

will not be occupied, there will be less noise and pollution. Thus, emotional and physical health will improve, which will lead to better health in general, reduce the number of diseases and the number of premature deaths.

СЕКЦІЯ  
ІНФОРМАЦІЙНІ ТЕХНОЛОГІЇ

**INFORMATION TECHNOLOGIES IN TRANSPORT**

*Azimov K. N., student,  
Gerasymchuk T. V., Associate Professor,  
Kharkiv National Automobile and Highway University*

Information technologies have revolutionized the way we travel. From booking tickets to tracking our luggage, technology has made transportation more efficient, convenient, and safe. In this article, we will explore the impact of information technologies on transport.

One of the most significant benefits of information technologies is the ability to gather and analyze data. With the help of sensors, cameras, and GPS devices, customers can gather a huge amount of data to track the movements of vehicles in real time. Transport companies can use methods and approaches of big data to optimize routes, predict traffic congestion and improve safety using online tools or mobile apps. For example, airlines can use data analytics to optimize flight schedules and reduce delays. Some data such as location is a sensitive piece of information, and releasing it to unauthorized entities might pose security and privacy risks. Therefore, many types of information available in a pervasive computing environment, such as people location information, should be accessible only by a limited set of people. [1, 2]

Another area where information technologies have made a significant impact is ticketing and payment systems. Today these systems use technology to streamline the ticketing process and make it more efficient for both customers and businesses. For passengers it means that they can book tickets online or through mobile apps,

eliminating the need to stand in long queues. Payment systems can also help reduce labor costs for companies by eliminating the need of ticket sellers and reducing staffing requirements at ticket booths. Additionally, these systems can provide valuable data on customer behavior and preferences, which can help businesses make more informed decisions about pricing and marketing. Also information technologies can help prevent fraud and counterfeit tickets. These systems often use advanced security measures, such as barcodes and RFID technology, to ensure that each ticket is genuine and has not been duplicated. Payment systems have also become more secure and convenient, with the introduction of contactless payment methods.

Information technologies have also transformed the way we navigate through cities. Navigation apps such as Google Maps and Waze have made it easier to find the best route to our destination, avoid traffic congestion, and locate parking spots. In addition, public transport companies have introduced apps that provide real-time information on the location and arrival time of buses and trains.

Smart highways are another example of how information technologies are transforming the transport industry. These highways use sensors, cameras, and other devices to monitor traffic conditions and adjust them in real-time. Smart highways can reduce accidents, improve traffic flow, and even generate electricity through solar panels embedded in the road. However, they also require significant investments and maintenance costs.

Autonomous vehicles, or self-driving cars, have been a hot topic in recent years. These vehicles use artificial intelligence and sensors to navigate roads without human intervention. According to the SAE classification, there are 5 levels of autonomy, but the market presents only first three levels of automated transport. The first level of autonomy includes cars with adaptive cruise control. Autonomous systems of the second level monitor the speed and control under certain conditions. The third level is conditional autonomy, when the autopilot system is on, the car can independently control the environment. The fourth and fifth levels of autonomy

assumes independent move with and without driver appropriately. Such vehicles can reduce accidents, improve mobility for people with disabilities, and increase productivity during commutes. However, they also raise questions about liability and ethical considerations, such as how to program the vehicle to make life-or-death decisions in emergency situations [2].

Another application of information technologies on transport is drone delivery. Drones can deliver packages and goods quickly and efficiently, especially in remote or hard-to-reach areas. However, drone delivery raises concerns about privacy, noise pollution, and safety, as well as the potential loss of jobs for traditional delivery workers.

Overall, information technologies have brought many benefits to the transport industry. One of the main benefits is that customers can reduce wait times and makes the transport processes more convenient. Some properties of the information raise unique challenges for the design of an access control mechanism.

In the field of safety and security in the transport sector made a big shifts. CCTV cameras and facial recognition systems are used to monitor public transport systems and identify potential threats. Smart traffic systems can detect accidents and alert emergency services, reducing response times and saving lives. To this direction should be given close attention.

As technology continues to evolve, we can expect further improvements in areas such as autonomous vehicles, electric cars, and smart cities. Future efforts should be focused on designing intelligent transport and communication infrastructures that will allow for optimal and instantaneous control [1]. However, it will be crucial to address these challenges and ensure that the benefits of these technologies are accessible to everyone.

## References

1. Eduard Babulak, 2008. *Information Technologies in Transportation*. DOI: <https://www.researchgate.net/publication/272089179>

2. Ivan Novikov, Alexey Konev, Nikolay Zagorodny and Alla Semykina. *Directions for the implementation of information technologies in transport*, MATEC Web Conf., 341 (2021) 00008. DOI: <https://doi.org/10.1051/matecconf/202134100008>
3. Gesa Wiegand. 2019. Benefits and Challenges of Smart Highways for the User. *In Joint Proceedings of the ACM IUI 2019 Workshops, Los Angeles, USA, March 20, 2019*. ACM, New York, NY, USA, 4 pages.
4. E. Frachtenberg, "Practical Drone Delivery," in *Computer*, vol. 52, no. 12, pp. 53-57, Dec. 2019, doi: 10.1109/MC.2019.2942290.
5. Hammant, Jeremy. "Information technology trends in logistics." *Logistics Information Management* 8.6 (1995): 32-37.

## **A CURSORY LOOK AT MODERN SEARCH ENGINES ON USED CAR WEBSITES**

*Veres M.D., student,  
O. S. Gubaryeva, PhD, Associate Professor,  
Kharkiv National University of Radioelectronics*

In the modern world, the need for a personal vehicle is still quite high. Many people have many needs. Each vehicle is designed for its own segment of consumers and not always the buyer can be sure that he is making the right choice.

There are two main segments of vehicles available for purchase by the average individual: new and used vehicles. In turn, the main channels for purchasing vehicles for a long time are car dealerships, used car dealerships and sites for posting ads for the sale of used vehicles.

The latter will be discussed. Using various sites for the sale of cars, people often face various difficulties. It is proposed to analyze the search functionality for used cars of two popular sites for the sale of vehicles in Ukraine and the European Union.

The first service under consideration is the site auto.ria [1].

On the main page, we can see a simplified search box with only the basic parameters that the user can enter, such as the brand, model, region, year of manufacture of interest to him, and one of the most important - the target cost.