Analysis of GIDAS accident data and potential of cooperative ADAS at intersections

GIDAS-Unfalldatenanalyse und Wirkfeldabschätzung kooperativer FAS im kreuzenden Verkehr

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Where are the problems in the current German accident scenario? Which situations can be addressed by active safety systems?

**Accident type in accidents with personal injury**
*(Germany, 2011, n = 306,266)*

- Accident in longitudinal traffic: 23.8%
- Acc. during turning into / crossing a road: 18.6%
- Driving accident: 14.0%
- Accident caused by turning off the road: 12.1%
- Other accident: 5.6%
- Accident involving stationary vehicles: 3.0%
Estimation of the field of effect

How many accidents with personal damage are generally addressable?

- Accident in GIDAS: \( \approx 20,800 \) accidents
- Germany (2011): \( \approx 306,300 \) accidents

**Accident type**

- Crossing / turning into: \( \approx 4,760 \) accidents (22.9%)
- 1st collision between 2 cars: \( \approx 1,420 \) accidents (6.8%)

**Collision partners**

- Relevant accident types: \( \approx 1,380 \) accidents (6.6%)
- \( \approx 70,100 \) accidents

- \( \approx 20,800 \) accidents
- \( \approx 20,200 \) accidents
Estimation of the field of effect

What are the consequences of these accidents?

**Injury severity of car occupants**
*(Accidents during crossing / turning into a road, collision between two passenger cars, only accidents with personal damage)*

- 0.2% not injured
- 5.9% slightly injured
- 46.0% seriously injured
- 47.9% fatally injured

Annualised these accidents account for:
- 125 fatally injured persons
- 3.500 seriously injured persons
- 28.200 slightly injured persons
Accident data analysis – Results

- Detailed analyses of real-world accidents out of GIDAS to identify typical accident characteristics (speeds, distances, involved vehicles and persons etc.)
Accident data analysis – Results

• Situations during crossing or turning into a road seem to be difficult especially for older drivers → Support by ADAS needed in terms of the demographic change