



Security issue of risk factors in road transport in the context of traffic accidents

Bezpečnostná problematika rizikových faktorov v cestnej doprave v kontexte vzniku dopravnej nehody

Bohumil ŠEJNOHA¹

¹University of Security Management in Kosice

The manuscript was received on 21. 04. 2021 and was accepted after revision for publication on 02. 06. 2021.

Abstract:

Road transport is one of the most general assignments in which several thousand traffic accidents occur every year, so it is necessary to ensure the importance of clarification of traffic accidents. The main goal is to close clarification of road traffic accidents caused by conductor with an effort to propose the possibilities of minimizing risks that can be negatively affected by clarification. Traffic accidents solution at the current pandemic situation is more difficult that members of the police force must also ensure its own health and the designated devices as respirators, gloves, spectacles and disinfection.

Keywords: Risk, Traffic Accident, Clarification, Pandemic

Abstrakt:

Cestná doprava je na Slovensku jedna z najrozvinutejších dopráv, v ktorej sa každoročne vyskytne niekoľko tisíc dopravných nehôd, preto je potrebné dbať na dôležitosť objasňovania dopravných nehôd. Hlavným cieľom je priblížiť objasňovanie cestných dopravných nehôd spôsobených vodičom so snahou navrhnúť možnosti minimalizácie rizík, ktoré môžu objasňovanie negatívne ovplyvniť. Riešenie dopravných nehôd pri súčasnej pandemickej situácii je o to zložitejšie, že príslušníci policajného zboru musia okrem iného zabezpečovať aj svoje vlastné zdravie a to určenými pomôckami ako respirátorom, rukavicami, okuliarmi a dezinfekciou.

Kľúčové slová: riziko, dopravná nehoda, objasňovanie, pandémia

Introduction

In particular, today's most common issue in the concept of road transport is the question, what risk of harming health is exposed to vehicle management or as pedestrians. Cars are an integral part of our lives, our everyday companion. Without realizing it, we are exposed to the risks associated with the guidance of the vehicle. Each traffic accident has its officer and its specific features that the executor must analyze the transport accident[1]. Sometimes it is challenging to come to the culprit accident and sometimes they say all the evidence clearly. Clarification of transport accidents is therefore a challenging process to which professionals must be trained and must have enough knowledge and skills to correctly establish the cause of the traffic accident and who caused accident. Human factor plays very important and will definitely play an irreplaceable role in the operator of the road motor vehicle. Alone is only a creature that can be influenced by different ways to knowingly or subconsciously. Especially if it does not realize their weaknesses interfering with the driver's performance, increasing the risk of safety in road traffic.

1. Expert testimony as an urgent or unrepeatable act to reduce the risk factor

In criminal proceedings, there are no peculiarities where the conclusions of the expert and the expert opinion is also necessary to evaluate the accusation in respect of the statutory conditions for the initiation of criminal prosecution[3]. It is only self-evident that it requires the presence of an expert itself at the site of a traffic accident, preferably at the point of transport accident. However, such a procedure is possible in criminal proceedings only in cases where an urgent or unrepeatable act. An urgent act is an act which, given the danger of its deflection, destruction or loss, does not take a deferral in terms of prosecution. A unique act is an act that will not be performed before the court. For an urgent or unrepeatable act at the stage of the procedure before initiating prosecution i. At the rejection stage, whether a crime and whether the offense has committed a particular person, it considers the dissection of the corpse and also the expert opinions that work with a biological material that is threatening rapidly and cannot be preserved by freezing or other form for expert investigation[2] . Other expert investigations carried out before the initiation of criminal prosecution are considered to be an urgent or unrepeatable actual action. If an investigator or police authority will be appreciated in the prosecution of a criminal prosecution of the criminal prosecution, the expert judgment, as a rule, loses evidence and in judicial practice is often considered only for documentary evidence. It is clear from that finding that an expert exploration from the road transport department MA in judicial practice only a small hope that if it is carried out before the initiation of prosecution, it will also be considered an urgent or unrepeatable act. This is also related to the attendance of a court expert in the departure of the travel accident. It is not except that in severe traffic accidents, or in traffic accidents where the driver of the motor vehicle is considered a technical failure of the vehicle, the investigator or the police authority will be kept for the purpose of the expert. At the scene of the crime scene, it acts as a consultant, a specialist that helps the investigator at the sightseeing of a traffic accident in assessing professional issues.

2. Computer softwares helping minimize risk factors when clarifying traffic accidents[3]

2.1. Rollei Metric MSR (Single Image Rectification)

It is rectification software for the transmission of planar objects to the selected range of plane. It is a Denor Rectification Program for digital rectification of images based on a design relationship between the image and the plane of the subject. To calculate eight transformation points, you need to know the 2D area (in plane) coordinates of at least four points. The system allows you to connect multiple images in the grid-sized crosses with fixed calibrated lenses set. Measured objects are recorded on a single image or a series of images. Digital cameras are used to obtain digital images. Scanners are used to digitize photos and negatives obtained by meter cameras or amateur cameras.

2.2. Rollei Metric CDW (Close Range Digital Workstation)

This is a digital evaluation and computing system for multi-core intersection photogrammetry. The system allows accurate and reliable measurements. High usability of the system, its user accessibility, integration of modern calculation features and algorithms, comprehensive solutions, the amount of functions for automating the measuring process creates a standards for spatial measurement of points.

2.3. System TopCon - PA - 200

This device uses the latest elements of the automated double-sided interconnection of digitization tables with personal computer and very progressive software support. It uses any type of ordinary commercially available photographic camera. Device Processing Negative Material. Images are evaluated from negatives using optical eyepieces.

2.4. PC Rect and PC Draw Program System

The PC-RECT and PC-DRAW is used by the Police Corps of the Slovak Republic, the transport police from 1999. All transport police are trained and have vehicles available, specially equipped for use and deploying the system. Among other things, it is part of the system digital camera, measuring cross and laptop. It is state-of-the-art and a very expanded system that does not require expensive and lengthy laboratory working and working with it after training everyone.

2.5. PC-Draw Program Package

The PC-Draw program is created in the PC Crash Simulation Program, version 5.0. The program is fully compatible with PC-RECT, with many features identical in both programs. PC-Draw allows very simple and fast drawing of images that can be stored and opened in DXF-shaped.

2.6. PC-RECT program package

PC-RECT is a program for rectifying photos. The program allows for rectify photos that have been taken at approximately horizontal surface (eg photographs from the travel accident). Reclamation is the result of a photograph that looks as if it was made perpendicularly from the top to a flat surface of the undressive lens. This is allowed all lengths and angles to subtract. Thus processed images can be saved as „Bitmapdatei“to disk and use in other programs. Even in PC Crash program, it is possible to use and move directly.

Conclusion

In assessing the causes of road transport accidents, we will often hear that traffic accidents are accompanied by the accelerating life pace and the revolutionary road traffic, shortly the evil caused and to handle it is not in its power. The accidents were, are and will be - sounds a comfortable conclusion of these claims, of course, quite incorrect. Accidents are not randomly inventives that could not be prevented, each is a consequence of some causes and has not been possible because, circumstances that condition the emergence of traffic accidents are from a particular traffic situation and from road traffic participants.

References

Books:

- [1] ZHOU, L. - BURRIS, M. W. – BAKER, R. T. – GEISELBRECHT, T. (2009). *Impact of Incentives on Toll Road Use by Trucks, Transportation Research Record – journal of the Transportation Research Board, No 2115. Washington, D. C.*
- [2] EVANS, I., (2004). *Traffic Safety. Bloomfield Hills, MI: Science Serving Society.*
- [3] MANDELÍK, J., HAVAJ, P., 2013. *Criminalistic procedures in the process of clarifying traffic accidents. Poland: ProceedingsSafety in globalization processes and tomorrow 5/2013 ISBN 978-83-87296-54-4*

Autor

Ing. Bohumil Šejnoha, MSc. - External PhD student, University of Security Management in Kosice, Košťová 1, Slovakia, e-mail: bohumil.sejnoha@vsbm.sk