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USING ADVANCED DATA RECORDING TECHNIQUES IN INVESTIGATIONS: THE IMPORTANCE OF AUDIO AND VIDEO TECHNOLOGIES FOR THE DEVELOPMENT OF INVESTIGATIVE PROTOCOLS

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Modern technologies occupy a central place in the field of justice. In addition, in this context, audio and video recordings play an important role as an appendix to investigative protocols. Audio and video recording provide unique opportunities for recording and documenting events, which ensures reliability and objectivity in the investigation process. In this regard, for the theory and practice of criminal procedural evidence, the key aspects of the use of audio and video recording as an additional way of recording information in the preparation of investigative protocols are relevant. In addition, ways to optimize the preparation of investigative protocols with modern solutions, including the technology of transcribing audio recordings into the text of a procedural document, are important for the investigation.

Audio recording and video recording provide indisputable means of proof, recording not only visual but also audio aspects of events. They are a reliable means of preserving legally significant circumstances, allowing them to be structured in conjunction with investigative protocols. Records ensure the completeness and accuracy of information transmission, which significantly affects the process of proof before and in court.

Let us pay special attention to the updated version of the third part of Article 199 of the Criminal Procedure Code of the Republic of Kazakhstan (CPC of the Republic of Kazakhstan). It contains the following norm: «In the case of complete recording of the progress and results of the investigative action by means of audio and video recording, the person performing the investigative action has the right to limit himself to a brief summary of the factual data obtained and the established circumstances relevant to the case» [1].

The legislator, of course, agreed with the designers about the need to solve a problem that actually takes place in practice. Prior to this amendment, the investigator and the inquirer had to draw up a protocol of investigative actions with excessive resource costs, the content of which should be identical to the results of audio and video recordings. In order to simplify the work of the investigator and the inquirer, to save procedural time and money, the right was introduced to brief them in the protocol on the factual data obtained and the established circumstances relevant to the case.

However, audio-video recording (AVR) materials are traditionally recognized as additional components to the written protocols of investigative actions, which complement and enhance the methods of recording information. These materials provide an opportunity for a more complete, comprehensive and objective study of the collected data, as provided for in Article 24 of the CPC of the Republic of Kazakhstan. They are also used to evaluate evidence from the standpoint of its relevance, admissibility, reliability and sufficiency, as well as to establish the circumstances of the subject of evidence at the stages of pre-trial investigation and consideration of a criminal case in court.

Unlike the materials of the AVR, written protocols of investigative actions are a basic, primary tool of proof, especially at the judicial stages of criminal proceedings. These protocols are characterized by a high degree of reliability in the preservation and protection of information. In comparison with AVR, written protocols are less susceptible to external influences and risks of loss, destruction or disclosure [2].

As Professor L.V. Golovko noted, «the principle of an exhaustive list (the principle of *numerus clausus*, i.e., a "closed list") of evidence sources serves as a fairly reliable barrier to all kinds of unreliable and substandard information entering the process» [3, c. 456-457].

One of the most common sources among the methods of official recording of factual data in the investigation process is protocols of procedural and investigative actions. These include inspection of the scene, search, seizure, examination, exhumation, investigative experiment and others. Moreover, important sources of evidence are the testimony of the participants, which should be documented in full-fledged interrogation protocols of various categories of persons: suspects, accused persons entitled to witness protection, victims and witnesses.

Therefore, instead of reducing legally significant information in investigative protocols, it is reasonable to apply a successfully tested technology for transcribing audio recordings into text. What does the term "transcription" mean? "Transcription is the "decoding" of an audio recording – translating it into a text format. Without this process, it is impossible to automatically analyze the content of speech in audio format, because the meaning lies not in the intonation that the audio track transmits, but in the words" [4].

Over time, audio-to-text transcription technologies have undergone significant improvements. Modern speech recognition algorithms based on artificial intelligence and deep learning are able to accurately and quickly translate audio recordings into text format. Such technologies not only increase the efficiency of investigators and interrogators, but also reduce the time spent analyzing evidence.

Transcribing audio into text provides a number of advantages. One of the key features is the ability to quickly access information. Investigators can easily view text versions of audio recordings, highlight key points and perform analysis without having to listen to the entire recording. This not only saves time, but also reduces the likelihood of missing important details. Despite the many advantages, there are also challenges in the process of transcribing audio into text. One of them is the difficulty in recognizing different dialects, accents, or indistinct speech. It is also worth noting that algorithms may encounter difficulties in recognizing specific terms or professional vocabulary. In addition, there are a number of problems related to the use of audio and video recordings in investigative practice. This includes questions about the authenticity of records, privacy concerns, and difficulties in managing and analyzing huge amounts of data.

However, the future of audio-to-text transcription promises even more accurate and adaptive solutions. The development of machine learning technologies, the use of big data and the constant improvement of algorithms create prospects for the creation of intelligent systems that can automatically adapt to a variety of language features and recording conditions.

In addition, modern technologies, such as the use of the blockchain program, represent an innovative method that ensures the authenticity of audio and video recordings. The blockchain creates a chain of blocks, where each block contains unique and impossible-to-transform information about the record. This ensures transparency and reliability of each stage of data creation and storage. This approach minimizes the risks of forgery, and ensures that the results of audio-video recording retain their integrity and authenticity throughout their storage period.

In conclusion, we note that the evolution of evidence fixation technologies, especially in the field of audio and video recordings, not only expands the possibilities of investigative and judicial processes, but also raises the standards of reliability and reliability of evidence. Innovative methods such as transcription, the use of blockchain, and analysis using artificial intelligence are shaping the modern landscape of evidence fixation, ensuring efficiency and flawlessness in the investigation process.

Together, innovative technologies and rational approaches to the use of audio and video recordings in criminal proceedings significantly improve the quality and effectiveness of pre-trial investigation at the stage of evidence collection. From the development of new recording techniques to ensuring the authenticity and confidentiality of data, these innovations are shaping the future of investigative practice, making evidence more reliable, reliable and up-to-date.

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РОЛЬ СУДЕБНО-ХИМИЧЕСКОЙ ЭКСПЕРТИЗЫ ПРИ РЕШЕНИИ ЮРИДИЧЕСКИХ ЗАДАЧ

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Химия, её методы исследования материалов являются основой криминалистики. С помощью методов химии, знаний её законов, можно намного улучшить раскрываемость преступности, укрепить правопорядок, неукоснительное соблюдение законности, усилить охрану интересов общества и государства, социально-экономических, политических, личных прав и свобод граждан.

Успешное решение сложной социальной проблемы, каковой является преодоление преступности, возможно лишь на строго научной основе, а именно, использование широкого арсенала научных методов и технических средств. Среди них достойное место отведено криминалистической технике и основам химии, усиливающим эту технику.

Нередко при расследовании убийств и грабежей, краж и хищений, действий транспортных происшествий и поджогов, и других противоправных действий перед дознанием, следствием, и при осуществлении правосудия – перед судом возникает острая необходимость решения вопросов, требующих специальных знаний в химии, которыми обладают сведущие лица (специалисты и эксперты-химики). Приведенные в статье примеры взяты из экспертного опыта и специальной литературы, на этих примерах можно показать, в чем же заключается работа экспертов-химиков при проведении экспертизы [1].

Пример: шоссе, труп молодого мужчины, рядом мотоцикл погибшего. Осмотр места происшествия позволил выдвинуть несколько следственных версий, одна из которых предусматривала связь факта гибели мотоциклиста с действиями водителя какой-то тяжелой грузовой машины. Предполагали, что пытаясь обогнать мотоцикл, он совершил наезд и скрылся, бросив жертву на произвол судьбы. Признаки повреждений были обнаружены только на корпусе автофургона: вмятина и глубокая длинная царапина со следами наслоения вещества желтого цвета, не относящегося к окраске фургона.

Возможность динамического контакта двух транспортных средств подтвердило (вывод химической экспертизы полимерных материалов: «На автофургоне ... обнаружено наслоение