Sustaining Real World Safety
- Through Innovative Technologies -

The Government point of view

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Cycle of Vehicle Safety Measures
- Study process before & after rulemaking procedure -

Accident analysis
[Subjects]
- Overview Analysis
- Specific Analysis

Safety measure study
[Subjects]
- Selection of prospective regulation items
- Overall study for future measures
- Assessment of the effect of each measure

Cycle of Vehicle Safety Measures

Evaluation of effects
Implementation of safety Regulations

- Issue of safety regulations
- Enforcement (type approval & inspection)
The safety regulation Exert Group
The accident analysis Expert Group

- Accident analysis
- International activities (IHRA, WP29)
- Effect evaluation

Direction of Safety Policy

Safety Regulations

Linking of safety regulations and new technologies

ASV project
Study Group for ASV
- Promotion of ASV technologies by industry, academia, and government
- Development of next generation ASV technologies

Linkage to increase user’s knowledge about new technologies

NCAP
NCAP study group
- Comparative safety performance testing & information supply
- Information on the correct use of safety devices, their availability, effectiveness ratings

Linkage to promote safety technologies

Good linkage among Safety Measures
Advanced Safety Vehicle Project

Phase 1: 1991-1995
- Cooperation among academia, industries, and government
- Study of technical feasibility

Phase 2: 1996-2000
- Demo2000
- Crash mitigation brake, lane keep assistance, ACC, etc. have been introduced in the market
- System verification tests were done on the test course of Tomakomai

Phase 3: 2001-2005
- Cooperation among academia, industries, and government
- Study of technical feasibility

Phase 4: 2006-2010
- A Large-scale Field Operation Test on public roads using approximately 30 vehicles equipped with inter-vehicle communications.

Design Principles
1. Driver Assistance
2. Driver Acceptance
3. Social Acceptance
Driver Assistance according to Sequence of Driving Condition

Driving Condition

Active Safety
Primary Safety

Normal
Critical
Pre-Crash

Passive Safety
Secondary Safety

Crash
In-Crash
Post-Crash

Information presentation & Control in normal condition

Warning in critical condition

Control in pre-crash condition
New Data Collection Devices

1. Driving Recorders with video (VDRs)
   - From the viewpoint of accident analysis, video image can be used for analyzing the behavior of the car before accident including distance to a car in front.

2. Event Data Recorder (EDR)
   - An EDR’s main purpose is to record data for retrieval after a crash that will assist in the understanding of how a particular vehicle’s systems performed.
There is a growing importance for taking into account the ongoing world-wide efforts in responding with the need to provide higher levels of vehicle safety, environmental protection, energy efficiency, etc.

Growing importance of international partnership

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ESV: Enhanced Safety Vehicles

UN/ECE/WP29: world Forum for harmonization of vehicle regulations

ITS world congress

... and many other relationships for global vehicle safety.
Thank you for your kind attention.