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Automotive innovation camp

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2021



South-Eastern Finland
University of Applied Sciences





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Business case

“Automotive expertise of road accidents”

Saint Petersburg State University of Architecture and Civil Engineering (SPbGASU)

Expert board::

- Podoprigora Nikolay Vladimirovich - forensic autotechnical expert, candidate of technical sciences, associate professor of the department of ground transport and technological machines
- Brylev Ilya Sergeevich - forensic autotechnical expert, candidate of technical sciences, associate professor of the department of ground transport and technological machines

Age group: students of secondary professional education





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General information about the business case

- On the territory of the Russian Federation, road transport is the most potentially dangerous means of transportation, which accounts for most of all traffic accidents - about 95-98%.
- Due to the severity of the consequences, road traffic accidents (RTA) remain a serious social, economic, moral, psychological, and medical problem. Therefore, establishing the true causes of accidents and ensuring a high level of objectivity in the conclusions of forensic auto-technical experts is a priority goal of every investigation.



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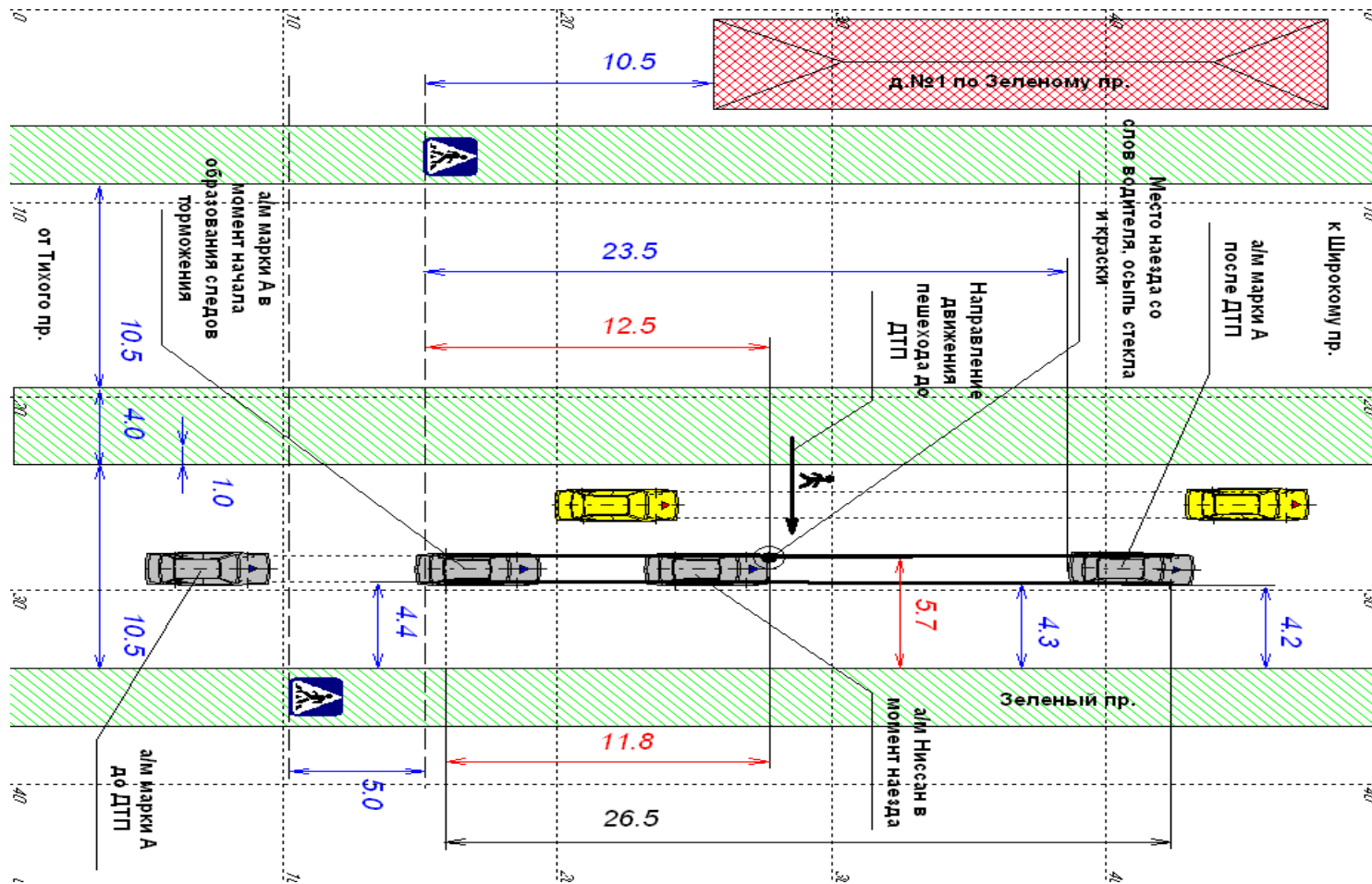
Technical details

Circumstances and primary data:

- April 01, 2020, at about 12:30 a.m. on Zeleny Prospekt, there has been a road accident involving: a Nissan vehicle, license plate XXXXX, driven by a driver GG and a vehicle brand A, license plate XXXXX, driven by a BB driver.
- Road conditions: daylight road illumination, unlimited visibility, asphalt dry, clear.

Analysis scenario

Diagram of the accident





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Statement of the problem

Research Questions:

1. What was the speed of the car of brand B in this traffic situation before the start of braking?
2. How should the drivers have acted in this traffic situation, according to the requirements of the traffic rules?
3. Did they have the technical ability to prevent accidents?
4. Did their actions comply with the requirements of the traffic rules?



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Problem-solving recommendations

1. Determine the speed of the vehicle in the considered road transport situation using the calculated dependencies.
2. Evaluate the correctness of the actions of the drivers of the vehicle in this TTP, guided by the requirements of traffic rules.
3. Assess the technical ability to prevent road accidents, guided by the requirements of traffic rules.



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Materials for solving the problem

Materials for solving the problem (given to all teams at the first meeting):

1. Evtjukov S.A., Vasiliev Ya.V., Forensic auto-technical expertise. Theory and practice. Tom 1 – SPb.: Publishing house Petropolis, 2018.
2. Evtjukov S.A., Vasiliev Ya.V., Forensic auto-technical expertise. Theory and practice. Tom 1 – SPb.: Publishing house Petropolis, 2018.
3. Puchkin V.A. Basics of expert analysis of road accidents: Data base. Expert technique. Solution methods – Rostov-on-Don: 2010. – 400 p.



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Business case solution format

- 3 - 4 PowerPoint presentation slides.
- The total time for the presentation of the case should not exceed 10 minutes.