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Summary of Activities up to Now

March 16, 2012

20th ITS Informal Group Meeting

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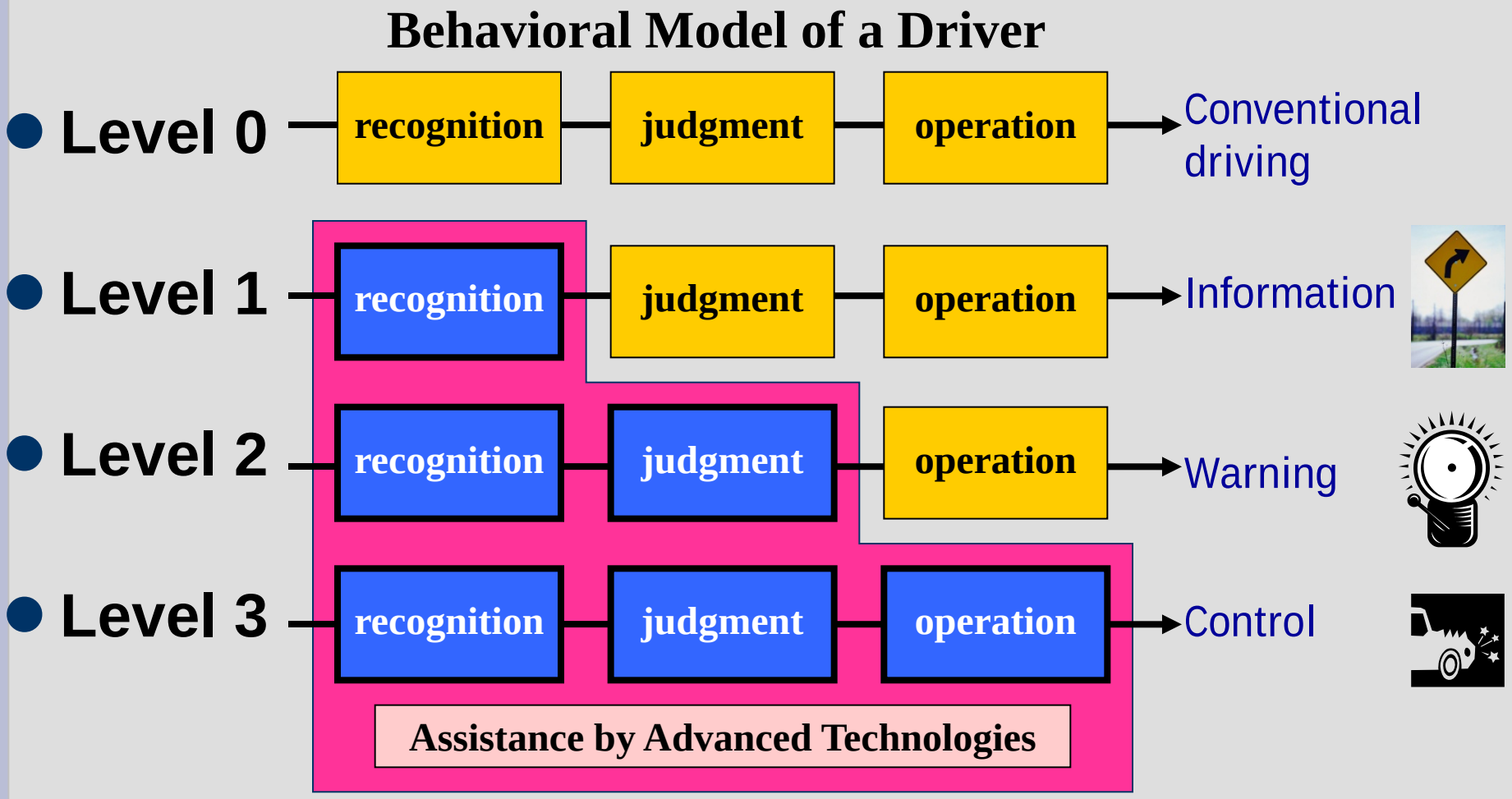
Past Activities :

- TOR : November 2004
  - To develop common understanding of driver assistance systems
- Report of Two Years Activities : March 2007
  - Appropriateness of "Driver in the Loop" under normal driving condition
  - Effectiveness of damage mitigation under pre-crash condition where collision is no longer avoidable
- Proposal of Warning Guidelines to WP29 : March 2010

How does ADAS assist driver ? :



Report of two years activities :

- **Information :**
  - To keep monitoring the situation of self-commitment basis guidelines, ESoP, AAM and JAMA, in each region for a time being
- **Warning :**
  - To develop high-priority warning guidelines in cooperation with IHRA-ITS WG
- **Control :**
  - To have baseline ideas for effective use of control systems in ADAS

Warning Guidelines :

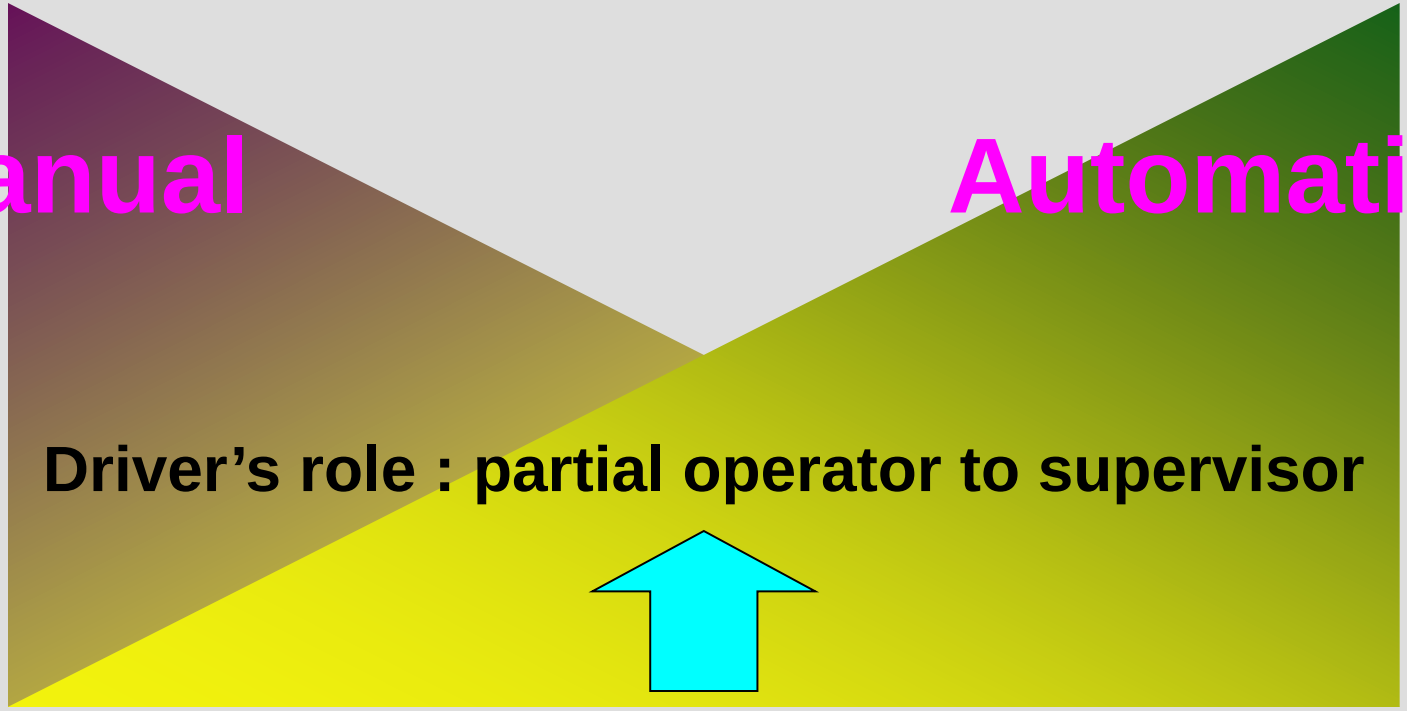
- **Purpose** : to provide basic recommendations for the design of high-priority warnings on ADAS
  - Better understanding from drivers
  - Reduced confusion
  - More accurate and consistent expectations
- **High-priority warning** : to be delivered at critical situation where the driver is required to take immediate action or decision to avoid crash event
- **Adoption** : at 154th session of WP29, June, 2011

Warning guidelines :

– ECE/TRANS/WP.29/2011/90 –

1. High-priority warning should be noticeable in the driving environment.
2. High-priority warning should be distinguishable from other messages in the vehicle.
3. High-priority warning should provide spatial cues to the hazard location.
4. High-priority warning should inform the driver of proximity of the hazard.
5. High-priority warning should elicit timely response or decisions.
6. Multiple warnings should be prioritized.
7. False/nuisance warnings rate should be low.
8. System status and degraded performance of high-priority warnings should be displayed.

Level of Driver Assistance



Conventional Driving
Driver only

Assistance Driving
Driver + System

Substitute Driving
System only

Report on Control Systems in WP29/ITS Informal Group(2007):

- Systems should be designed in which driver is always held responsible for his/her driving. For this purpose followings are effective.
  - Installation of auditory or visual announcement devices providing information on the system functioning
- Control systems activated under normal driving condition should be designed based on “Driving in the loop”, where driver should be involved in driving in a way or other. For this purpose followings are effective.
  - Announcement is made when the driving initiative is transferred from system to driver.
  - Driver is kept involved in driving operation. For example, starting initiative should not be given to system.
  - System allows switching on or off by driver
  - System allows overriding by driver
- As for Control systems to reduce collision speed activated under pre-crash condition where collision is no longer avoidable, there is no time for necessity of overriding and driver is not very likely to depend on system.

Control Principles
- Background and Aim -

- **Background**:
  - Rapid technology evolution in ADAS makes the driver handling easier and more comfortable.
  - Roles of driver assistance systems varies dependent upon system configurations.
  - Such advanced systems should not be hindered by the reason of different rules among the regions.

- **Aim**:
  - Baseline ideas on driver-system interaction are needed for proper development of advanced systems .
  - The first draft was submitted at the last meeting of ITS Informal Group, and revised several times.

Control Principles
- Activities up to Now -

- **Activities**:
  - Submission of the first draft from IHRA-ITS WG in November, 2010
  - Presentation at 19th ITS Informal Group Meeting in March, 2011
  - Comments from OICA, JAMA and others
  - Revision and circulation to relevant quarters in February, 2012

- **Next step(provisional)**:
  - Introduction of revised control principles : ITS Informal Group Meeting in March, 2012
  - Presentation to WP29 in 2012
  - Examination among related GRs in 2012-2013

Thank you for your attention