2019) Modern Problems of Reforming Preliminary Investigation in the Russian Federation. *Russian Journal of Criminology* 13(3):477-488. doi: 10.17150/2500-4255.2019.13(3).477-488
- Turner JI (2019) Managing Digital Discovery in Criminal Cases. *Journal of Criminal Law & Criminology* 109 (2):237-311
- Veynberg RR (2019) Influence of the Development of Neural Network Technologies in Russia Digital Economy. International Scientific and Practical Conference Contemporary Issues of Economic Development of Russia: Challenges and Opportunities 59:1042-1048. doi: 10.15405/epsbs.2019.04.113
- Vilkova TY, Maslennikova LN (2019) Legitimacy and Unification in Criminal Proceedings: from Procedural Document Forms to the Electronic Criminal Case. *Vestnik Permskogo Universiteta* 4:728-751. doi: 10.17072/1995-4190-2019-46-728-751
- Zaytsev OA, Pastukhov PS (2019) Formation or a new strategy for crime investigation in the era of digital transformation. *Vestnik Permskogo Universiteta* 4:752-777. doi: 10.17072/1995-4190-2019-46-752-777