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# Issues of Introducing Artificial Intelligence Technologies into Cassation Proceedings in Criminal Cases

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**Abstract:** In today's conditions of globalization, digital technologies are widely implemented in all spheres around the world and are rapidly penetrating the way of life of humanity. It can be observed that countries that are carrying out effective work in this direction are developing rapidly.

In particular, in our country, digital technologies have been widely introduced into the judicial system, which serve to increase the transparency and effectiveness of criminal proceedings and ensure effective interaction between judicial bodies

at various levels.

**Keywords:** Artificial Intelligence (AI), Digital Technologies, Cassation Proceedings, Criminal Cases, Court Digitalization, Video Conferencing, E-justice Systems, Electronic Court Cases.

## Introduction

In particular, the COVID-19 pandemic undoubtedly had a serious impact

on many aspects of public life, including the activities of the judicial and legal system. The spread of the virus forced many organizations and institutions, including courts, to adapt to the new conditions. During the pandemic, the use of video conferencing has become the main tool for ensuring the continuity of judicial proceedings. This not only ensured the safety of all participants, but also served

to minimize the need for personal communication, save citizens time, and reduce their expenses.

In particular, according to statistical data obtained from the Department

of Information and Communication Technologies of the Bukhara Regional Court,

a total of 523 court hearings were held via videoconference in the courts of the Bukhara region in 2022, in which more than 713 people participated, as a result

of which a total of 195,144,203 soums of budget funds were saved.

The increase in the use of video conferencing in judicial activity in recent years may be a direct consequence of the pandemic. It also reflects a broader global trend towards the digitalization of court proceedings, which has accelerated due

to the need to comply with security measures.

Videoconferencing provides ample opportunity to improve the accessibility and efficiency of the judicial system, as well as to optimize processes in situations where personal participation may be limited, for example, due to the epidemiological situation or distance.

The introduction of this technology into criminal procedure practice

is a means of optimizing the consideration of cases by the cassation court, significantly reducing deadlines, and minimizing economic costs associated with the movement of defendants or convicts.

Reducing logistical risks, protecting defendants, and preventing attempted escape are also important aspects.

Thus, according to the order of the Bukhara Regional Department of Internal Affairs dated September 11, 2025, according to letter No. 47/15-999, in the pre-trial detention center No. 4 of the 6th regional zone of the Penitentiary Institution under the Ministry of Internal Affairs, there are 2 halls adapted for videoconferencing,

in which a total of 337 court hearings were held via videoconferencing during

the 9 months of 2025. Through these court hearings, 2,000 liters of fuel allocated

by the state for 15 vehicles per month, the services of 18-20 employees, and thus

20-22 million soums were saved. If this indicator is taken in the context of a single correctional institution, it is possible to imagine how much resources are saved at the republican level.

In our opinion, the prospects for the development of digital technologies

in criminal cassation proceedings cover a wide range of innovations, from document automation to the use of

advanced technologies such as artificial intelligence and blockchain.

For instance, in the criminal cassation process, artificial intelligence may

be employed for precedent analysis and predictive analytics. The capability

of artificial intelligence to process and analyze large volumes of data enables

the identification of patterns of events and relevant precedents, thereby providing cassation judges with legally substantiated information to facilitate more well-grounded judicial decisions.

Artificial intelligence can also automate routine tasks such as checking procedural deadlines, creating and sending notifications, and preparing standard documents, allowing the court to focus on more complex tasks, increasing efficiency, and improving the quality of court decisions.

Blockchain technology can significantly increase the protection of personal data of process participants and ensure the integrity of electronic evidence.

The development of large-scale decentralized blockchain databases will allow courts to store data on the results of cassation (and other) cases in a secure and decentralized environment, reducing the associated risks. The use of blockchain reduces the time required to verify any documents and court decisions, as all records are securely and easily stored.

It is well known that, within the framework of the implementation of the Presidential Decree approving the State Programme for the realization of the "Uzbekistan – 2030" Strategy in the Year of Environmental Protection and the Development of the "Green" Economy, a number of measures have been undertaken.

The "Uzbekistan – 2030" Strategy envisages practical measures, a list

of regulatory and legal instruments, and target indicators for each of its five priority areas for the year 2025. In particular, in the direction "Ensuring the rule of law, organizing public administration at the service of the people," which is the

4th direction of the draft State Program, it is planned to accelerate the digitalization of the activities of courts in order to make ensuring the supremacy of the Constitution and laws, reliable protection of human rights and freedoms the main criterion

of judicial and legal reforms.

The introduction of artificial intelligence technologies into the activities

of courts and the use of modern information and communication technologies create a number of conveniences. In particular, it will accelerate the circulation

of electronic documents, ensure the collection, processing, systematization,

and storage of relevant information. At the same time, it is convenient to notify

the participants in the court proceedings electronically through the information system.

Currently, a number of programs of modern information and communication technologies have been implemented in the activities of courts. In particular, remote appeals to the courts, participation in court sessions via videoconference, automatic distribution of cases among judges, publication of court decisions on the Internet and their easy receipt by citizens, sending enforcement documents for compulsory execution in electronic form, any legal entity and individual can submit claims

and complaints electronically through the e-xsud.uz website.

Furthermore, the Supreme Court has launched interactive services such

as "Sending an Electronic Appeal to the Court," "Samples of Appeals to the Court," "State Duty Calculator," "Electronic Payment System," and "Getting Court Decisions Online" through the my.sud.uz website, expanding citizens' access

to appeals.

It should be noted that in 2024, the President of the Republic of Uzbekistan adopted a resolution "On the approval of the Strategy for the Development

of Artificial Intelligence Technologies until 2030." In accordance with this document, taking into account the current state of development of artificial intelligence technologies and the best practices of foreign countries, the goals

and objectives of the widespread use and accelerated development of artificial intelligence in our country have been defined.

Indeed, the reforms serve to strengthen social justice in society, increasing public confidence in the state and the judicial system.

In particular, the adoption of Presidential Decree No. DP-140 of 21 August 2025 of the Republic of Uzbekistan "On additional measures for increasing the level of access to justice by introducing artificial intelligence technologies in the activities of courts and for improving the material and technical support of the judicial system" has become an important step in the

development of the sector.

This document is aimed at reducing paperwork and the influence of the human factor, as well as creating additional conveniences for citizens through the digitalization of judicial processes.

According to the decree, the "Digital Court" concept is being gradually implemented in the country. By the end of 2025, modern courtrooms equipped with digital technologies will appear in Tashkent as an experiment. Based on the results of the experiment, the concept will be gradually implemented in all courts

of the republic in 2026-2027.

Appeals to the courts are accepted only in electronic form, and court cases

are conducted entirely in digital format. For example, previously, in most cases, citizens and entrepreneurs submitted applications or claims in paper form to the court office in person. This required additional time and expenses.

Participants in the proceedings may not appear in the courtroom without the judge's permission and may be connected to the court session remotely. Court costs are calculated and paid online, which reduces the risk of corruption.

Citizens will be able to predict the possible outcome of the judicial process and the associated costs using artificial intelligence before filing a lawsuit.

In addition, the parties will be able to familiarize themselves with all case materials electronically, the minutes of the sessions will be automatically generated in real time, and draft judicial acts will be generated by the system.

In addition, the Decree provides for the launch of a platform for analyzing regulatory legal acts, the creation of software for the automatic preparation

of judicial acts, the introduction of a virtual consultant based on artificial intelligence on the my.sud.uz portal, as well as the development of new interactive services

and an updated version of the "Personal Account" platform.

Implementation of electronic data exchange between the Supreme Court and investigative bodies by the end of 2025, development of a mobile application for monitoring and payment of fines, integration of the databases of the "Digital Government" system with the judicial system, as well as preparation of documents on administrative cases in accordance with Transition to electronic format through the "E-ma'muriy ish" system is planned.

At the same time, a draft normative legal act on the introduction

of information technologies at the pre-trial stage will be developed. Including:

- automatic recording of procedural actions;
- create the possibility of obtaining information online;
- prevention of discrepancies between data;
- creation of the possibility of online transfer of case materials;
- use of artificial intelligence technologies in the qualification of crimes;
- maintaining a unified record of refusal to initiate criminal proceedings;
- mechanisms for appointing forensic examinations online will be determined.

In the course of the study, the experience of various countries where digital technologies have been successfully applied in the process of considering cases in cassation proceedings in criminal proceedings was studied.

In particular, the Russian Federation's "Online Justice" project deserves special mention. In 2022, the Supreme Court of the Russian Federation began creating a comprehensive platform for the implementation of procedural functions in virtual space.

This platform allows participants in the judicial process to remotely perform a full spectrum of procedural actions. This includes services such as filing applications, filing claims, paying court costs, reviewing case materials, participating in court sessions using web conferencing technology, and receiving court decisions electronically. In 2024, the "Justice Online" platform was updated, and biometric identification of participants in legal proceedings was introduced.

This system has a number of advantages. In particular, it includes

the integration of an interactive assistant to assist in the preparation and submission of procedural documents.

In addition, a notification system is in place on the State Services Portal, accessible through a personal account, which significantly increases the level

of awareness of the parties involved in the proceedings.

This system automates registration, accounting, and movement processes, improves the collection and analysis of forensic statistics, and provides comprehensive information support. Registration and accounting of cases, reports, complaints, petitions, etc., received in the cases under consideration, preparation

of statistical reporting in paper and electronic form.

In addition, it creates a unified database of judicial practice, contributing

to the collection, analysis, and systematization of court decisions in order to ensure the consistency and transparency of judicial proceedings.

At the same time, the platform includes the Nestor audio and video recording system, which is designed to synchronously capture oral presentations delivered by speakers in courtrooms. The Nestor audio and video recording system

is a specially developed tool intended to ensure synchronized recording.

In countries with an Anglo-Saxon legal system, the use of modern digital technologies in cassation proceedings in criminal cases is quite developed,

and several important aspects can be listed, such as electronic work and document management, electronic evidence systems, digital transcription, and court recording. These modern technologies contribute to improving the quality and accessibility

of justice in criminal appeal processes. However, it should be noted that the level

of their use varies depending on the country.

For example, in the USA, the use of the PACER (Public Access to Court Electronic Records) system is widespread. This system provides online access

to federal court documents, including cases of district, appellate, and cassation courts. The system contains case information, including submitted documents, court records, court decisions, and other court documents.

In the UK, a similar system, called HM Courts & Tribunals Service, is used, which allows electronic access to court cases and documents. The system covers various levels of the judicial system, including magistrate courts, royal courts, supreme courts, and specialized courts. These systems are key elements

in the digitalization of judicial services and ensuring the transparency of justice.

In addition, among the modern technologies used in criminal appellate proceedings in the Anglo-Saxon legal system, the following can be listed:

- Case Management/Electronic Case Files (CM/ECF) is a system of federal case management and electronic documentation widely used in U.S. courts. Allows electronic submission of documents, consideration of case documents, and electronic notification of the parties about judicial actions;
- LexisNexis and Westlaw are two leading legal research

services in the

Anglo-Saxon legal system. These systems are important for accessing extensive databases of court decisions, legislation, as well as for preparing legal articles

and cassation appeals;

- BlueJeans, Zoom and Microsoft Teams these video conferencing platforms were and continue to be actively used in court sessions during the COVID-19 pandemic;

- ROSS Intelligence is an AI-based tool designed to help find relevant legal information and precedents;

- Thomson Reuters Court Management Solutions comprehensive solutions for managing court cases, including office automation, analytical tools for managing court resources;

- Relativity e-Discovery an electronic discovery platform used to manage large amounts of data and electronic evidence in complex legal cases, including criminal cases;

- Clio this system is a legal practice management platform that offers tools for business management, time management, billing, and customer interaction.

Thus, it can be concluded that in countries with an Anglo-Saxon legal system, digital technologies are already widely used in criminal cassation courts. The main aspects of digitization in cassation proceedings are:

1. Electronic file and document management, including electronic document management, including registration, storage, retrieval, and transmission

of documents, electronic document management systems, electronic justice systems provide online access to case information, including court records, court decisions, and other documents.

2. Electronic evidence systems allow for the safe and secure storage of digital evidence.

3. Digital transcription systems of court hearings automatically generate text transcripts, audio and video recording systems of court hearings provide visual storage of court hearings for subsequent viewing and analysis.

In the countries of continental Europe, where the Romano-Germanic legal system prevails, modern digital technologies are also actively used in cassation proceedings in criminal cases.

For example, Elektronischer Rechtsverkehr (ERV) system was tested

in Germany. This system allows for the electronic exchange of legal documents between courts and

parties. It is used in various types of cases, including criminal ones.

In France, the Télérecours system is designed for electronic submission

of documents to administrative courts, including cassation instances. Initially designed for administrative courts, this system is adapted for various court needs, including cassation appeals.

In Italy, a Processo Civile Telematico (PCT) system has been implemented for electronic submission and administration of civil and criminal cases to the courts. While this technology was initially focused on civil proceedings, over time its functionality has expanded and now encompasses criminal cases, including cassation cases.

In the Netherlands, the KEI (Kwaliteit en Innovatie Rechtspraak) system covers various types of cases, including criminal cases, and implies the digitalization of proceedings. Also, the Rechtspraak system is used in criminal justice activities

in this country. This system also includes remote control and participation in court hearings via videoconference.

In Spain, LexNET uses an electronic document management system.

This system allows judges and other participants in the judicial process to exchange documents electronically. Similar systems provide digitization of criminal cassation cases in countries such as Belgium (Phenix) , Sweden (Mål & Ärendesystem (MAS)) and Portugal (Citius) .

In Estonia, the most advanced digital technologies are also used in the process of considering criminal cases in cassation. Estonia ranks first in the European Union in the use of digital technologies in the judicial system. This means, in particular, that communication between participants in court proceedings during

the consideration of criminal cases in cassation proceedings, including

the submission of documents, data exchange, and other aspects of interaction

with the judicial system, is carried out almost 100 percent in digital form. Also,

an artificial intelligence system called "Smart Majelis" has been introduced

in the judicial system of Estonia. This system automatically selects judges

for consideration of cases, taking into account their qualifications, workload,

and experience in the type of case under consideration.

In neighboring countries, including in the post-Soviet space, elements



of digital technologies are being introduced into judicial processes, in particular,

in cassation proceedings in criminal cases.

For example, in Ukraine, a comprehensive approach to the digitalization strategy was taken to increase transparency and efficiency in criminal proceedings. Thanks to the support of the European Union and the anti-corruption initiative,

the Supreme Anti-Corruption Court of Ukraine was the first to introduce

an electronic record keeping system (eCase) .

The countries of the South Caucasus (Georgia, Armenia, and Azerbaijan) are also striving for the modernization and digitalization of the judicial system.

In the countries of Central Asia (Kazakhstan, Kyrgyzstan, Turkmenistan, and Tajikistan), the digitalization of the judicial system is developing.

In particular, special attention is paid to the introduction of digital technologies in Kazakhstan. One of the key elements of digitalization is the "Torelik" system, which represents a unified information environment for all courts and judicial bodies. In addition, Kazakhstan has implemented an automated system for audio/video recording of court hearings, almost completely replacing written protocols. Currently, 92.5% of all court proceedings are recorded using this system. This will ultimately increase the transparency and effectiveness of judicial processes, reduce the number of appeals against judges' decisions, and accelerate

the consideration of criminal cases.

All the examples considered indicate the desire of different countries

to integrate digital technologies into the judicial system, which will allow accelerating and optimizing cassation appeal procedures in criminal cases, increasing their transparency, and ultimately improving access to justice.

Thus, the integration of these systems and software products into the activities of the cassation court of general jurisdiction will serve to strengthen the legal infrastructure, ensure the organization of court proceedings at a high level,

and increase the openness and transparency of the system for citizens.

For the convenience of citizens, it is advisable to create and implement mobile applications integrated into electronic information systems.

The development of such mobile applications will allow participants

to receive notifications about the date and time of the court session, the status

of the case, and other important information, making it more convenient for citizens to participate in cassation proceedings.

It is necessary to develop existing electronic document management systems by integrating advanced functions such as the automatic generation of draft cassation decisions, complaints, submissions, and applications based on artificial intelligence into these mobile applications.

Additionally, the introduction of virtual assistants or chatbots capable

of providing legal advice to the app will significantly improve the preparation

of necessary documents and guide stakeholders in filing an appeal to the cassation court.

As can be seen, the creation of such specialized platforms will have

a significant impact on the exchange of skills, knowledge, and best practices.

In our opinion, the proposed solutions can be integrated with the existing judicial infrastructure. They complement and expand the functionality of already implemented products, ultimately leading to more complex, understandable, transparent, and accessible cassation processes for criminal cases.

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