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## INFORMATION TECHNOLOGY FOR DECISION SUPPORT IN VIDEO SURVEILLANCE AND MONITORING TASKS

Information technologies and decision-making systems are becoming key elements in solving video surveillance and monitoring tasks in the modern world. Due to the constant development of technologies, new opportunities are emerging to optimize the processes of collecting and analyzing large amounts of video data, which provides unique opportunities for making informed and effective decisions in the field of security, transport control, territorial planning and many other areas.

Due to the growing volume of video data and the need for real-time decision-making, information technology plays a crucial role in the development of modern video surveillance and monitoring systems. The use of intelligent image processing, machine learning, and data analysis algorithms allows improving event detection, object identification, and decision automation systems. The relevance of this topic lies in the search for effective technological solutions that will ensure a high level of security and efficient resource management in the face of a growing amount of video data. Improvement of the accuracy and speed of video stream analysis is an important component for the successful implementation of video surveillance in modern society [1, p. 13].

Information technologies aimed at supporting decision-making are becoming an integral part of video surveillance and monitoring, given the current technological progress and large amounts of video data that require efficient analysis and processing.

The use of intelligent image processing and machine learning algorithms in video surveillance enables automation of the process of event detection and object

identification. Such technologies authorize systems to independently analyze a huge volume of video streams, recognize anomalies and respond in a timely manner to potential threats or malfunctions [2, p. 21].

The ability of information technology to process great number of video data in real time is extremely important. Collecting and analyzing large amounts of information requires high performance and speed, which is achieved with the help of specialized software solutions and equipment.

Information technology also plays a pivotal role in making decisions based on video data analysis. Automated systems not only provide operators with the necessary information and can also independently recommend intervention strategies based on previous experience and training.

The use of information technologies in video surveillance not only increases the efficiency of security and control systems, but also contributes to sustainable development by optimizing the use of resources and increasing the level of security in society. This integrated approach, combined with the constant development of technology, makes information technology an integral part of the successful implementation of video surveillance and monitoring in the modern world.

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#### **PRODUCTION AND TECHNOLOGICAL PROCESSES IN MECHANICAL ENGINEERING**

The production process is used to transform natural objects into a product useful to humans. The production process includes all the stages that natural objects go through on the way to transforming them into a finished product.

The production process carried out at a machine-building plant is part of the entire production process of transforming natural objects into a machine. Thus,