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IGS - INTELLIGENT GAWK SYSTEM

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IGS - INTELLIGENT GAWK SYSTEM

Technical task:

Increasing road safety by avoiding accidents caused by sensationalism.

Initial situation:

The starting point is the current negative development of the sensationalism and the increasing development of traffic accidents to record spectacular images of an accident site with electronic image recording devices such as smartphones. As a result, traffic jams occur when, for example, the speed is unnecessarily reduced on oncoming lanes or parallel lanes because the driver's documentation and sensation drive temporarily takes priority over the traffic. Such avoidable, unfounded hard braking maneuvers as a result of sensational greed often result in rear-end collisions that lead to further accidents, obstruct the flow of traffic or a rescue activity by third parties such as an emergency doctor, fire brigade, THW or a crisis management team.

Solution:

The aim of the development is to automatically generate or issue a concrete verbal request in a motor vehicle in order to remind the driver of the desired duty behaviour "Do not gawk" from an ethical and moral point of view in the event of a special event. The IGS-"intelligent gawk system"-development describes a procedure and a control device for an intelligent, automatically generated driving instruction "Do not gawk" with the aim to increase traffic safety.

Using an intelligent process, the control device makes use of the following components in and on a motor vehicle:

- a front camera
- an interior camera that monitors and records the driver's behaviour
- a GPS system
- a traffic and message reporting system e.g. traffic jam information
- an output unit for a textual, acoustically verbal and/or striking display of "Do not gawk"

Advantages:

- Increasing road safety
- Reduction of unnecessary traffic jams as well as braking and acceleration processes
- Automated traffic school on the subject of ethics and morals and the role model function for fellow travellers, such as children
- CO² savings through more fluid traffic
- Reduction of traffic obstructions for rescue workers

Possible application:

1. Mr Huber drives on the motorway and approaches an accident scene on the opposite lane
2. Mr. Huber is shown an accident hazard locally via various traffic messages and navigation devices
3. The front camera focuses on the traffic behaviour when approaching the scene of the accident, i.e. senses the extended accident area, e.g. parts lying around, stationary or defective vehicles, persons, etc.
4. In this phase, the interior camera switches to increased observation and sensing activity, which documents the behaviour pattern of the driver, it detects, for example, a different direction of view from Mr Huber's direction of travel for a longer period of time, e.g. when the vehicle speed decreases
5. If threshold values are exceeded, i.e. temporal intervals of a viewing direction remote from the direction of travel or a temporally repeated viewing direction, i.e. viewing directions remote from each other in short succession, an output unit is automatically activated which generates a textual, acoustically verbal and/or striking display "Do not gawk"
6. In a special version, a vibration module in the driver's seat and/or steering wheel optionally alerts the driver to his misconduct in order to increase his awareness in the direction of travel
7. In another special configuration, the display may be displayed or projected on a mirror glass surface of an exterior mirror or side window which is transverse to the direction of travel in the direction of vision