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CIECA
CONGRESS
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Modern technology in driving – bane or boon? Are we able to use it in a safe way?

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German Road Safety Council

Tbilisi, 7th June 2019



On the way to high automated driving!

driver only

assisted driving

partly automated driving

high automated driving

full automated driving

Photo DVR, Definition BAST



ADAS are necessary!

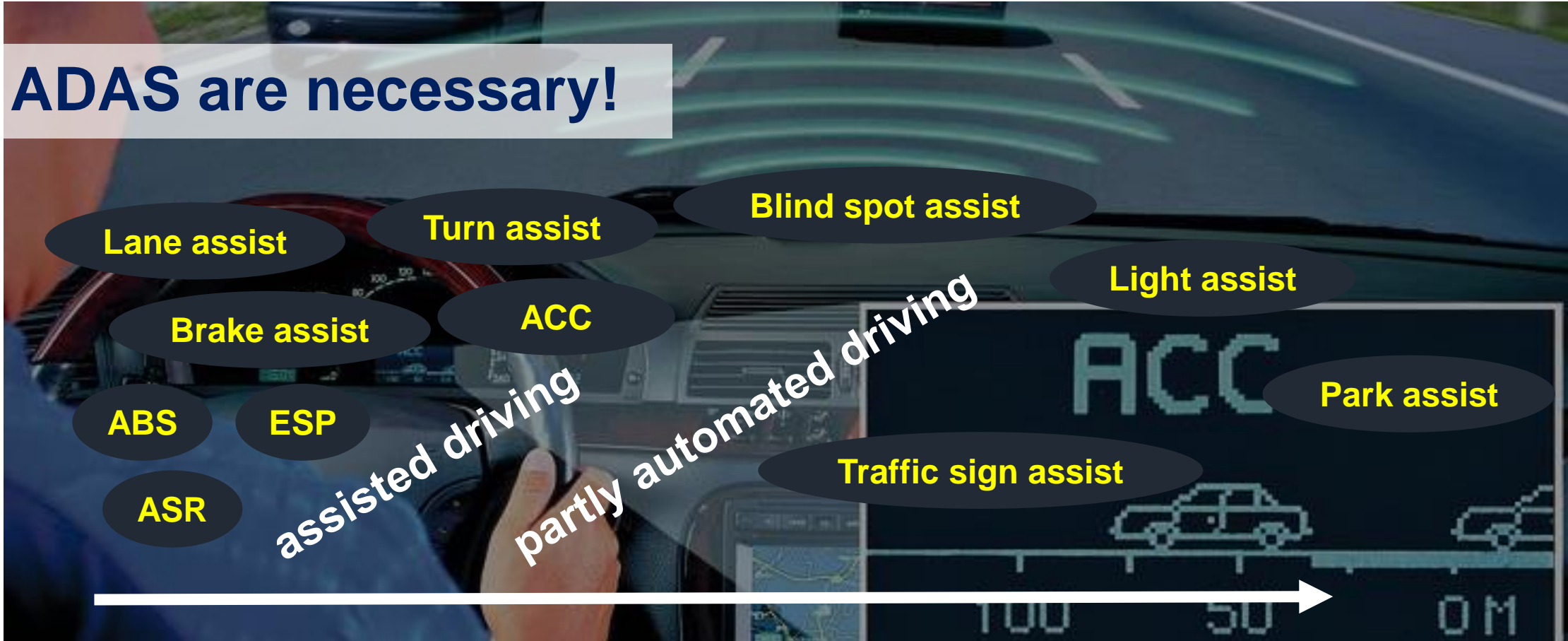


Photo DVR, Definition BAS

1. Are drivers able to understand the systems?

- Some ADAS are only working to correct a driving error.
- Drivers don't want to make a driving error.
- Most of critical situations are seldom.
- Drivers do not really realize, that they have made a driving error, when some systems are working.
- Today drivers mostly are not prepared to reflect their driving critical by themselves.

Photo „bester beifahrer“

2. Sometimes there exist a resistance against ADAS?

- Some professional drivers switch off the brake assist, because this system works against there normal habits (e.g. safety distance).
- Some drivers are irritated of the signals from the blind spot warning assist.
- Some drivers switch of the ESP.
- Some ADAS can change behaviour into an unsafe way.

Photo „bester beifahrer“

3. Are drivers able to supervise ADAS?

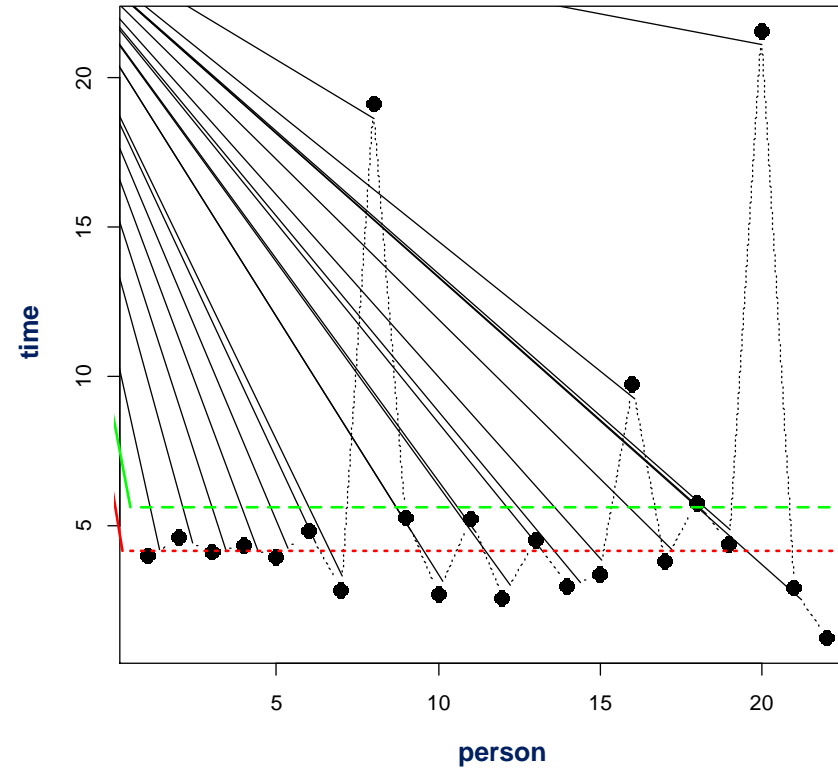
- Drivers do not have learned to supervise only like pilots or train driver.
- Drivers will do other things driving partly or high automated.
- Drivers are not prepared to realize when systems are not working in a right way.
- Drivers are not prepared to react directly and safe when they must take over driving.
- Today drivers are not prepared to change quickly from partly automated to manual driving.

Photo DVR

3. Are drivers able to switch back to “driver only”?



Time to switch back



n = 23
 task: Tetris/Nintendo
 warning time:
 21s/420m (70 km/h)
 IAG, Dresden, 2017

3. Are drivers able to switch back to “driver only”?



2282895.4



4. Are driving teacher today prepared to educate ADAS?

- Some ADAS are only working to correct a driving error. It is very difficult to educate to drive into a critical situation to get an idea of how and when it works.
- Not every driving teacher has experience using ADAS to explain the different effectiveness of systems.
- Not every car used in driving schools has the actual ADAS's.

Photo „DVR“

5. Are learner driver able to understand all ADAS?

- In the field of driver education learner driver learn how to drive in a safe and correct way.
- To come to know the effectiveness of ADAS include also to drive into critical situations. This can overload and destroy the learning process.

Photo „DVR“



Conclusions



Photo „besten beifahrer“



Conclusions

- We are not prepared for the way to come to safe high automated driving!

assisted driving

partly automated driving

high automated driving

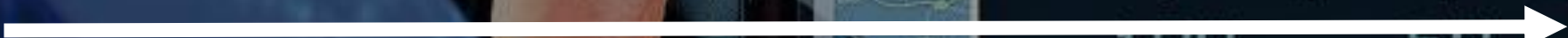
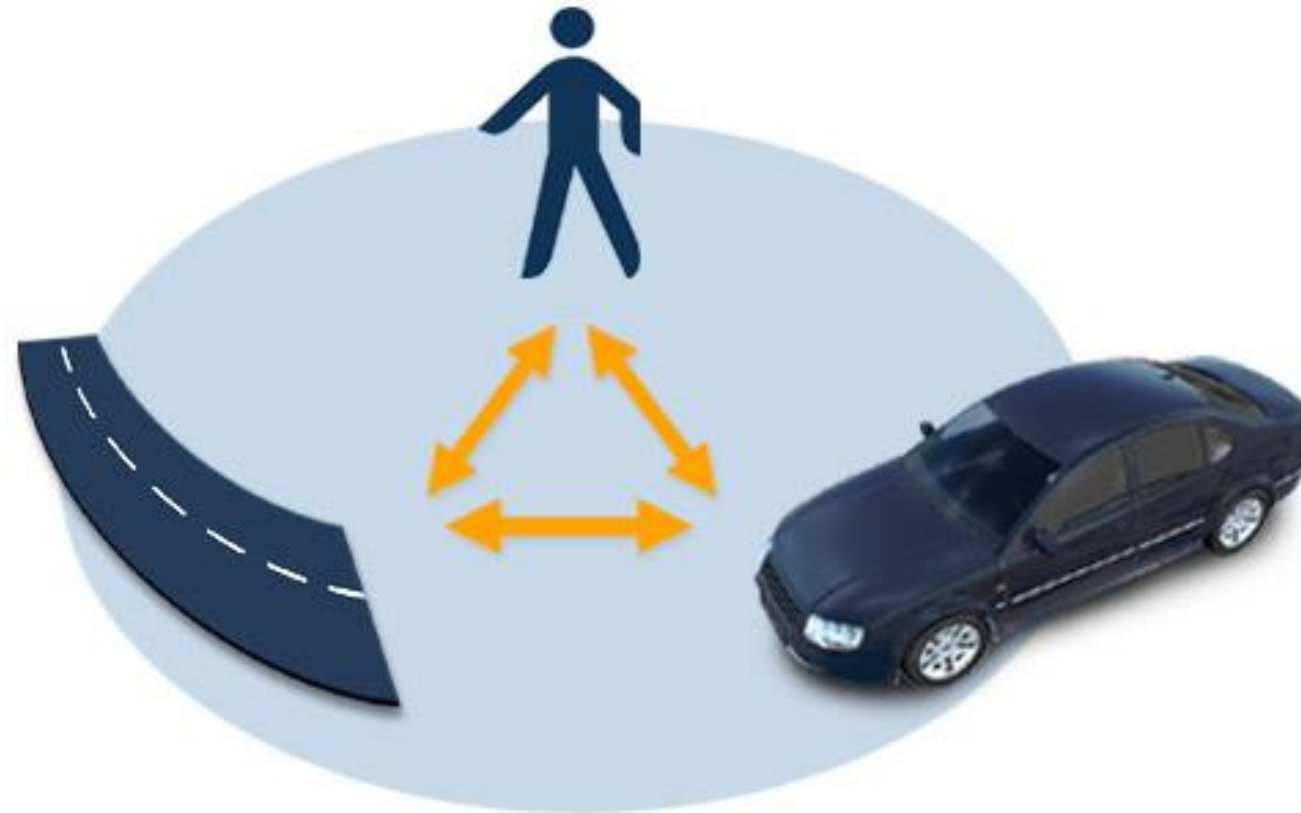


Photo DVR, Definition BAST

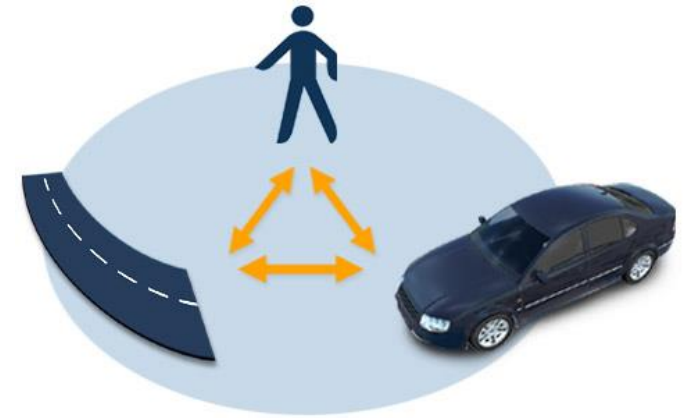


10 Postulations for the future



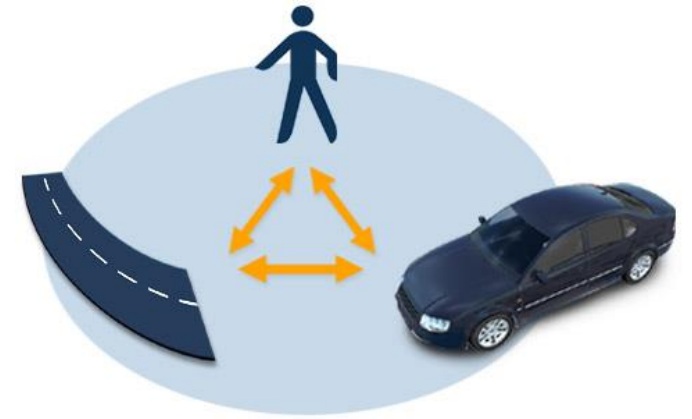
Postulations

1. We need a clear action plan for the next 10 years for the field of driver education.
2. We need research about the criteria for fitness to drive under the condition of supervising instead of driving by driver only with a continuous follow-up.
3. We need new criteria for the fitness to drive for partly automated and high automated driving with a continuous follow-up.



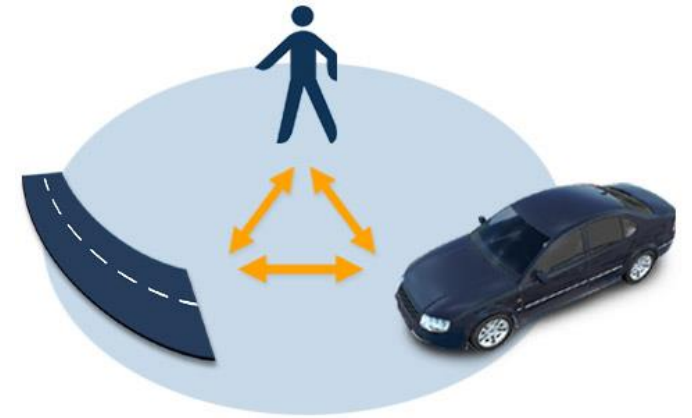
Postulations

4. We need a uniform curriculum for driver education in Europe for the change from „driver only“ to „high automated driving“.
5. We need a clear concept to educate supervision in „partly automated“ and „high automated“ situations.
6. We should split the driver education. First part for „driver only“ with experience in traffic. Second part for „partly automated“ and later „high automated“ driving.



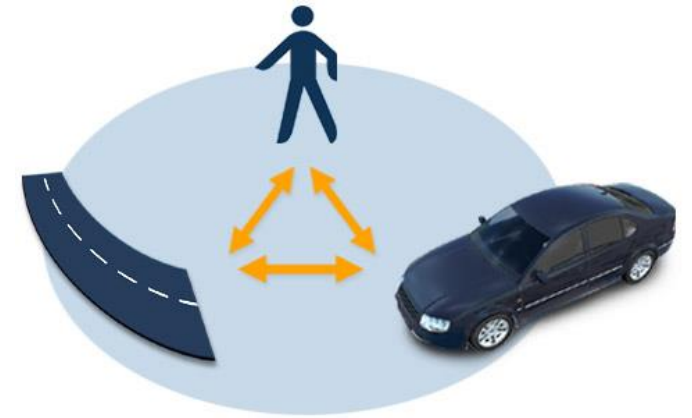
Postulations

7. We need a uniform idea in Europe for the examination for the change from „driver only“ to „high automated driving“.
8. We should split the driving examination. First part for „driver only“ with experience in traffic. Second part for „partly automated“ and later „high automated“ driving.



Postulations

9. We should think about concepts for an additional education and/or examination for experienced driver, who want's to drive „partly automated“ at the latest „high automated“.
10. CIECA should launch a think tank for the common future to work on the postulations.



Contact

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