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### **Driver-Car Interaction & Safety 2014**

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# The traffic accident happened on the crossroad made of the main road Skopje-Ohrid with the str. Boulevard "Boris Kidric" in town Kicevo

Zlatko V. Sovreski<sup>A</sup>

Abstract - With the expertise it was necessary the following circumstances to be confirmed: conditions when the accident happened, flow and dynamics of the event of the accident, the reasons which caused the accident, omissions of the participants in the accident, other circumstances that the expert considers that are necessary for correct evaluation of the factual state

Keywords- expertise; accident; planning phase; traffic; decision process

### 1. Findings - General data

The traffic accident happened on 25.07.2013 around 05:00 am, on the crossroad made of the main road Skopje- Ohrid with the str. Boulevard "Boris Kidric" in Kicevo.

#### PARTICIPANTS:

- 1. TMV Tanker "Mercedes1824" with reg.plates OH-961 ownership of JP "Komunalec" controlled by Shterjoski Jovan by father Ljube born on 17.09.1967, who lives in Kichevo on str "Trenko Taseski" number 74.
- 2. PMV"Mercedes E320", with registration plates number RK5-A2 VM1JS1JP1, controlled by Zekjir Hajroja, by father Rufat born on 16.09.1994 from v.Trapchin who was driving.

In PMV "Mercedes E320" co-drivers were:

- -Zulku Liridon by father Nebi from v.Trapcin Dol
- -Shpend Iljazi by father Sulejman who lives on str. "Goce Delchev" number 106 born on 08.05.1995
- -Vaiti Vait by father Avni born on 16.03.1995 in Germany and who lives in v.Trapchin Dol who was sitting next to the driver who died by his injuries

### 2. Description on the insight

The traffic accident happened on 25.07.2013 around 05:00 am, on the crossroad made of the main road Skopje-Ohrid with the str. Boulevard "Boris Kidric" in Kicevo. (bolted crossroad).

The main road Skopje-Ohrid is made of two lanes with two traffic lanes constructed of asphalt surface with width of 7,1m where there is one way traffic. The lanes are separated between with green surface and there is speed limit of 60km/h.



Fig. 1: General look of the insight (seen into the direction of movement of PMV "Mercedes E320")

On the insight there was found PMV "Mercedes E320" which was damaged in the front part, the doors of PMV "Mercedes" were opened and there could be seen a pool of blood next to the driver's seat, photos have been made on the insight, drawn with the parts which have been thrown on the road.



Fig. 2: Damages made at PMV "MercdesE320"

In the opposite direction to the PMV "Mercdes E320" there has been present the stooped TMV "Tanker- Mercedes 1824" with registration plates OH-961 and the driver of that vehicle was Shterjoski Jovan who was at the offices of OVR Kichevo. On the back side of TMV "Tanker- Mercedes 1824" there could be seen visible signs the hit of the PMV "Mercedes.



Fig. 3: Damages made at TMV "Tanker-Mercdes1824"

The injured people Zekjiri Hajroja, Zulku Liridon, Shpend Iljazi and Vaiti Vait who were transferred emergently at the Medical Centar Kichevo were kept on treatment. Due to severity of the gained injuries, the person Vaiti Vait was directed to the Clinical center Skopje with the vehicle of the emergency, but from the injuries that he gained in the traffic accident on the way to Skopje died.

PMV "Mercedes" was driving from the str. Boulevard "Osloboduvanje" to the main road to the Mill in Kichevo.

The truck "Mercedes- Tanker" with OH-961 from JP "Komunalec" controlled by Shterjoski Jovan was moving from the str. "B.Kidric" and jointed the traffic lights on the direction to the Mill Kichevo and there was the crash with the PMV "Mercedes".

On the insight there has been noticed a Trace from dragging of the front right wheel by PMV "Mercedes E320", in the drawing marked by position number, from the insight there has not been present, but on the insight there were remains by the PMV "Mercedes" and parts of the vehicle and spilt oil from the vehicle.

There were no eye witnesses on the insight, except the injured and the driver of the tanker.

#### 3. Analyses of the accident

With detailed analyses there have been found traces on the insight and on bases of the location of the damages made at the crashed vehicles, it was confirmed that the position of the crash was in the direct surrounding before the Trace 1 made by the front right wheel of PMV "Mercedes 320" which was on the imagned left lane from the right lane considered into the direction of PMV "Mercedes E320".

Both vehicles made back eccentric crash and on TMV "Mercedes tanker" with the back left part and PMV "Mercedes E320" with the from right part which overlapping was approximately 2/3 from its width.

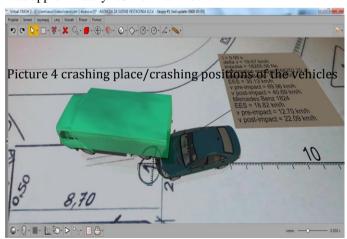


Fig. 4: Crashing place/crashing positions of the vehicles

TMV "Mercedes tanker" directly before the crash was moving on str. "Boris Kidric" into the direction of ELS municiplaity Kichevo to the crossroad made of the Main road A2 Skopje -Ohrid and str. "Boris Kidric" with the road that

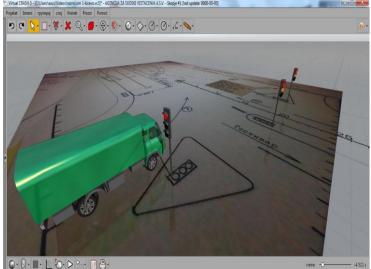
leads to the settlement Krushino. On the cross road TMV Mercedes tanker turned on the left with intention to join the lane from the main road which was for moving of vehicle into the direction to Ohrid.

PMV Mercedes E320 was moving on its right traffic lane of the road lane on the main road A2 Skopje- Ohrid for movement of vehicle into the direction to Ohrid.

TMV Mercedes tanker to the crossroad approached with the speed of 54 km/h while PMV Mercedes E320 with speed of 70km/h.

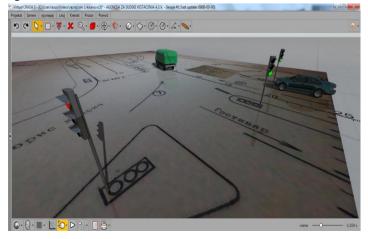
When entering the crossroad TMV "Mercedes" slowed down so at the crashing position there was a crashing speed with about 13km/h while the "Mercedes E320" entered with the confirmed speed of 70km/h and that is the speed when it crashed with TMV "Mercedes tanker".

TMV "Mercedes tanker" was in a phase of approaching with slowing down to the crossroad on the lantern of the traffic lights while there was green light on, until the moment when the front part was on 10m before the traffic lights stand, when the yellow light turned on. The red light on the traffic lights of TMV "Mercedes tanker" was on, when the front part was on the parallel with the traffic lights stand and at that moment it had speed of 32km/h.

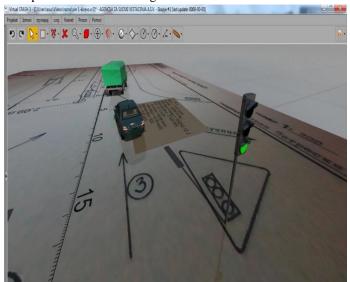


TMV "Mercedes –tanker" was parallel with its traffic lights stand and when the red light turned on then PMV Mercedes E320 before its traffic lights stand was on distance of 87,5m and at that moment except the red light, the yellow light turned on as a preparation that soon the green light would turn on on the traffic lights.

TMV "Mercedes tanker" in the area of the crossroad entered with turned on red light of the traffic lights while PMV "Mercedes" with turned on green light on the traffic lights.



The driver of PMV "Mercedes" on the created danager reacted with direction on the vehicle on the left and from its right traffic lane crossed on the imagined left trafic lane in the attempt to avoid the crashing with TMV "Mercedes-tanker".



The moment of creation of the real danger for the driver of PMV "Mercedes E320" was made on 56m before the crash, when TMV "Mercedes tanker" entered on the lane on which the PMV "Mercedes E320" was moving. If the driver of PMV "Mercedes E320" in the given situation reacted on time with intensive stopping, he had technical possibility through stopping to stop the vehicle before the place of crashing . The driver of TMV "Mercedes tanker" on the concrete case of the crossroad entered with turned on red light on the traffic lights and entered on the right traffic lane instead to enter on its left traffic lane and in that way in considerable measure and range stopped the movement of PMV "Mercedes E320". With such taken actions the driver of TMV "Mercedes tanker" initiated dangerous situation which resulted with creation of the subject accident.

### 4. Conclusion

- 1. With detailed analyses there have been found traces on the insight and on bases of the location of the damages made at the crashed vehicles, it was confirmed that the position of the crash was in the direct surrounding before the Trace 1 made by the front right wheel of PMV "Mercedes 320" which was on the imagned left lane from the right lane considered into the direction of PMV "Mercedes E320".
- 2. Both vehicles made back eccentric crash and on TMV "Mercedes tanker" with the back left part and PMV "Mercedes E320" with the from right part which overlapping was approximately 2/3 from its width.
- 3. TMV "Mercedes tanker" directly before the crash was moving on str. "Boris Kidric" into the direction of ELS municiplaity Kichevo to the crossroad made of the Main road A2 Skopje -Ohrid and str. "Boris Kidric" with the road that leads to the settlement Krushino. On the cross road TMV Mercedes tanker turned on the left with intention to join the lane from the main road which was for moving of vehicle into the direction to Ohrid.

- 4. PMV Mercedes E320 was moving on its right traffic lane of the road lane on the main road A2 Skopje- Ohrid for movement of vehicle into the direction to Ohrid.
- 5. TMV Mercedes tanker to the crossroad approached with the speed of 54 km/h while PMV Mercedes E320 with speed of 70km/h.
- 6. When entering the crossroad TMV "Mercedes" slowed down so at the crashing position there was a crashing speed with about 13km/h while the "Mercedes E320" entered with the confirmed speed of 70km/h and that is the speed when it crashed with TMV "Mercedes tanker".
- 7. TMV "Mercedes tanker" was in a phase of approaching with slowing down to the crossroad on the lantern of the traffic lights while there was green light on, until the moment when the front part was on 10m before the traffic lights stand, when the yellow light turned on. The red light on the traffic lights of TMV "Mercedes tanker" was on, when the front part was on the parallel with the traffic lights stand and at that moment it had speed of 32km/h.
- 8. TMV "Mercedes –tanker" was parallel with its traffic lights stand and when the red light turned on then PMV Mercedes E320 before its traffic lights stand was on distance of 87,5m and at that moment except the red light, the yellow light turned on as a preparation that soon the green light would turn on on the traffic lights.
- 9.TMV "Mercedes tanker" in the area of the crossroad entered with turned on red light of the traffic lights while PMV "Mercedes" with turned on green light on the traffic lights.
- 10. The described dynamics can be seen on the enclosed CD with made simulation by licensed software Virtual Crash 3.0 which is constitutional part of the findings and the opinion.
- 11. The driver of PMV "Mercedes" on the created danager reacted with direction on the vehicle on the left and from its right traffic lane crossed on the imagined left trafic lane in the attempt to avoid the crashing with TMV "Mercedes-tanker".
- 12 The moment of creation of the real danger for the driver of PMV "Mercedes E320" was made on 56m before the crash, when TMV "Mercedes tanker" entered on the lane on which the PMV "Mercedes E320" was moving. If the driver of PMV "Mercedes E320" in the given situation reacted on time with intensive stopping, he had technical possibility through stopping to stop the vehicle before the place of crashing .
- 13. The driver of TMV "Mercedes tanker" on the concrete case of the crossroad entered with turned on red light on the traffic lights and entered on the right traffic lane instead to enter on its left traffic lane and in that way in considerable measure and range stopped the movement of PMV "Mercedes E320". With such taken actions the driver of TMV "Mercedes tanker" initiated dangerous situation which resulted with creation of the subject accident.
- 14. The protection time of the traffic lights does not secure maximal safety of the vehicles which at any time were found directly before or in the area of the crossroad at the phase exchange of the regime of work of the traffic lights.

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