SAFER ATTENTION
Future safety systems and services to promote attentive driving

Claudia Wege
Road Safety Authority International Conference on Driver Distraction
Dublin, Ireland 20. March 2014
“SAFETY IS, AND MUST ALWAYS BE, THE BASIC PRINCIPLE FOR ALL ENGINEERING DESIGN.”

– Assar Gabrielsson & Gustaf Larson, Volvo’s founders, 1927
Need for distraction countermeasures

“DISTRACTED DRIVING IS THIS GENERATIONS CHRONIC DISEASE.”
– Wetzel, 2012
Volvo Group’s Advanced Technology and Research

... investigates causing factors and consequences of driver distraction to further improve Volvo Group products and strive for our Safety Vision.

Our target is to...

influence behavioral change, thereby resulting in more attention allocation to the forward roadway, and improved vehicle control.

to promote attentive driving
DO - IT BEST Feedback Model (Wege & Victor, 2013)

Advanced Driver Assistance Systems

Integrated Safety

to promote attentive driving

Behaviour-Based Safety Services
DO - IT BEST
Feedback Model
to promote attentive driving through
Advanced Driver Assistance Systems
DO - IT BEST
Feedback Model

to promote attentive driving through
Advanced Driver Assistance Systems

Research example:
Visual Distraction Alert System
DO - IT BEST Feedback Model

Visual Distraction Alert System
DO - IT BEST

Feedback Model

Studied Effects - Visual Distraction Alert System
DO - IT BEST
Feedback Model

to promote attentive driving
through
Advanced Driver Assistance Systems
On-market
Safety Systems
DO - IT BEST Feedback Model

Collision Warning  Lane Keeping Support  Lane Change Support  Driver Alert Support

Volvo Group
Advanced Technology and Research, Claudia Wege
DO - IT BEST
Feedback Model
to promote attentive driving
DO - IT BEST Feedback Model

to promote attentive driving through Behaviour-Based Safety
DO - IT BEST Feedback Model
DO - IT BEST
Feedback Model
DO - IT BEST Feedback Model
A Volvo Holistic Safety Approach

Advanced Driver Assistance Systems

D Define behaviour
O Observe behaviour
I Intervene to influence
T Test the effectiveness of the intervention

B Behavioural check-ups
E Education
S Safety benefit analysis
T Training

Behaviour-Based Safety Services
Thank you!

There is only one acceptable number of accidents with Volvo Group products.

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Annex

Images references

Slide 1-5, 16-19: Flickr
Slide 2-16: Volvo Internal

Selected Scientific Publications


Annex


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![Graphs showing the number of glances per minute for all single glance duration thresholds as well as their cumulative percent distribution and the standard deviation lane position (SD LP) and steering wheel reversal rate (SWRR). Measures for glances off road (left) and glances on road (right) for the reliable warning condition (above) and the unreliable warning condition (below).](image-url)
Annex
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