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PRELIMINARY REPORT

# **Criminal Procedure Principles of Traffic-Technical Expertise**

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Received: April 14, 2025 Accepted: July 25, 2025 **Abstract:** Traffic accidents are an everyday occurrence in modern society and usually occur when a vehicle collides with another vehicle, pedestrian, animals, road debris or other immovable obstacles, such as a tree, pole or building. Traffic accidents very often result in minor and serious injuries, participants' disability, death or minor/major property damage, as well as financial costs of both society and individuals involved in the events during and after the traffic accident. There are numerous causes that contribute to the risk of collisions, i.e. traffic accidents, including vehicle design, driving speed, appearance, i.e. road condition, road environment, driving skills of traffic participants, alcohol or drug use by the participants, as well as their behavior, especially other participants driving obstructions, speeding and street racing. Expertise is a procedural action that is undertaken by a Court or the Prosecutor's Office order, with the fulfillment of the conditions prescribed by law. Expertise involves the engagement of special experts, whose obligation is to examine the expertise subjects that have been handed over to them in accordance with the rules of their scientific field, technical knowledge, skills or artistic orientation, and then provide their expert findings and opinion.

Traffic-technical expertise is a special type of expertise which analyzes the material elements from the case file and conducts a detailed analysis of the traffic accident course. In this regard, the expert examination determines the manner in which the traffic accident occurred, the position of the vehicles at the time of the accident, the speed of the vehicles involved in the accident, the location of the collision and the position of the vehicles immediately before the collision. In order to establish the above facts, it is necessary to state all the findings that were collected through analysis, including some of the basic data if the expert analyzed it: who was driving, what were the weather or traffic conditions at the accident scene, etc.

**Keywords:** traffic accident, vehicle, expert, expert examination, traffic-technical expert examination, criminal procedure.

## INTRODUCTORY REMARKS

Traffic accidents are an everyday occurrence in modern society and usually occur when a vehicle collides with another vehicle, pedestrian, animals, road debris or other immovable obstacles, such as a tree, pole or building. Traffic accidents very often result in minor and serious injuries, participants' disability, death or minor/major property damage, as well as financial costs of both society and individuals involved in the events during and after the traffic accident. There are numerous causes that contribute to the risk of collisions, i.e. traffic accidents, including vehicle design, driving speed, appearance, i.e. road condition, road environment, driving skills of traffic participants, alcohol or drug use by the participants, as well as their behavior, especially other participants driving obstructions, speeding and street racing.

A traffic accident is quite often the result of driver's

error that leads to the creation of a dangerous situation. On the other hand, in a certain number of cases, a dangerous situation can be a consequence of sudden and unpredictable changes on the road, and when analyzing a traffic accident and consequently prosecuting criminal acts which endanger public traffic, it is important to conduct a comprehensive analysis of the traffic accident and avoid possible errors that occur due to direct and indirect reasons. The direct or immediate reasons for errors in traffic accident analyses are the following: superficial facts establishing, rashly conclusions making, formalism, subjectivism, ignorance, disinterest and inattention, and intentional concealment of certain knowledge caused by interests<sup>1</sup>. Indirect reasons for errors for traffic accidents analysis are: the lack of work standards and the required level of quality, the lack of a

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<sup>&</sup>lt;sup>1</sup> Istvan Bodolo, (2007), The use of software for simulating traffic accidents in expertise, Gazette of the Bar Association of Vojvodina 79, No. 7-8, p. 252.

requirement to explain the attitudes in the findings, the lack of an efficient social control mechanism and possible sanctions, and the unfavorable state of the judicial system in terms of motivation, personnel selection, organization and financial stability<sup>2</sup>.

Direct or immediate reasons for errors in traffic accident analyses can originate from both the competent court and other participants in the criminal proceedings themselves. Thus, by failing to assess each piece of evidence individually and to relate them to each other, as well as by failing to assess the findings and opinions of traffic experts in terms of meeting the criteria for the completeness of the expert opinion and the obligation of expert research in relation to the causes of the traffic accident, the court violates the right to a fair trial, namely the right to a reasoned court decision, and the violation of the principle in dubio pro reo, which certainly leads to an absolutely essential violation of criminal proceedings, which is reflected in the lack of reasons for decisive facts. The consequence of such court action is reflected in the violation of the participants in the traffic accident's rights, as well as in the unfounded protection of a legal entity as a road manager.

A traffic expert who makes a finding and opinion based on a time-space analysis of a traffic accident that does not include all potential causes of the traffic accident, acts contrary to the principles of completeness and mandatory expert research.

A prosecutor who, during the investigation phase, fails to specify the order for the traffic expert to conduct an expert examination regarding the analysis of all potential causes of the traffic accident, as well as a prosecutor who fails to supervise the work of authorized officials during the traffic accident investigation, produces negative consequences in the criminal procedure in terms of the completeness of the expert examination and the violation of the participants' rights.

Omissions by the defense attorney during the main trial phase, and above all those relating to the quality of the cross-examination of the traffic experts and the determination of the decisive facts on which the expert's finding and opinion are based, lead to a violation of the defendant's rights.

Improper behavior of the police officials during the traffic accident investigation can cause a large number of negative consequences in cases of public traffic endangerment<sup>3</sup>.

Much has been written about the causes of traffic accidents, and in the literature, the causes of traffic accidents<sup>4</sup> can most often be divided into: 1. direct causes (errors/omissions), which can include: a suddenly created danger on the road, an inappropriate/incorrect assessment of the

traffic situation, inattention/distraction, an inappropriate/ incorrect maneuver or driving style, a sudden vehicle failure or hidden road defects, a collision in the communication of traffic participants and 'force majeure' (impact of a stone, bird, animal); 2. indirect causes, which most often include: alcohol and other intoxicants, insufficient knowledge and skills for driving a motor vehicle, aggressive driving - showing road rage, road and traffic equipment deficiencies, shortcomings in the vehicle construction and active safety elements, driver fatigue and other unfavorable psychophysical conditions, high and inappropriate speed and improper and irregular movement/driving, etc.; 3. contributing causes (certain conditions and circumstances), which can be: weather and climate conditions, physical defects (poor eyesight, nervous disorders, chronic diseases), psychological causes related to perception, understanding, decision-making and taking reactions, driving a vehicle with risks taking, driver's physical and physiological busyness and the participants' inadaptation to the traffic characteristics5.

# **EXPERTISE IN TRAFFIC ACCIDENTS**

#### The concept and subject of expert opinion

Expert opinion is a procedural action in which an expert, as a person who possesses special scientific or professional knowledge and skills, applies his knowledge, skills and methods to the facts that are the subject of expertise<sup>6</sup>.

Expert opinion is a procedural action that is undertaken by order of a court or a prosecutor, in compliance with the conditions prescribed by law and by which special experts, i.e. experts, are engaged to examine the objects of expert opinion submitted to them in accordance with the rules of their scientific field, technical knowledge, skills or artistic orientation, and then provide their expert findings and opinions<sup>7</sup>.

Within the definition of the meaning of the term expertise, there are several historical phases in which expertise is defined in different ways.

According to the theories that define expertise as a mixed investigation, expertise is not an independent evidentiary action. Expertise is most often carried out during the investigation process, during which an expert<sup>8</sup> appears. According to the authors who consider the expertise to be a scientific judgment, it is not evidence that the judicial panel will appreciate, like all other evidence, adhering to the prin-

<sup>&</sup>lt;sup>2</sup> Ibid.

<sup>&</sup>lt;sup>3</sup> Ljubinko Mitrovic, (2008), *Police Law – Internal Affairs Law*, Banja Luka, Defense Center for Security, Sociological and Criminological Research, p. 5-8.

<sup>&</sup>lt;sup>4</sup> Nebojša Bojanic, (2011), Causes of traffic accidents on the roads of the Sarajevo Canton, *Criminal Issues* 11, No. 1-2, p. 21-55.

<sup>&</sup>lt;sup>5</sup> Svetozar Kostic & Nenad Ruskic, (2009), Scientific and professional procedures and techniques of traffic expertise. in: Proceedings: VII Symposium - On traffic-technical expertise and damage assessment, TSG (Traffic Safety Group) Serbia, Vrnjacka Banja, p. 335-349.

<sup>&</sup>lt;sup>6</sup> Hajrija Sijercic-Colic, (2005), *Criminal Procedural Law*, Sarajevo, Faculty of Law, p. 332.

<sup>&</sup>lt;sup>7</sup> Hajrija Sijercic-Colic et. al., (2005), *Commentaries on the Law on criminal/criminal procedure in Bosnia and Herzegovina*, book III, Sarajevo, Council of Europe and European Commission, p. 283.

<sup>&</sup>lt;sup>8</sup> Snežana Sokovic, (1990), Expert testimony as evidence in criminal proceedings (doctoral dissertation, Faculty of Law Kragujevac, p. 44.

ciple of free judicial conviction, but a scientific judgment, that is, a decision that is always mandatory for the court. The understanding of expertise as a scientific judgment, that is, the expert as *iudex facti*, originates from the positive and anthropological school of Criminal Law<sup>9</sup>.

One group of theorists' views expertise as a way of verifying evidence, denying it the property of an independent means of evidence and interpreting it as a form for verifying other evidence. According to this understanding, expert testimony is not a means of evidence, but, as the objects of expert testimony are usually other material evidence, it represents only a way of verifying that evidence<sup>10</sup>.

There are also understandings according to which expertise is defined as a means of evidence *sui generis* since, depending on the specific situation, it can be designated as testimony, judicial assistance and as a scientific judgment<sup>11</sup>.

The reasons for expertise are generally classified into three groups, namely: communication of general views of science and practice, concrete procedural facts and special knowledge of the issue<sup>12</sup>.

Expertise is determined as a means of evidence and has two phases, namely:

- disclosure of facts important for the procedure (expert report) and
- 2. giving an opinion on those facts (expert opinion).

The expertise cannot refer to legal issues, and the subject of the expert opinion can only be an important fact, the determination or evaluation of which requires the application of special professional knowledge possessed by the expert<sup>13</sup>.

## The concept of an expert

An expert is a person who, by the authority of his professional knowledge and/or skill in the field of a certain science or technique, at the request of the criminal procedure body, gives a written or oral finding and opinion on the existence or non-existence of facts that are established in the criminal proceedings, and who, as necessary, and based on the existence and/or non-existence of those facts, draws a certain conclusion<sup>14</sup>.

An expert in criminal proceedings is any person who, on the order of the criminal proceedings authority and based on his special expertise in a certain area, performs the necessary research, according to the rules of a special professional discipline and according to the provisions of

the Law on Criminal Procedure<sup>15</sup>.

An expert is also a natural or legal person who is invited by a court decision to give his findings and opinion on the defined circumstances of the expert examination. Consequently, the expert should assist the criminal procedure authority exclusively in establishing the facts, and never when deciding on the application of the legal norm<sup>16</sup>.

An important characteristic of every expert, that is, what is mostly his *differentia specifica*, or so-called the 'essential requirement' in relation to all other criminal procedure subjects, is precisely his expertise. For this reason, an expert can only be designated as a person who possesses special, extra-legal, i.e. professional knowledge needed to solve a specific criminal matter<sup>17</sup>.

Although the demarcations of expertise stages, as well as their specific content, are conditioned by the specifically applied special professional methodology, which process theory cannot go into in detail, this should not be the reason for almost complete theoretical ignoring of this issue with important practical consequences<sup>18</sup>.

The competences of a traffic-technical expert include, for example, the following activities and possible answers to the following questions, namely:

- determination of the technical condition of the motor vehicle, its individual parts, assemblies, and mechanisms,
- determining the conditions, causes and moment of occurrence of the traffic accident,
- determination of the causal link between the malfunction of the motor vehicle and the resulting traffic accident,
- determination of the mechanism of occurrence and course of the traffic accident,
- determining of the motor vehicle speed up to the moment of the traffic accident - what was the significance of speeding for the traffic accident,
- determining the braking and complete stopping distance at a given driving speed, type, condition and profile of the road,
- what was the significance of the traffic accident in violation of the driving rules from the Law on the Basics of Road Traffic Safety in Bosnia and Herzegovina, the Rulebook on Dimensions, Total Masses and Basic Load of Vehicles and on the basic conditions that must be fulfilled by devices and equipment on vehicles in road traffic, Rulebook on Road Traffic Signs, etc.
- determination of the causal link between the vehicle malfunctioning and the traffic accident,
- determining the cause of the collision, drifting, overturning of the motor vehicle and other conditions traffic and road situations with the aim of

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<sup>&</sup>lt;sup>9</sup> Ibid.

<sup>&</sup>lt;sup>10</sup> Sijercic-Colic et al., *Commentaries on the Law on Penal/Criminal Procedure in Bosnia and Herzegovina*, book III, p. 283.

<sup>&</sup>lt;sup>11</sup> Sokovic, Expert testimony as evidence in criminal proceedings, p. 54.

<sup>&</sup>lt;sup>12</sup> Sijercic-Colic et al., *Comments on the Law on Penal/Criminal Procedure in Bosnia and Herzegovina*, book III, p. 283.

<sup>&</sup>lt;sup>13</sup> Ljubinko Mitrovic, (2014), Means of evidence in misdemeanor proceedings, Expert Journal, from the field of theory and practice of expert testimony in Bosnia and Herzegovina, no. 1, p. 29-36.

<sup>&</sup>lt;sup>14</sup> Sijercic-Colic et al., *Commentaries on the Law on Penal/Criminal Procedure in Bosnia and Herzegovina*, book III, p. 283.

<sup>&</sup>lt;sup>15</sup> Sokovic,Expertise as evidence in criminal proceedings, p. 176.

<sup>&</sup>lt;sup>16</sup> Sijercic-Colic, Law on Criminal Procedure p. 331.

 $<sup>^{17}</sup>$  Sokovic, Expertise as evidence in criminal proceedings, p. 158.

<sup>18</sup> Ibid.

determining the violation of technical norms from the Law on the Basics of Traffic Safety on Roads in Bosnia and Herzegovina and other normative acts on safe driving,

- is there a causal connection between the malfunction of the motor vehicle, the condition of the road and the traffic accident,
- which parts of the vehicle hit the obstacle and
- how the driver had to act from a technical point of view in a given situation in order to ensure safe driving<sup>19</sup>.

## Findings and opinion of the expert

The expertise procedure depends on the type of expertise, but in any case, it has three phases, namely: introductory, operative and concluding.

In the introductory phase, procedural issues are resolved and a kind of preparation for operational work is carried out. In this phase, the invited expert first familiarizes with the legal norms that regulate expertise as an act of proving. Furthermore, in this phase, the expert is called and familiarized with the criminal case and the expert task. After that, the expert is handed the material to be expertized with all the accompanying documentation (expertise order, copies of the investigation report, etc.). In the same way, the expert gets to know the subject of the expertise and the questions to which he/she provides answers20. Also, the expert is invited to, for example, examine and consider the expertise subject carefully, then to state everything he/she observes and determines, and to express his/her opinion objectively and in accordance with the rules of science and skill<sup>21</sup>.

The expertise is directly performed in the so-called operational phase. This phase is carried out by the expert personally, by applying methods and means in accordance with the profession and adhering to the strictly set requirements of the requester (customer) of the expertise<sup>22</sup>. Therefore, expertise is performed by an expert applying professional knowledge and methods, and adhering to the expertise order, in the sense that experts only perform what the prosecutor or the court ordered him/her to do<sup>23</sup>.

The operative phase is expert work according to the order (request) for an expertise, and it depends on the expertise subject itself. It can refer to looking at certain objects or files and asking for the necessary clarifications, then proposing to produce evidence or obtain objects or data that are important for giving findings and opinions<sup>24</sup>.

The final phase of the expertise refers to giving findings and opinions. Along with the findings and opinion, the expert submits working material, sketches and notes to the criminal procedure authority that ordered the expertise<sup>25</sup>. At the same time, the authority of criminal proceedings in the same expertise subject can request a finding from one expert, and an opinion from another<sup>26</sup>.

Expert's finding (*visum repertum*) and opinion (*parere*) make up his testimony, and they must be based on verified facts and presented precisely and clearly. In the finding the expert states everything he/she observed and discovered, the methods he/she applied, and in his/her opinion - the conclusions he/she came to in the process of establishing the facts. In doing so, the expert must always explain on the basis of which facts he/she drew conclusions and gave an opinion, and which rules of science or skill he/she used<sup>27</sup>.

Based on all performed actions necessary for expert research, the expert gives his/her findings and opinion. In the findings and opinion, the existence or non-existence of the facts for which the expertise was ordered, based on which the expert draws conclusions and gives his opinion, is established. The entire procedural action, i.e. determination of expertise, expert research, formulation of findings and opinions, and verbal or written communication of such findings makes an expertise a special means of evidence. The finding and opinion obtained in such a procedural action constitute evidence, independent, original, indirect or immediate, depending on the specific situation<sup>28</sup>.

The report describes in detail the subject of the expertise subject, in the state in which the specific subject was submitted for expertise. The first is necessary for several reasons, the most important of which are the possibility of identification and possible irregularities in securing the delivered item<sup>29</sup>.

The expert's findings and opinions constitute evidence, and as such have their place in criminal proceedings only if they reveal new facts. However, this is not possible just by 'opinion', not even in the sense of reasoning. On the other hand, the finding and the opinion are logically and organically interconnected, that is, the finding represents the foundation, the support, the argument for the 'opinion'. The finding is the subject of 'opinion'. If there is none of finding - there is none of opinion<sup>30</sup>.

The written structure of the expert testimony in the form of an introductory part, findings and opinion (conclusion) must be based on something, and that is the expert's finding. There are special cases when the expert testimony consists only of findings or only opinions. The finding

Bosnia and Herzegovina, book III, p. 297.

<sup>&</sup>lt;sup>19</sup> Vladimir Vodinelic, (1986), *Traffic criminology: methodology for traffic accidents processing on roads, water and air*, Belgrade, Contemporary administration, p. 329.

<sup>&</sup>lt;sup>20</sup> Sijercic-Colic et al., *Comments on the Law on Penal/Criminal Procedure in Bosnia and Herzegovina*, book III, p. 297.

<sup>&</sup>lt;sup>21</sup> Hajrija Sijercic-Colic, Law on *Criminal Procedure*, p. 334.

<sup>&</sup>lt;sup>22</sup> Sijercic-Colic et al., *Comments on the Law on Penal/Criminal Procedure in Bosnia and Herzegovina*, book III, p. 297.

<sup>&</sup>lt;sup>23</sup> Sijercic-Colic, Criminal Procedure Law, p. 334.

<sup>&</sup>lt;sup>24</sup> Sijercic-Colic et al., Comments on the Law on Penal/Criminal Procedure in

<sup>&</sup>lt;sup>25</sup> Sijercic-Colic, Law on Criminal procedure, p. 335.

<sup>&</sup>lt;sup>26</sup> Sijercic-Colic et al., Comments on the Law on Penal/Criminal procedure in Bosnia and Herzegovina, book III, p. 297.

<sup>27</sup> Ibid

<sup>&</sup>lt;sup>28</sup> Sokovic, Expert testimony as evidence in criminal proceedings, p. 221.

<sup>&</sup>lt;sup>29</sup> Sijercic-Colic et al., *Comments on the Law on Penal/criminal Procedure in Bosnia and Herzegovina*, book III, p. 303.

<sup>&</sup>lt;sup>30</sup> Sokovic, Expert testimony as evidence in criminal proceedings, p. 222.

and opinion of the expert must refer to the *expertise subject*, specified in the competent authority's order for expertise, as well as to the questions raised. Otherwise, the expert's testimony has no procedural value in a specific criminal case and cannot be used as evidence in the proceedings.

The introductory part of the expert report should contain information about the authority that ordered the expertise, with the official number and date of issuance of the expertise order, its brief content (general information about the expertise subject, the questions asked, etc., the conditions under which the report was conducted, etc.). Expertise finding is the second part of the expert report or the dispositive (descriptive) part. As far as the content is concerned, it must be a direct reflection of what the expert established by examining (analyzing) the expertise subject. In that part of the record, the expert should state everything he/she observed during the examination (analysis), which is relevant in connection with the tasks received from the criminal procedure authorities.

In accordance with the provisions of the Law on Criminal/Penal Procedure, the expert is obliged to carefully consider the object or objects of the expertise and accurately state everything he/she observes and finds (establishes). Report formulation must be such that, in terms of important facts, they give the most accurate picture of expertise subject, without any generalizations. If the expert was unable to determine the true factual situation by examining the expertise subject, this unreliability should be highlighted without hesitation. It follows from the above that the finding of an expertise is a statement of a set of facts required for the opinion of an expert. The findings primarily include the facts that the expert discovered, noticed, found and selected, but also other facts that were established by the criminal procedure authority or that were established and found by another expert. This certainly means that the expert must also take the facts from the file as the basis of his findings, where observation and finding does not require special professional knowledge.

The question of whether there have been any changes and consequences and which ones, why and what possible impact they might have on the course and outcome of the expert examination, is one of the main questions to which the expert must answer. Specifying and describing of the expertise subject must be done in such a way that it enables its identification<sup>31</sup>.

# **Traffic-technical expertise**

In order to carry out and produce a traffic-technical expertise, it is necessary to perform a detailed analysis of all material elements from the case file and perform their comparative analysis. In order for the expert to be able to draw correct conclusions about the possible manner of traffic accident occurrence, it is necessary to first analyze the place where the accident occurred, the time of occurrence,

atmospheric conditions and the possibility of safe traffic at the scene of the accident. The stated facts represent the basic data related to the traffic accident, they are in the file and are an indispensable part of the expert's findings and opinion. Apart from the basic data about the traffic accident, which are already in the court files, the findings and opinion are mandatory parts of the expert report.

In the traffic-technical expertise, the criminal procedure authority may encounter the problem of marking the most important questions to which the expert should answer. Marking the most important questions to which the criminal procedure body requires an answer from the expert implies not only the ordinary logic of the criminal procedure body, but also a deeper knowledge of the problems of traffic-technical expertise, that is, the methods and procedures that are applied within it. The criminal procedure body can hire an expert advisor for this, who will, if necessary, clarify the possible problems and direct him to the most important questions and answers he/she expects from the expert<sup>32</sup>.

The analysis of a traffic accident implies the determination, calculation and analysis of material elements that can be obtained from the evidence collected during the investigation of a traffic accident. Such analyzes enable an objective assessment of the situation at the time of the traffic accident or the situation that possibly preceded the traffic accident in a relatively short period of time. A qualitative analysis of the collected data related to the occurrence of a traffic accident provides data related to the place and time of the occurrence of the traffic accident, i.e. a shorter time interval immediately before the accident, but it does not give us reliable data about the longer period that preceded the accident, i.e. the moment when the danger occurred, i.e. when the traffic situation required the action of one of the traffic participants<sup>33</sup>.

On the basis of a complex investigation of all the accident causes in the forensic examination procedure, the indictment can be correctly defined and, in the light of the assessment of all the presented evidence, a fair judicial decision can be made. This also applies to cases where the indictment is brought only against the persons who are the main culprits of the accident or only against the surviving participant of the accident, because in the decision-making process the contribution of other elements of the system (the contribution of the victim) is evaluated, which is important for determining the punishment type and amount.

The action of individual elements of the vehicle - driver - road - environment (V-D-R-E) system, which are important for defining the course and dynamics of a traffic

<sup>&</sup>lt;sup>31</sup> Dusko Modly, (2007), *Contemporary criminal theories*, Sarajevo, Faculty of Criminal Sciences, p. 56.

<sup>&</sup>lt;sup>32</sup> Dragan Radosavljevic, (2012), Traffic-technical expertise, expert and expert advisor through the new Criminal Procedure Law in the Republic of Serbia, in: Proceedings: XI Symposium - *Analysis of traffic accidents and insurance fraud*. TSG (Traffic Safety Group) Serbia, Zlatibor, p 1-12.

<sup>&</sup>lt;sup>33</sup> Nenad Markovic & Dusko Pesic, (2012), Dangerous situation and occurrence of traffic accidents, in: Proceedings: XI Symposium - *Analysis of traffic accidents and insurance fraud*. TSG (Traffic Safety Group) Serbia, Zlatibor, p. 51-60.

accident<sup>34</sup>, is expressed to the greatest extent in the phase preceding the accident. In order to define and evaluate the action of these elements in an expertise, by analyzing the material factors produced in the accident (traces, damage, injuries) and witness statements, one should also be well acquainted with the basic elements of driving quality. During the expertise, driving quality is assessed by analyzing the driver's actions and behavior in all phases of a traffic accident. Such an analysis can only be performed by a traffic expert who knows all the factors of safe driving conditioned by the action of the V-D-R-E system.

As part of a traffic and technical expertise findings, it is necessary to determine the necessary elements for conducting an analysis of the course of a traffic accident by analyzing the material elements from the file. Namely, the manner of the accident, the collision position, the speeds of the accident participants, the collision location and the position of the vehicle immediately before the collision should be determined. To establish the above facts, it is necessary to state all the findings that were reached through the analysis, including some of the basic data if the expert analyzed them: who was driving, what were the weather conditions at the accident scene, what were the traffic conditions, etc<sup>35</sup>.

During the investigation of the accident, the expert uses certain graph-analytical procedures to calculate the basic parameters in order to provide answers to the following questions based on them, namely:

- a) what was the driving speed of the accident participants before the dangerous situation occurred,
- b) at the time of the dangerous situation, were the drivers driving their vehicles at the permitted speed (if it was limited) and at a safe speed for the situation that happened before the danger occurred,
- c) did the participants in the accident before the collision react to the danger in appropriate manner
- d) did the participants in the accident have the technical ability to avoid a collision by braking in appropriate time?

If the collision occurred while the car was moving at an equally slow speed (braking), the expert is also asked to answer the following question: Was there a possibility to avoid the collision without braking, with or without turning?

In cases of accidents when the danger was created suddenly, in situations that the driver could not foresee, the court asks for an answer to the question: At what speed (conditionally safe speed) should the car be driven in order to avoid the collision by braking, by stopping the car before reaching the place of the collision (some experts wrongly equate this speed with safe speed for the situation that ex-

isted before the sudden danger occurred)36?

When performing a traffic-technical expertise, the expert is given a court file for study, which contains:

- investigative documentation (record, scene sketch, photo documentation, etc.),
- data on accident participants and injured persons,
- data on vehicles and their technical condition,
- road and weather data,
- records of the participants' and witnesses' hearing about the accident and
- other material data and evidence about the traffic accident<sup>37</sup>.

Every traffic accident can be viewed as one event resulting from the action of several different factors, some of which may be accidental. That is why every collision between vehicles or a vehicle and a pedestrian (every traffic accident), has its own specific characteristics, characteristic only for that case, which separate it from other analogous events<sup>38</sup>.

The place of the traffic accident is an important element for the traffic accident analysis and the application of temporal or spatial criteria. The dangerous situation in the area of the traffic accident is a key factor in the occurrence of a traffic accident, which represents a traffic-technical issue. At the same time, the cause of the traffic accident results from it, which is a legal issue<sup>39</sup>.

Determination of the technical causation of a traffic accident is the competence of an expert, while the determination of causation in the sense of Criminal Law falls under the competence of the court. The circumstance that the driver's actions (behavior) in the process of driving a motor vehicle caused certain technical results (vehicle sliding from the road, drifting, overturning, and so on) is conditioned by technical causal connection. If the same action of the driver, which is contrary to the provisions of the Law on Traffic Safety, caused socially dangerous consequences described in the Criminal Law - carried out intentionally or unintentionally, in such a case the causal connection between the driver's actions and the occurrence of the consequences has a criminal character, not an accidental one, and becomes one of the essential features of the criminal act.

In order to solve the question of causality, the method of thought elimination (hypothetical elimination) is applied. Its essence is that from the set of antecedents (predecessors), which are supposed to have a causal meaning, the action that interests the examiner is excluded (abstracted)

<sup>&</sup>lt;sup>34</sup> Milan Vujanic & Tijana Ivanisevic, (2015), Time-space analysis of a traffic accident, Journal of Expertise, in the field of theory and practice of expert witnessing in Bosnia and Herzegovina, No. 2, p. 161-167.

<sup>&</sup>lt;sup>35</sup> Marković & Pesic, Dangerous situation and the occurrence of a traffic accident, p. 52.

<sup>&</sup>lt;sup>36</sup> Miodrag Tojagic, (2015), *Road Traffic Safety*, Brcko, European University, p. 251.

<sup>&</sup>lt;sup>37</sup> Radoslav Dragac, (2009), Time-spatial analysis of a traffic accident in the preparation of findings and opinions of experts, in: Proceedings: VII *Symposium - On traffic-technical expertise and damage assessment*, TSG (Traffic Safety Group) Serbia. Vrnjacka Banja, p. 351-367.

<sup>38</sup> Vodinelic, Traffic crime, p. 332-335.

<sup>&</sup>lt;sup>39</sup> Milan Bane Stevovic, (2012), Delineation of legal and traffic-technical issues in a dangerous situation, in: Proceedings: XI *Symposium - Expert examination of traffic accidents and insurance fraud.* TSG (Traffic Safety Group) Serbia, Zlatibor, p. 32-37.

in the mind (e.g. the actual driving speed). If it turns out that the event would not have occurred or would have occurred in a different course than the real one, this means that this action appears as a necessary condition (cause) of the event (traffic accident) and is in the causal nexus. If it is shown that the event would have occurred as it did without that action, then it is assumed that there is no causal connection between that action and the event<sup>40</sup>.

In practice, it happens that the court asks the traffic expert whether the driver could or could not foresee the obstacle (danger)? The expert may only be asked a question about the technical moment of the danger occurrence (real obstacles). The expert will determine the time when the suspension arm broke, the causes of that phenomenon, whether the failure was invisible or could be noticed, when and in what way, whether the driver could have noticed it in time, and the like. However, the legal moment when the driver is obliged to notice the technical malfunction of his motor vehicle and take appropriate steps to prevent a traffic accident must be determined by the court, based on the totality of all the evidence obtained. The expert examines what measures the driver should have taken if this requires the knowledge of a specialist. Determination of the moment when the driver had the technical ability to prevent a traffic accident also falls within the competence of a traffic expert. However, the determination of the moment when the driver had to and could foresee the occurrence of a traffic accident falls exclusively within the court jurisdiction. The court's analysis refers to the subjective characteristics and driver conditions. The expert opinion helps the court to obtain the necessary and comprehensive information about the traffic situation (visibility, condition of the road) and the condition of the vehicle in order to determine whether the driver had the opportunity in the specific situation (and at what time) to foresee the probable occurrence of a traffic accident in the event that he/she acted contrary to the norms of the Law on Traffic Safety<sup>41</sup>.

The criminal responsibility of the driver for not applying the safe driving measures, provided in the regulations on traffic safety, occurs only from the moment he/she notices the obstacle or was obliged and could have foreseen its appearance. The driver's criminal responsibility for measures taken or not taken arises only from the moment when his/her obligation to respond to the danger arose.

It can be safely concluded that the key moment for determining liability is the moment of danger. In relation to it, the emergence of the traffic participant's obligation to react to the danger and be responsible for the resulting consequences is always determined. It is the duty of the court to determine: the moment of the danger occurrence and the moment when the driver was obliged to take measures to prevent the traffic accident<sup>42</sup>.

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<sup>&</sup>lt;sup>40</sup> Vodinelic, *Traffic crime*, p. 345.

<sup>&</sup>lt;sup>41</sup> Vodinelic, *Traffic crime*, p. 345.

<sup>42</sup> Ibid.